

Evaluations of E-Governance Projects

Studies Conducted by

**Center for Electronic Governance,
Indian Institute of Management, Ahmedabad**

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Prof. T. P. Rama Rao,
Coordinator, Center for Electronic Governance,
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18th April, 2004

Chapter 1. Evaluations of e-Governance Projects: Introduction

The Center for Electronic Governance at Indian Institute of Management, Ahmedabad (CEG-IIMA) on a research grant provided by Asia Foundation, USA, has conducted evaluations of five e-Governance projects to make an assessment of sustainable approaches to e-governance projects.

The broad objectives of these studies are to:

- Identify and evaluate the costs and benefits of e-governance projects among the intended stake holders, with key focus on costs.
- Assess the impact of the project on transparency, accountability and corruption within the scope of system.
- Identify the gaps in implementation, explore the strategies deployed for overcoming the gaps or challenges, and provide suggestions for a sustainable impact.

Methodology of Evaluation

The evaluation studies were conducted by the researchers of the CEG-IIMA under the guidance of its faculty members. Each study is backed up by data collection through field visits and an in depth analysis of the responses.

Projects selected for evaluation represent a broad spectrum of G-C e-Governance applications in India. These are given in the table below:

Project	Type	Domain
1. Civic Centers of Ahmedabad Municipal Corporation, Gujarat	G-C Urban	Municipal Corporation
2. Fully Automated Services of Transport – Andhra Pradesh	G-C Urban	State Government
3. Regional Passport Office at Ahmedabad	G-C Urban	Central Government
4. Mahithishakti – Godhra, Gujarat	G-C Rural	District Administration
5. Road Transport Office at Ahmedabad, Gujarat	G-C Urban	State Government

Individual evaluation reports are presented in the subsequent chapters of the report.

Chapter 2: e-Government at Ahmedabad Municipal Corporation: An Evaluation¹

The municipal corporation of Ahmedabad (AMC) is responsible for the governance of the nearly 3.7 million people in the city. The Ahmedabad Municipal Corporation was constituted under Bombay Provincial Corporation Act, 1949. Exhibit 1 presents the administrative setup of the AMC that comprises of 5 zones and 43 wards. The AMC is responsible for maintaining a clean and healthy living environment, provide and maintain civic infrastructure and endeavor to provide a better quality of life to the citizens. In order to attain these objectives the AMC relies heavily on tax as a source of revenue. Various kinds of taxes like octroi, property tax and others are levied on businesses and individuals to meet the expenses of the AMC. (See exhibit 2 and 3 for Revenue and expenditure statement). It is indeed a mammoth task to collect revenues from a variety of taxpayers and at the same time provide satisfactory civic services to all concerned.

To fulfill the objective of better service delivery, AMC embarked on the course of e-government, with “e-City” as the guiding vision. The first and big step in this direction was the setting up of 6 City Civic Centers that promises to efficiently deliver citizen services (See Exhibit 7 for location map). Each of these centers first of which started functioning from September 18, 2002 is equipped with 11 state of the art computers that are operated by the staff of the AMC.

System Architecture

The application architecture is three tiered comprising of Oracle 9i data base running on Solaris OS on a Sun server, a web server and the front end client machines that access the database through the web server. The programming for the front end has been done using VB and active server pages (ASP). The database server is located at the main office of the AMC. Dedicated 64 kbps lease lines are used to connect to the database at the central office. The application is also available through the internet and citizens can access the website to lookup a variety of information relating to their various tax payments and status of complaints. The services that are currently available at the civic centre are described below.

¹ *Evaluation Study conducted by Mr. Subhajyoti Ray and Prof. V. Venkata Rao, CEG, Indian Institute of Management, Ahmedabad*

Costs

The hardware and networking costs for the system was Rs. 2.5 Crore while the software cost was Rs. 60 lakhs. The annual maintenance cost is approximately Rs. 12 lakhs. Entire initial investment for the project has been provided by the state government, thus showing support and faith in AMC.

Services offered

Tax collection

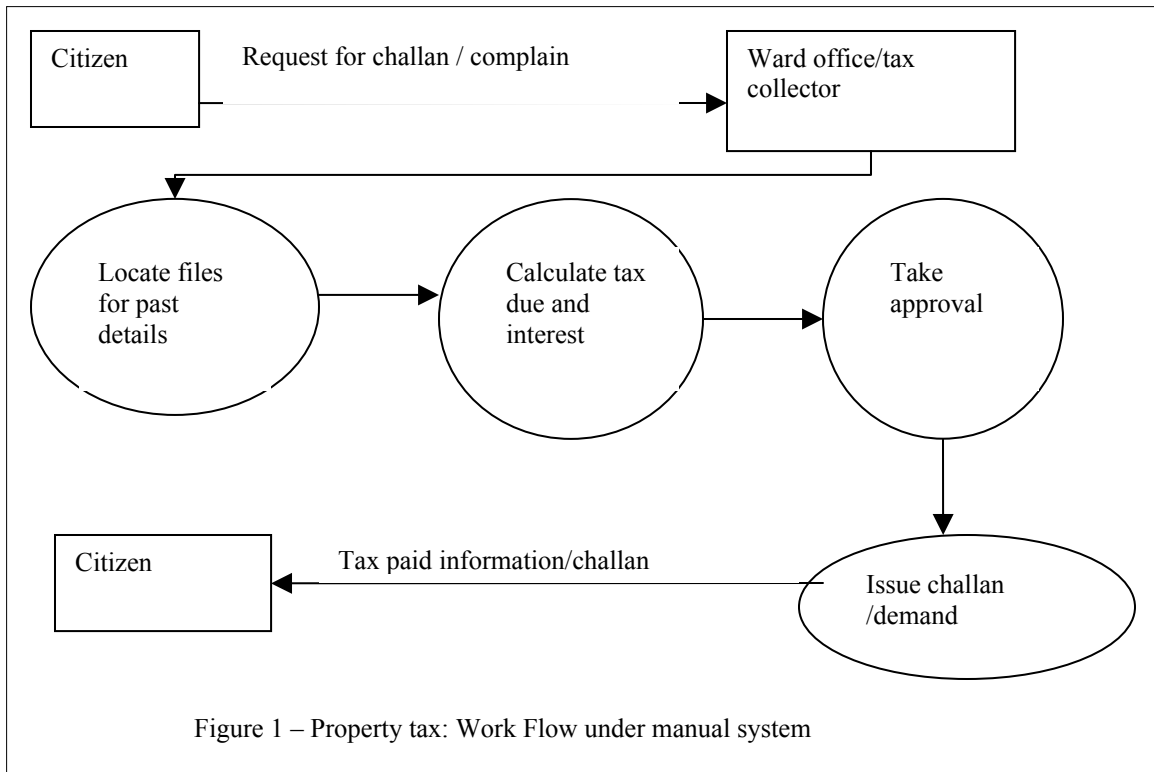
Tax collection starts with the assessment of the tax payers' liability. Thus in the case of property tax, assessment is based on a host of factors like building type and use, location, area and age among others. Similarly vehicle tax and octroi tax are determined by the AMC from time to time. Clearly this exercise of mere tax assessment is huge as it entails maintaining records of individual units.

Property tax collection

Property tax is collected from every building standing within the jurisdiction limits of the AMC. The exercise of tax assessment requires the data of various characteristics of the property like usage, area and value among others. There are nearly 1 million property tax assessments and collections that are done on a yearly basis. Furthermore every year properties change hands, undergo additional construction and change in usage among various other modifications that need to be updated from time to time. This increases the complexity and scope of the work of AMC as frequent inspection of the property has to be done to reassess tax liability where modifications have been made to the existing characteristics of the property.

Before the CCC interface was initiated there was drastic changes made in the tax assessment rules. The whole process of tax assessment used to be so cumbersome that it was beyond the easy understanding of the citizen.

Figure 1 presents the core processes under the manual system of property tax collection.



An examination of the above process flows reveal three stages at which delay gets institutionalized in the system. Firstly the work does not get started if the tax collector is not present at the time the citizen approaches the ward office. While this is a very general problem within any system the impact here is much more as the process is not independent of the person, thus making the reliance on the tax collector complete and inevitable. This inevitably meant multiple visits to the ward office. A second problem area is the process of locating old files and records which opens up opportunities for delay and discreteness on the part of the official and hence the opportunity for rent seeking behaviour. Finally the tax and interest calculation done under the old system, posed problems like wrong calculation, disagreement between citizen and ward office regarding exact amount due as calculation details were not clearly spelt out nor were they understood by the layman and potential for evasion by paying a small amount instead of actual tax liability. In other words the system heavily dependent on the concerned official in this case the tax collector at ward offices and was therefore vulnerable to all kinds of malpractices.

With IT enabled rapid information retrieval and storage and modification of the tax assessment procedure, the property tax collection system has been streamlined to serve the citizen in a far more efficient manner than before. The process of paying tax now

involves visiting any of the service centers and paying a check or cash or paying online by credit card. The assessment is done by a simple formula understandable to all. The website also provides scope for self assessment of tax details, past paid and due details thus making redundant the need to look manually for data, removing the need for dependence on the tax collector or other official to approve and accept the payment. In case of wrong assessment and modification to property characteristics the citizen can fill up the prescribed form and submit at the civic center. The complaint is automatically directed to the appropriate ward office and needed action taken. While the need for physical verification remains the same and the approval for changes have to be done by the officer of level Assistant Manager or Deputy Assessor of taxes there has been significant gains from the current system. Easy availability of past data, routing of complaints to the right ward and reduction in the number and types of wrong assessments are some of the easily visible benefits.

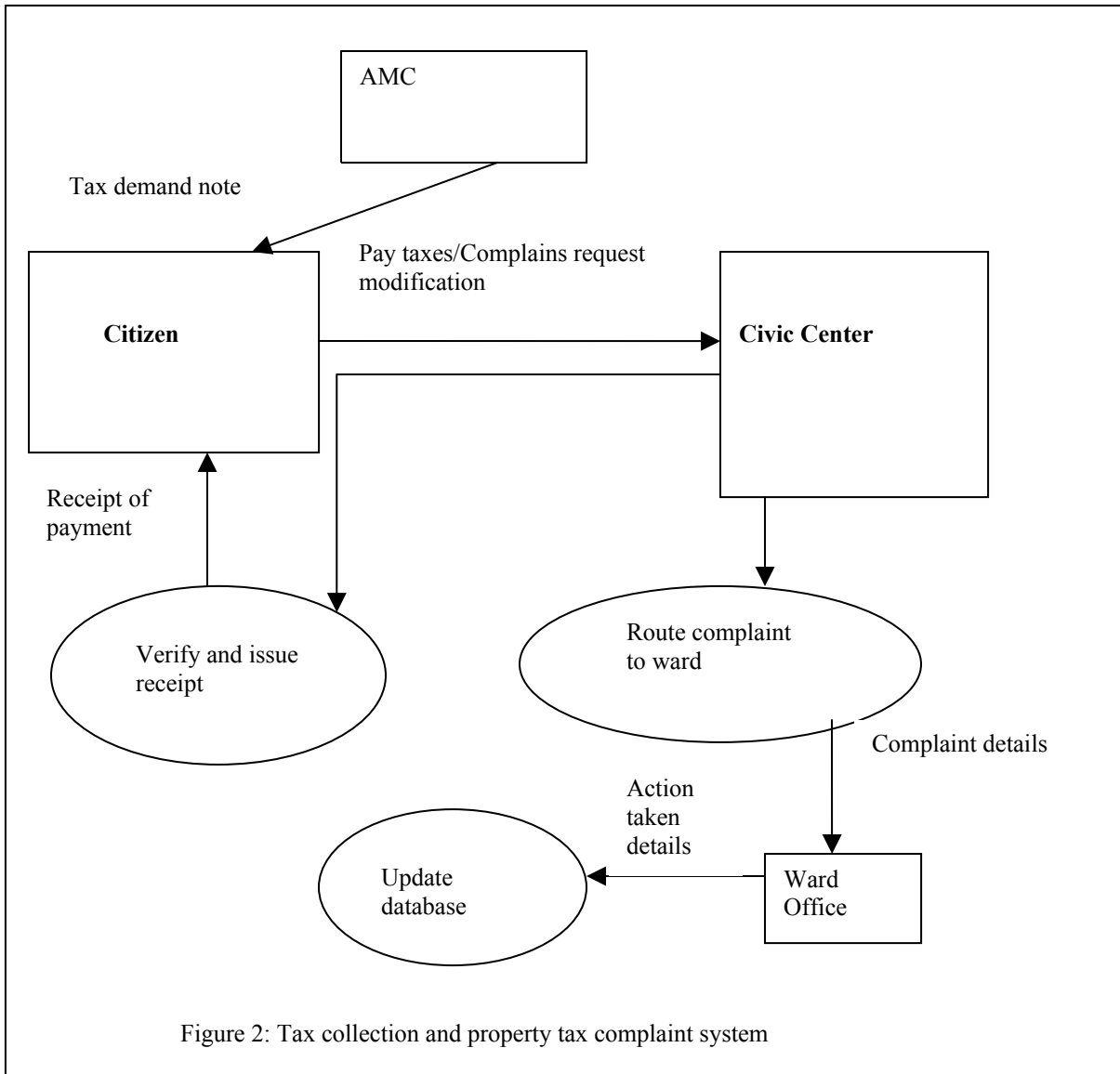


Figure 2 describes the current tax collection and complaint addressing system. The complaint are as before addressed at the ward level as they require physical inspection or verification but the current system has eliminated the need to visit the ward office for tax calculation purposes. The issuance of tax receipt is instantaneous and calculation transparent thus providing great relief to the citizen.

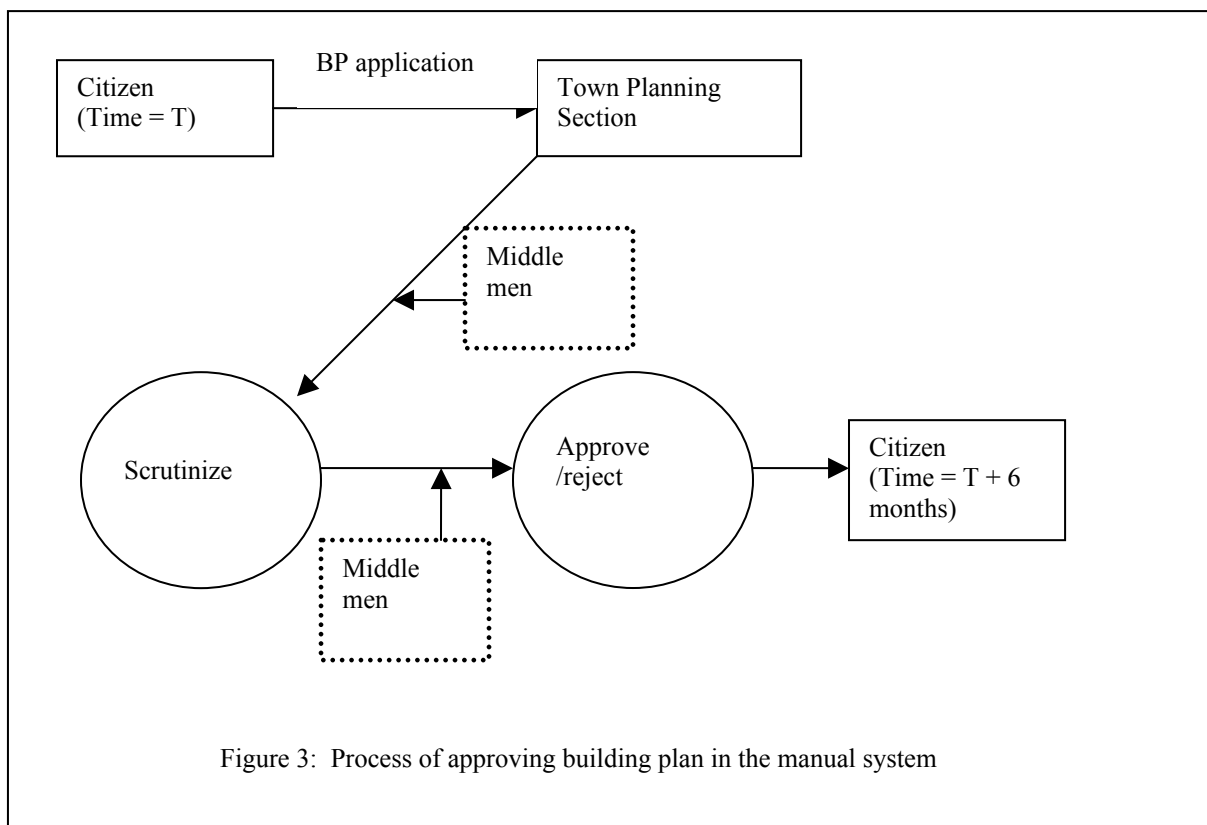
Vehicle tax

Vehicle tax is levied on registered vehicle every year by the AMC. The application does provide history, details and tax due information for every vehicle and hence provides a transparent mechanism for tax collection and monitoring. The systems' database is

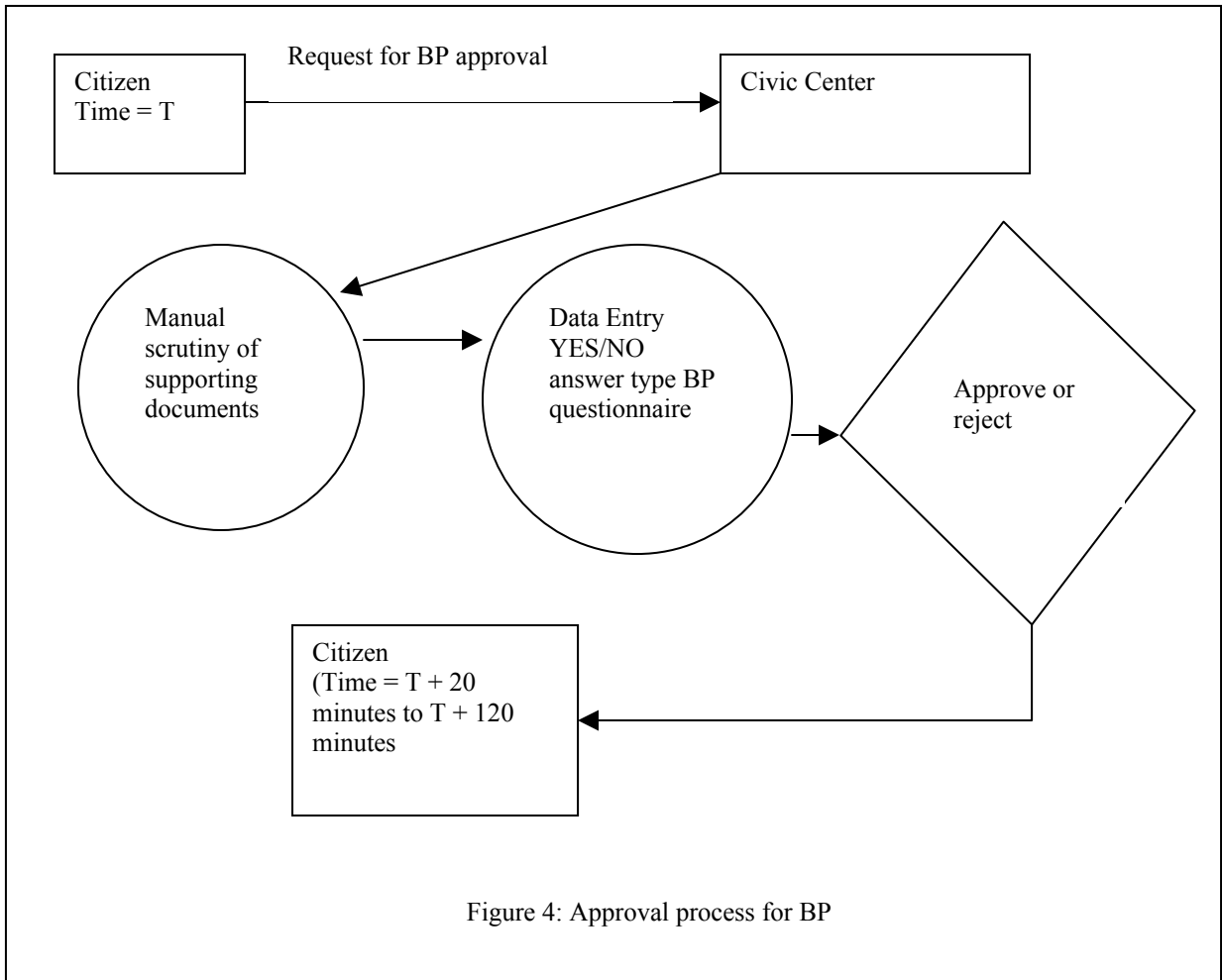
connected with the RTO and octroi check posts and therefore enables control of tax evasion. Payments are accepted through the internet by credit card and also at the civic centers.

Building Plan

AMC is the first in the country and perhaps among the very few in the world that have computerized and automated the approval of building plans. AMC has the responsibility of overseeing the correctness and legality of any construction in the city and is the sole authority of approving building plans for the city. Structural and civic guidelines need to be adhered to for any construction work being approved. AMC has designed a unique YES/NO questionnaire that captures all the details of the proposed construction. The details once fed into the computer the application determines whether the plan is in accordance with the guidelines and immediately notifies the applicant whether his plan has been approved or not. Modifications and clarification are also requested where ever necessary and the applicant in such cases has to approach the AMC at a later date along with the modified plan and supporting documents.

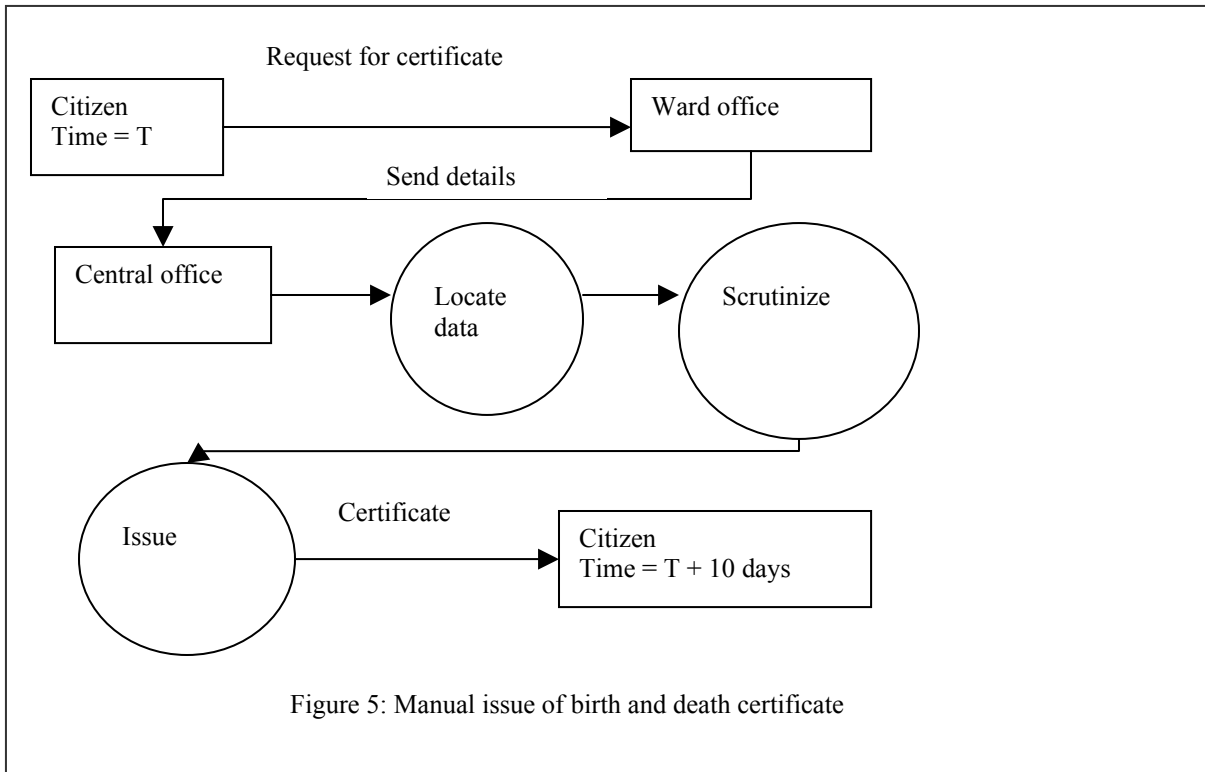


The process of scrutinizing and issue involved extensive vertical movement of document within the town planning section. Middle men accepted money to speed up the processes and hence the people with less paying capacity were disadvantaged. Most applications would take more than one round within the section as the applicant was unaware of the exact nature of supporting documents, regulations and procedure of building plan approval. Multiple visits were the norm for a single building plan approval. The current system of BP approval does away with a lot of opportunities for discretionary behaviour and completely makes redundant the role of the middle man. The most significant change to the process of approval has been the establishment of a checklist of dos and don'ts for all kinds of building plans. While the supporting documents are required like before the scrutiny of the plan happens immediately after the details of the checklist are entered into the computer. The list of approved engineers, architects, the list of required documents and the design regulations to be followed in a building are now easily available. There approval for plan does not require paper movement within the AMC and the civic center in most cases approve the plan immediately. Figure 4 below captures the current process for BP approval.



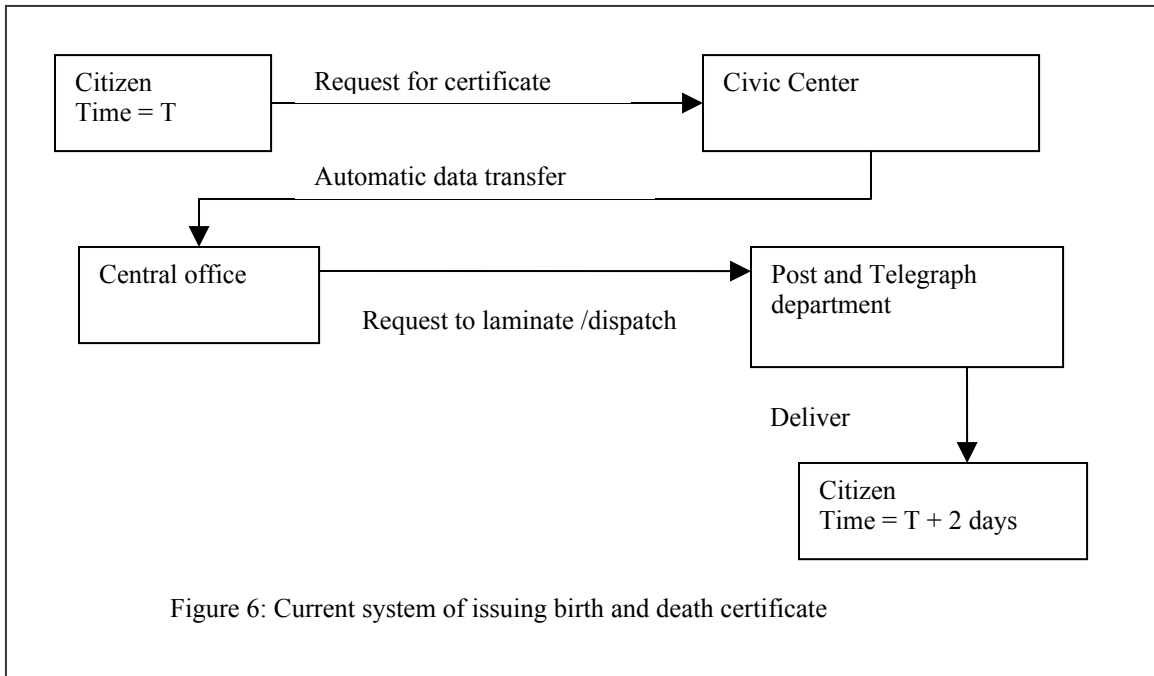
Birth and death registration

The application is aiming to provide direct and online access to hospitals to intimate the occurrence of births and deaths to the AMC. The same will be recorded in the databases of the AMC and hence avoids the manual reentry of data. Now for a payment of Rs. 25 birth and death certificates can be obtained in a matter of two days in most normal cases. The AMC has got into an arrangement with the Post and Telegraph department for printing, laminating and dispatch of birth and death certificates to the applicant. The database now contains all records on birth and deaths from 1981 onwards. The data entry work is in progress and soon all records will be transferred from paper files to databases. Figure 5 below describes the manual process of issuing the birth and death certificates and the average time taken in normal cases.



Besides the time delay of issuing certificates, chances for error in names, and other details were high as data had to be recorded manually and different places by different persons. It became the citizens' responsibility to ensure that the ward office sent correct data to the central office and also undertake repeated visits to hasten the process. A small bribe at the ward office was often needed to speed up the process.

Figure 6 describes the much simplified process being followed with the advent of civic center mode of service delivery.



The processes described above are applicable in cases where the data is available with AMC. In case of new births and deaths the additional step involved is that of inspection by ward offices which continues to remain the same under the current system. However, as hospitals get connected to the database and can record the birth and deaths online the need to have an inspection will be greatly diminished thus bringing more benefits to the citizen.

Shops and Establishment

The issuance of licenses to run shops in the city is an important regulatory activity of the corporation.

The process of issuing of licenses to shops was the sole responsibility of the Gumasadhara department. The department had the complete responsibility of accepting, scrutiny and issuing of new or renewal licenses to the applicants. Application relating to registration, renewal modification, duplicate licenses, insurance and sign board are frequently received by the department. This involved tons of paper work and had glaring opportunities for malpractices. Every single application was required to be approved by the Chief Inspector of Shops hence even with the best intentions timely issuance of licenses was impossible.

The current system has done away with the need for a separate department all together. The data pertaining to shops and establishment have been entered and also linked to the property tax database based on unique tenement number. New licenses and renewal certificates are now issued instantly at the counters of the civic centers. Any shop owner can now approach the city center with relevant documents to modify, renew or request approval for licenses. On verification at the counter the license is immediately printed and delivered to the applicant. Inspection of the details submitted by the applicant happens later and is undertaken by the respective ward inspectors.

Complaint

All the 43 wards of the AMC and the civic centers are now connected over intranet to receive complaints from citizens. The citizen can also file complaints over the internet by accessing the AMC web site. The notification of a complaint is immediately received by the commissioner and the details of the complaint are directed to the relevant department and/or desk automatically.

Key Benefits

The civic centre initiative has brought visible benefits to AMC as well as the citizens. The use of ICT in the functions of AMC has not only streamlined the storage and retrieval of information but also has enhanced the quality of citizen services by increasing the supply and also making them more accessible.

AMC gains

From the AMC point of view there has been substantial increase in the collection of various kinds of taxes. Since AMC now has accurate and useable information about units of taxation and their details, the tax compliance and timeliness of payment has greatly improved.

Property tax collection was recorded the highest ever in the year 2002-03 at Rs. 130 crore. This has been largely enabled because of greater compliance, flawless assessment of tax and interest accrued charges. During the financial year 2003-04 the property tax collected in the little over of 9 months is approximately 115 crore and hence in all likelihood the tax collections will again be a record high and simultaneously allow the corporation to close the accounts within the year. Vehicle tax collection was nearly

nil before the implementation of the system as it was impossible to track the tax dues of vehicles in co-ordination with the RTO. However, the new system by the virtue of its being connected with the RTO has the necessary information to assess tax liability and issues demand notices to the vehicle owner. Immediate benefits of the system are visible as vehicle tax collection has moved up to Rs. 2 crore from almost zero. The same is expected to stabilize at Rs. 8 crore in the coming years. Besides these monetary benefits accruing to the AMC, significant gains have been realized in processing and dispensing of licenses. Earlier, the renewal or issue of licenses for shops needed verification of property tax details among other things. This involved referencing to other documents, files of other departments and invariably involved a middleman to see the process through. The current system has released the AMC of all this work. Any new license or a renewal of license application can be verified at the counter of a civic center and property tax liabilities scrutinized simultaneously. This has been made possible as the shops and property tax databases are logically linked based on unique identification number i.e. the tenement number. Another gain to AMC has been the ability to assess the total number of citizen complaints received on various accounts. This was earlier not possible and hence adequate planning for deployment of resources was not feasible. The complaint reporting system now provides AMC with accurate data on real time basis of all complaints lodged by the citizen, the type and nature of complaints and the department to which the same has been forwarded for corrective action. For example during the period September 2002 to April 2003, 68696 complaints were received by the AMC on various accounts. Because adequate deployment of resources could be done 63,439 of these were handled adequately in that time. Most complaints are disposed within 24 hours as the concerned officer can co-ordinate laterally and vertically to deploy resources. Finally, the AMC has gained by having a set of highly motivated and enthusiastic workforce in the operators at the civic centers. The proactiveness and motivation which is likely to have its antecedents in job satisfaction of the operators augurs well for the AMC, not only for its own administrative gains but also by projecting a friendlier and caring image of itself to the society.

Citizen gains

The citizens too have benefited significantly from the e-government project. The citizens now have more access to municipal government services. Not only the 6 civic centers but also 24hrs internet access to the website allows the citizen to assess and pay the dues, check status of applications and need not worry about the middle man. The citizen

is now in a position to ascertain the requirements of any application or tax assessment rules and hence is more empowered. The need for clarification seeking which is very true of government services has greatly reduced. The staffs at the counters of the civic centers are aware of the procedures and can clarify whatever doubts the citizen has regarding any matter. The inhibition and apprehension often faced by people seeking government service has been substantially eliminated. This is largely because the interface between the citizen and the municipal corporation are the civic center operators and not the departmental staff responsible for various sanctions. The system has eliminated the requirement or opportunity of discreteness to a large extent and established a transparent rule based working environment. With regard to the complaint addressing system, the citizen has benefited greatly as most complains are now being addressed within 24 hours. This has been possible as the 43 wards (lowest unit of city administration) are connected to the central database to receive complaints on civic amenities or tax related matters. Furthermore, the status of complaints accessible to the citizen as well as the senior officers within the corporation has ensured effective monitoring and redressal work being carried out in a reasonable time frame. Overall the citizen has benefited immensely as most transaction are now happening within 10 minutes which in the earlier systems needed ore than one trip and sometimes hours to complete the work. The number of trips needed to visit the government office has therefore substantially come down, though the average numbers of trips and time for service have not been estimated. However, based on citizen interviews (3 all together) regarding the service quality at the civic centers, the following list of benefits emerged.

1. Up-to-date equipment
2. Appealing Physical facilities
3. Operators are sympathetic and reassuring when citizens have problem
4. Operators are dependable
5. The system has accurate records
6. Less time required for getting service
7. Quick and clear answer to query
8. Knowledge of person to be contacted for service
9. Access to information and knowledge of procedures

It is very likely that other kinds of benefits are being realized by the citizen and open ended interviews with a more diverse and larger sample would provide more clues. Exhibit 4 provides a preliminary estimate of benefits to citizens. Details of nature and number of transactions at a particular civic center are presented in Exhibit 5.

Social gain – Social capital?

Finally transparency and better service delivery has brought in overall societal gains, though only in small way. In the earlier system property tax assessment was not well understood by the citizens and the assessor was also the collector thus leaving many opportunities for malpractices. This meant that regarding property tax neighbours were skeptical about the amount others were being charged and there was implicit race to pay the lowest tax. Now with the interface between government and the citizen being just a computer operator, the tax assessment procedure having been simplified and understandable and ease of payment, people no longer have to worry about the tax their neighbours are paying. On the contrary because paying tax has become so convenient people can now even ask their neighbours for a favour requesting them to pay their taxes, as the time taken to pay taxes has been reduced substantially, therefore making the asking of this favour look reasonable. This under the previous systems would be impossible to imagine. Clearly two things are visible firstly the trust levels between citizens and government and among citizens are likely to increase induced by more transparency and efficient service delivery. Secondly, the scope of unredeemed favours happening between people in the city, at least between neighbours is increased and hence in time more charitable and friendly reciprocal behaviour can be expected. In other words social capital is likely to be fostered as trust levels increase and reciprocal behaviour in society becomes more common and frequent.

Exhibit 1: Administrative units of the AMC

Zone	Total no of wards	Area sq. Kms.	Population ('000s approx.)
Central	9	16.50	600
East	9	27.51	800
West	9	42.32	700
North	9	32.19	800
South	7	72.32	800
Total	43	190.84	3700

Exhibit 2: Main revenue Income of the AMC

Rs. in Millions

Year	Octroi	Property and other Tax	Non-Tax Income	Grant & Contribution	Total
1996-97	22,49.270	9,20.878	255.323	446.542	38,72.013
1997-98	2425.370	1009.368	301.337	471.257	4207.332
1998-99	2642.734	1190.081	358.774	558.385	4749.974
1999-2000	3094.013	1154.623	416.475	890.988	5556.099
2000-2001 (Budget)	3600.000	1700.600	1244.084	1628.805	8173.489
2001-2002	4050.00	1500.60	949.975	2151.72	8652.295

Exhibit 2a: Main sources of capital income of the AMC

Capital Income (2001-2002)	
Income Heads	Rs in Millions
Loan From HUDCO	1003.926
Loan From HDFC	109.360
NRCP Grant For Sabarmati River	470.687
Contribution for GIDC Affluent Disposal Scheme	23.287
Grant/Loan From Central Government For Slum Networking Project	70.000
Grant for MP/MLA For City Development Works	70.000
Contribution From Local Road, Water & Drainage Line	26.964
Loan From NHB For EWS Housing Scheme	70.000
10th Finance Commission Grant	62.500

Grant From G.M.F.B. For City Development Works	37.500
Grant From Zoo Central Authority For Development Of Zoo	2.500
Other Capital Income	1.018
Revenue Savings Transfer to Capital Account	790.000
Loans/Grants for fire equipments & solid waste machineries	1009.750
Grant for Slum Development	45.000
Grant for Slaughter House Development	41.231
Total Capital Income	3341.651

Exhibit 3: Main uses of Funds of AMC

Capital Expenditure (2001-2002)	
Expenditure Heads	Rs. in Millions
Road	408.424
Bridge	110.369
Water Supply	484.104
Sewerage & Drainage	249.406
Street Lighting	28.600
Works for Weaker Section	79.940
Building	412.357
Public Places	104.840
Motor & Transport Vehicle	533.450
Plant, Machinery & Equipment	562.259
Office Furniture, Fixtures & Fitting	87.000
Work from Grant & Contribution	<-
(a) Work for NRCP Sabarmati	470.687
(b) GIDC Affluent Removal Scheme	23.287
(c) Work from MP/MLA Grant	70.000
(d) Slum Networking Project	70.000
(e) Other Grants & Loans	312.500
Land	12.500
Urban Poor Housing Program	70.000
River Front Development Board	5.000
Total	4091.723

Besides capital expenditure AMC spends approximately Rs. 7000 million annually on non capital items e.g. establishment expenses, salaries and loan repayments.

Exhibit 4: Benefits to citizens from e-government at AMC

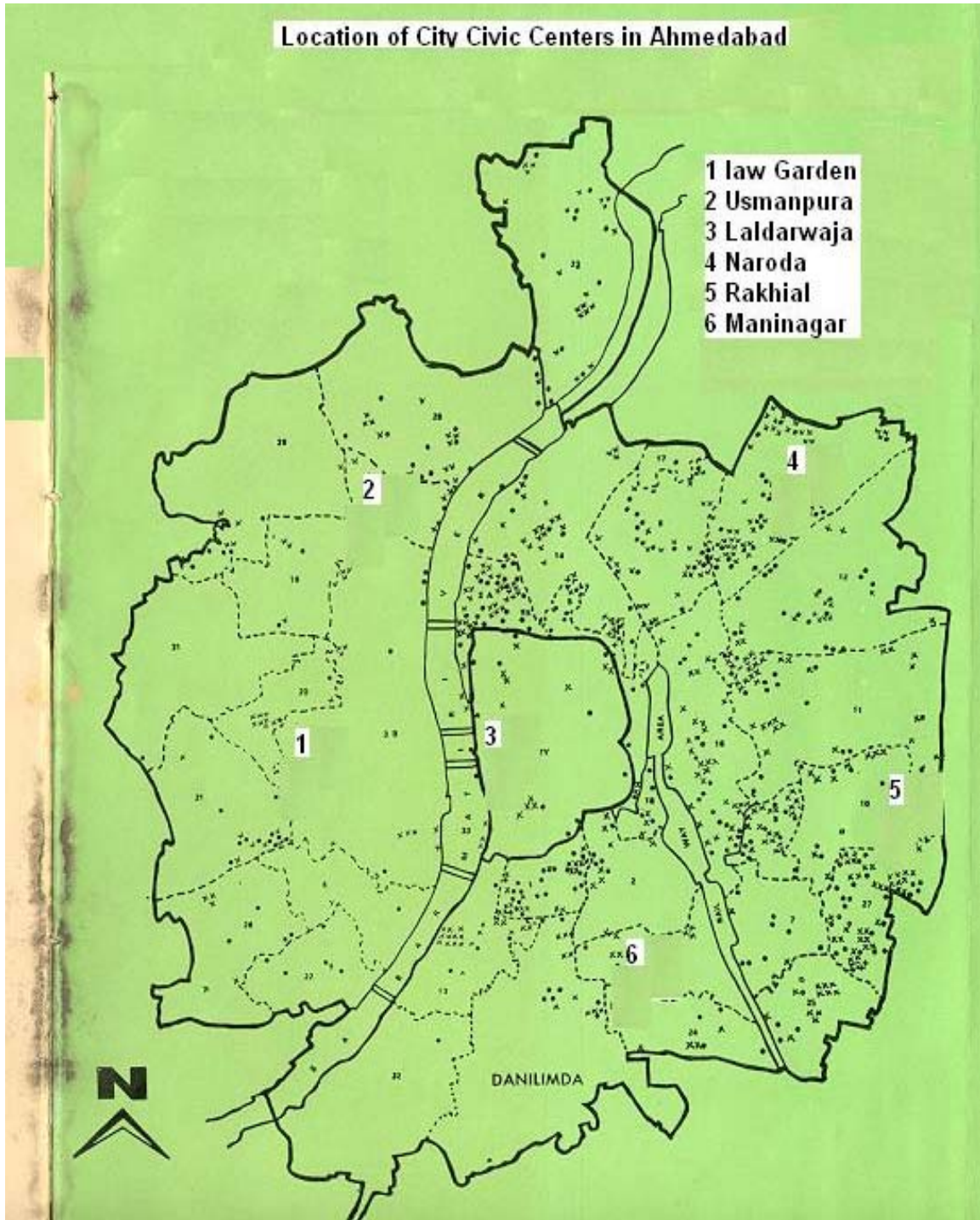
Application/Service	Before	After
Birth and Death certificates	Several days/multiple visits	Two days in most cases
Property tax payment	Hours, multiple visits	Under 10 minutes
Vehicle tax	Hours, multiple visits, evasion	Under 10 minutes
Building Plan approval	Average of 6 months	Instantly if application is in order, further refinements are in progress
Complaints	No way of knowing status, accountable person	Status known immediately, attended within 24 Hrs in majority of the cases
Licenses for shops and establishment	Several days, multiple visits and middle men	Under 10 minutes

Exhibit 5: Quarterly number of transactions under various accounts at one civic center

Item	Q1	Q2	Q3	Q4
Building Plan	58	58	30	23
Shops	988	3641	1100	638
Vehicle Tax	86	2283	464	599
Property Tax	1832	8159	24895	3779
Birth and Death	-	-	-	19
Total	2964	14141	26489	5058

Note: Q1=1st Oct, 2002 - 31st Dec 2002 etc.

Exhibit 6



Chapter 3: User Perceptions on Computerization of Road Transport Offices²

Andhra Pradesh has computerized all its operations and services related to issuance of driving licenses, registration of vehicles, issuance of permits, transfer of ownership, etc, under the name of Fully Automated Services of Transport (FAST).

This evaluation study analyzes the responses of citizens to the facilities at computerized road transport offices in Andhra Pradesh. For this purpose six centers have been chosen. Out of these six centers five centers are computerized and one center works with manual system. Warangal, Secunderabad, Ranga Reddy, Khairatabad, and Bahadurpura are computerized offices while Mehedipatnam has a manual system. The purpose of choosing one manual office was to find differences of perceptions, if any, amongst users of computerized and not computerized centers. Here it is important to mention that this is a preliminary study and the observations need to be confirmed by taking large samples.

Each location is evaluated on two dimensions: services and infrastructure. Variable like Timings, Procedure and Help Desk measure the department on services offered, variables like waiting space, water, canteen etc. measure the department on infrastructure offered to the citizens. The summary of data collected on these dimensions is presented in Exhibits 1 to 7. These exhibits are:

Exhibit 1: Perceptions of Users doing Transaction through Agents

Exhibit 2: Perceptions of Users doing Transaction on their Own

Exhibit 3: Perceptions of Users at Computerized Offices (Variables Vs. Education Level)

Exhibit 4: Perceptions of Users at Manual Offices (Variables Vs. Education Level)

Exhibit 5: Perceptions of Users At Computerized Offices (Variables Vs. Income Group)

Exhibit 6: Perceptions of Users At Manual Offices (Variables Vs. Income Group)

Exhibit 7: Time Taken for Various Services

The observations based on the analysis of the responses are as follows.

- On the location variable except the office in Warangal all other offices were considered to be at a good location.
- The timings are convenient to users in all the locations.
- The procedures at all the offices were considered to be above average. That implies that there were no unnecessary demands by in terms of bureaucratic processes.

² Study conducted by Ms. Monica Raina and Mr. Kapesh Mehta, under the guidance of Prof. Sanjay Verma, Center for Electronic Governance, Indian Institute of Management, Ahmedabad.

Table 1: User perception on Facilities

	Warangal	Secunderabad	Ranga Reddy	Khairatabad	Bahadurpura	Mehedipatnam
Location	Poor	Good	Good	Good	Excellent	Good
Timings	Average	Good	Good	Good	Good	Good
Procedure	Average	Good	Good	Good	Average	Average
Help Desk	Average	Excellent	Excellent	Excellent	Excellent	Excellent
Waiting Space	Poor	Excellent	Excellent	Good	Good	V. Poor
Water	Poor	V. Poor	V. Poor	Good	V. Poor	V. Poor
Canteen	Poor	V. Poor	V. Poor	Good	V. Poor	V. Poor
Toilets	Poor	V. Poor	V. Poor	Good	V. Poor	V. Poor
Telephone	Poor	Average	V. Poor	Good	V. Poor	V. Poor
Photocopy	Poor	Good	Poor	Good	Poor	V. Poor
Ambience	Average	Good	Good	Good	Good	Average
Overall Satisfaction	Average	Good	Good	Good	Good	Average

*Non-computerized office

- The services provided by Help desk at all the offices except Warangal were considered to be excellent.
- The infrastructural services like Water, Canteen, Toilets were considered to be poor at all the locations except Khairatabad. It should be noted that Khairatabad is one of the most important offices of the department and a person of the rank of Assistant Commissioner sits here.
- The ambience of all the offices were either average or better than average.
- Overall the citizen goes satisfied from the office.
- Computerization significantly achieves its objective if citizens feel confident of going to office and getting the work done rather than handing over the assignment to some agent. Table 2 shows that most of the citizens themselves get the work done, and do not avail the services of the agents. It is interesting to note that at Khairatabad and Bahadurpura not a single respondent was using service of the agent.

Table 2: Mode of Using Services

(Self Vs Agents)

Description	Bahadurpura	Khairatabad	Mehedipatnam	Ranga Reddy	Secunderabad	Warangal
Agent	0	0	14	8	10	1
Self	16	33	27	39	40	12

- No significant difference was found in perceptions of citizens doing self-service as against the citizens using agents.

Providing driving licenses to citizens can be considered as one of the primary activities of the 'Road Transport Office'. Driving licenses are of two types: learners license and permanent license. Permanent license is provided only after a learner's license has been prepared and the citizen has shown ability to drive the vehicle suitably following all the rules and regulations.

- If the time taken to prepare and deliver learner's license is considered, there are some variations in average time taken. While Secunderabad office takes 20 minutes to deliver a learner's license Ranga Reddy office takes 65 minutes to deliver the same (Table 4).
- For permanent license also any conclusive evidence that computerized offices take less time compared to manual offices.

Table 3: Comparison of User perception Categorized on mode

Parameter Name	Self Transaction		Agents	
	Computerized Locations	Manual Location	Computerized Locations	Manual Location
Location	Good	Good	Good	Good
Timings	Good	Average	Good	Good
Procedure	Good	Good	Good	Poor
Helpdesk	Excellent	Excellent	Good	Excellent
Waiting Space	Excellent	V. Poor	Good	V. Poor
Water	Excellent	V. Poor	Good	V. Poor
Canteen	V. Poor	V. Poor	V. Poor	V. Poor
Toilets	V. Poor	V. Poor	V. Poor	V. Poor
Telephone	V. Poor	V. Poor	V. Poor	V. Poor
Photocopy	Average	V. Poor	Average	V. Poor
Ambience	Good	Good	Good	Good
Overall Satisfaction	Good	Good	Good	Good

Table 4: Average time for Important Services

Purpose	Bahadurpura	Khairatabad	Ranga Reddy	Secunderabad	Warangal	Mehedipatnam*
License Renewal	120 (1)	125 (8)	35 (7)	41 (11)	91 (7)	102 (5)
Permanent license	23 (10)	165 (14)	15 (15)	34 (12)	70 (2)	40 (8)
Learners license	25 (3)		65 (15)	20 (15)	40 (1)	37 (14)
Suspension/ cancellation	20 (1)	73 (4)	31 (12)	23 (5)	90 (2)	27 (8)

*Non-computerized office

Exhibit 1: Perceptions of Users doing Transaction through Agents

	Warangal	Secunderabad	Ranga Reddy	Mehedipatnam*
Location	Marginal	Excellent	Good	Good
Timings	Average	Good	Good	Good
Procedure	Average	Good	Average	Average
Helpdesk	Average	Excellent	Good	Excellent
Waiting Space	Marginal	Excellent	Good	Poor
Water	Marginal	Poor	Poor	Poor
Canteen	Marginal	Poor	Poor	Poor
Toilets	Marginal	Poor	Poor	Poor
Telephone	Marginal	Good	Poor	Poor
Photocopy	Marginal	Good	Poor	Poor
Ambience	Marginal	Excellent	Good	Average
Overall Satisfaction	Marginal	Good	Good	Average

Exhibit 2: Perceptions of Users doing Transaction on their Own

	Warangal	Secunderabad	Ranga Reddy	Khairatabad	Bahadurpura	Mehedipatnam*
Location	Marginal	Excellent	Excellent	Good	Excellent	Good
Timings	Marginal	Good	Good	Average	Good	Good
Procedure	Average	Good	Good	Good	Average	Average
Helpdesk	Average	Excellent	Excellent	Good	Excellent	Excellent
Waiting Space	Average	Good	Excellent	Good	Good	Average
Water	Marginal	Poor	Poor	Good	Poor	Poor
Canteen	Marginal	Poor	Poor	Good	Poor	Poor
Toilets	Marginal	Poor	Poor	Good	Poor	Poor
Telephone	Marginal	Marginal	Poor	Good	Poor	Poor
Photocopy	Marginal	Good	Marginal	Good	Marginal	Poor
Ambience	Average	Good	Good	Good	Good	Average
Overall Satisfaction	Average	Good	Good	Good	Average	Average

**Exhibit 3: Perceptions of Users At Computerized Offices
(Variables Vs. Education Level)**

Education Group	Illiterate	Passed V	Passed IX	Matriculate	Passed XII	Graduate	Post Graduate	Prof. Course
Location	Excellent	Excellent	Marginal	Good	Good	Good	Good	Excellent
Timings	Good	Good	Good	Good	Good	Good	Average	Good
Procedure	Average	Average	Average	Good	Good	Good	Average	Good
Helpdesk	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Good	Excellent
Waiting Space	Excellent	Excellent	Good	Good	Good	Good	Good	Good
Water	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Canteen	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Toilets	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Telephone	Poor	Poor	Good	Poor	Poor	Marginal	Average	Marginal
Photocopy	Average	Marginal	Good	Marginal	Marginal	Average	Average	Good
Ambience	Good	Excellent	Good	Good	Good	Good	Good	Good
Overall Satisfaction	Average	Marginal	Marginal	Good	Good	Good	Good	Good

**Exhibit 4 Perceptions of Users At Manual Offices
(Variables Vs. Education Level)**

Education Group	Illiterate	Passed V	Matriculate	Passed XII	Graduate	Post Graduate	Prof. Course
Perception							
Location	Excellent	Good	Marginal	Good	Good	Good	Good
Timings	Good	Good	Average	Good	Good	Average	Good
Procedure	Excellent	Poor	Average	Average	Marginal	Marginal	Good
Helpdesk	Excellent	Good	Average	Excellent	Excellent	Good	Excellent
Waiting Space	Poor	V. Poor	Poor	Poor	Poor	Poor	Poor
Water	Poor	V. Poor	Poor	Poor	Poor	Poor	Poor
Canteen	Poor	V. Poor	Poor	Poor	Poor	Poor	Poor
Toilets	Poor	V. Poor	Poor	Poor	Poor	Poor	Poor
Telephone	Poor	V. Poor	Poor	Poor	Poor	Poor	Marginal
Photocopy	Poor	V. Poor	Marginal	Poor	Poor	Poor	Marginal
Ambience	Poor	Average	Average	Average	Average	Average	Good
Overall Satisfaction	Marginal	Average	Marginal	Average	Average	Average	Average

**Exhibit 5: Perceptions of Users At Computerized Offices
(Variables Vs. Income Group)**

Income Group	<5000	5000-9999	10k-14999	15k-19999	20k-24999
Location	Good	Good	Good	Good	Good
Timings	Good	Good	Average	Marginal	Average
Procedure	Good	Good	Good	Poor	Marginal
Helpdesk	Excellent	Excellent	Good	Marginal	Excellent
Waiting Space	Excellent	Good	Good	Good	Good
Water	Poor	Poor	Poor	Poor	Poor
Canteen	Poor	Poor	Poor	Poor	Poor
Toilets	Poor	Poor	Poor	Poor	Poor
Telephone	Poor	Marginal	Marginal	Marginal	Marginal
Photocopy	Average	Average	Average	Average	Average
Ambience	Good	Good	Good	Good	Average
Overall Satisfaction	Good	Good	Good	Marginal	Average

**Exhibit 6: Perceptions of Users At Manual Offices
(Variables Vs. Income Group)**

Income Group	<5000	5000-9999	10k-14999	15k-19999	20k-24999
Location	Good	Good	Good	Average	Good
Timings	Good	Average	Good	Poor	Average
Procedure	Average	Marginal	Average	Good	Marginal
Helpdesk	Marginal	Excellent	Excellent	Marginal	Good
Waiting Space	Marginal	Marginal	Marginal	Marginal	Marginal
Water	Marginal	Marginal	Marginal	Marginal	Marginal
Canteen	Marginal	Marginal	Marginal	Marginal	Marginal
Toilets	Marginal	Marginal	Marginal	Marginal	Marginal
Telephone	Marginal	Marginal	Marginal	Marginal	Marginal
Photocopy	Marginal	Marginal	Marginal	Marginal	Marginal
Ambience	Average	Average	Average	Marginal	Average
Overall Satisfaction	Average	Average	Average	Average	Average

Exhibit 7: Time Taken for Various Services

Purpose	Location	No. of Counters Visited	No. of Users	Minimum Time	Average Time	Maximum Time
Learners license	Secunderabad	1	9	5	16	30
Learners license	Ranga Reddy	1	5	5	11	15
Learners license	Bahadurpura	1	1	5	5	5
Learners license	Mehedipatnam	1	6	5	18	30
Learners license	Secunderabad	2	1	10	10	10
Learners license	Mehedipatnam	2	1	30	30	30
Learners license	Secunderabad	3	3	15	32	55
Learners license	Ranga Reddy	4	2	150	150	150
Suspension/cancellation	Secunderabad	1	1	40	40	40
Permanent license	Ranga Reddy	1	1	5	5	5
Permanent license	Khairatabad	1	1	120	120	120
Permanent license	Bahadurpura	1	1	5	5	5
Permanent license	Secunderabad	2	9	10	29	45
Permanent license	Ranga Reddy	2	4	5	11	15
Permanent license	Khairatabad	2	2	120	195	270
Permanent license	Bahadurpura	2	1	10	10	10
Permanent license	Mehedipatnam	2	1	30	30	30
Permanent license	Ranga Reddy	3	8	10	24	40
Permanent license	Khairatabad	3	2	120	120	120
Permanent license	Bahadurpura	3	2	20	23	25
Permanent license	Secunderabad	4	1	60	60	60
Permanent license	Khairatabad	4	1	240	240	240
Permanent license	Warangal	4	1	120	120	120
Permanent license	Khairatabad	5	2	120	150	180
Permanent license	Secunderabad	8	1	37	37	37
Pucca registration	Ranga Reddy	1	3	5	57	150
Pucca registration	Mehedipatnam	1	2	10	13	15
Pucca registration	Ranga Reddy	2	2	20	20	20
Pucca registration	Khairatabad	2	1	180	180	180
Pucca registration	Warangal	2	2	60	90	120
Pucca registration	Mehedipatnam	2	1	40	40	40
Pucca registration	Secunderabad	3	2	20	25	30
Pucca registration	Ranga Reddy	4	4	15	15	15

Fitness certificate	Secunderabad	1	1	10	10	10
Transfer of ownership	Mehedipatnam	1	2	5	18	30
License Renewal	Secunderabad	1	2	10	25	40
License Renewal	Bahadurpura	1	1	120	120	120
License Renewal	Mehedipatnam	1	1	30	30	30
License Renewal	Secunderabad	2	5	10	25	45
License Renewal	Khairatabad	2	1	20	20	20
License Renewal	Warangal	2	1	10	10	10
License Renewal	Secunderabad	3	3	15	43	65
License Renewal	Khairatabad	3	3	16	52	120
License Renewal	Warangal	3	4	30	83	120
License Renewal	Mehedipatnam	3	1	180	180	180
License Renewal	Secunderabad	4	1	70	70	70
License Renewal	Ranga Reddy	4	1	50	50	50
License Renewal	Khairatabad	4	2	30	75	120
License Renewal	Warangal	4	1	30	30	30
License Renewal	Khairatabad	6	1	360	360	360
Issue of temporary permit	Khairatabad	1	1	30	30	30
Issue of pucca permit	Khairatabad	1	2	30	60	90
Collection of life tax (P)	Ranga Reddy	1	1	2	2	2
Collection of life tax (T)	Mehedipatnam	2	1	8	8	8
International license	Secunderabad	1	1	40	40	40
International license	Secunderabad	3	1	50	50	50
International license	Secunderabad	4	1	70	70	70
International license	Khairatabad	5	1	90	90	90
DL related	Secunderabad	2	1	50	50	50
Others	Bahadurpura	1	1	5	5	5
Others	Mehedipatnam	1	1	5	5	5
Others	Ranga Reddy	3	2	5	8	10
Endorsement/addition	Secunderabad	1	1	15	15	15

Chapter 4: Evaluation of Regional Passport Office at Ahmedabad³

1. Introduction

The Regional Passport Office (RPO) at Ahmedabad was recently computerized. Computers were used to mechanize internal processes as well as to provide access to the citizens through internet. Services were web enabled so that citizens can minimize their visits to RPO and save time, effort, and costs in getting services.

Through this study, we evaluated the new service by collecting the experiences of citizens and agents. This report presents a summary of the study.

2. Computerized RPO Service Organization

The RPO is located in a newly constructed 5 storied building. The overall ambience of the place is quite neat and clean with arrangement for sitting, drinking water and security to manage the queue.

In all, there are 16 counters for various functions. These are:

Fresh Application fees collection	6
Scrutiny of Fresh Applications	3
Distribution of Forms	1
Counter for Senior Citizens	2
Enquiry Counter	2
Passport Delivery Counter	1
Miscellaneous Counter	1

The RPO daily receives more than 1000 fresh applications for passport and about 1500 applications, including miscellaneous functions, in all. A large number of applicants are found standing in the RPO premises due to this heavy rush. Many of them reach RPO early in the morning and many of them are from out station.

Due to this heavy rush, a large number of private agents approach the applicants offering assistance at some charge which varies from case to case.

There are shops for photocopying, telephone booths, Eateries etc., nearby the RPO.

3. Web enabled Service

RPO has recently launched Internet based service. Through this service, citizens can:

1. Enter basic details and obtain a date for submission of complete application
2. Enquire the status of a Passport Application

³ Study conducted by Mr. Dhawal Bhatia, Mr. Kalpesh Mehta and Ms. Monica Raina, CEG, Indian Institute of Management, Ahmedabad

It is expected that, the web based service minimizes the time and effort a citizen spends in obtaining a passport or the related services.

4. Application handling Process at RPO

In the case of fresh application for passport, the applicants will have to:

1. Stand in the Enquiry counter queue and take the appointment of Public Relations Officer (PRO)
2. Stand in the queue to meet PRO who gives a date for collection of the passport.
3. Reach RPO on the scheduled date to collect the passport from the delivery counter.

This process is same even for the persons applying through the internet. They will have to follow all manual processing steps. No priority number is given to them.

The operating times of the counters are:

- | | |
|--|---------------|
| 1. Accepting applications from citizens: | 10 am to 1 pm |
| 2. Accepting applications from Agents: | 2 to 4 pm |
| 3. Issue of the passports: | 4 to 6 pm |

These staggering time slots are expected to help citizens in ensuring that the queues are not too long.

As the counters are assigned specific tasks, the queue lengths vary from task to task. For example, there is practically no rush at the forms distribution counter since forms are available at the same price from the agents sitting outside the office.

However, long queues are noticed at the two enquiry counters which are meant for:

1. Citizens not aware of the application process.
2. Citizens who want to know further process steps.
3. Citizens who want the appointment with PRO (to resolve various problems in issue of passport: All the verification activity is done by the PRO)

In addition, there is a long queue to meet the PRO. On the average, each applicant spends around 4-5 hours in the queue.

4.1 Stages in Processing of Application Processing at RPO

Following are the stages in application processing at the RPO:

1. Accepting completely filled up forms at the reception counter after scrutinizing them against all documents submitted by the applicant and information required.
2. Entering 'basic data' into computer at the reception and assigning a file number.
3. Entering 'detailed data' at the back end (by different set of employees).
4. Indexing of the applications

5. Printing of the passports
6. Dispatching the passports

5. Perceptions of Citizens:

The study team has interviewed several citizens, who have arrived at RPO for the passport related services. Responses of nine representative citizens are presented in the Annexure-2. Following is a summary of citizen perceptions

- There is general lack of awareness on the e-Passport service launched by the RPO. Citizens still waste their time, effort, and money in making visits to passport office to know the procedures and status of their applications.
- Around 50% of citizens from remote towns were aware of the e-Passport service and saved their trips by querying the details on the RPO web site from cyber cafes in their towns.
- Queues at the counters are still too long. Citizens spend around 3 hours on an average at each counter. More counters and some self operated kiosks could solve the problem.
- Large number of citizens seems to be waiting on the wrong queues and waste their time. RPO needs to provide improved directions and educate the users.
- Citizens feel that they are often misguided by the RTO staff and sent to wrong queues. They feel that it is deliberate and doubt that the system is not free of corruption. They also feel that the staff is not courteous. Staff needs to be trained on customer relations.
- Citizens feel that manual system was more efficient. RPO staff seems to be taking more time to process the transactions on computer terminals. More training of staff perhaps would solve the problem.
- Although there are good sitting arrangements in side the RPO, citizens complain that the drinking water and toilet facilities are not hygienic.
- There is general dissatisfaction on the behavior of the security officials
- Citizens feel that extended hours, including on Sundays are desirable, even at extra charges are desirable to meet the demands.

6. Perceptions of Agents at RPO

There are around 50 agents at the RPO. Each agent is allowed to bring at most 10 cases per day. The study team has interviews several agents. Following is the summary of perceptions of the agents on the computerized services of RPO:

S. No.	Observation	Description
1.	Inadequate staff	The RPO staff strength is less than the number of counters. Thus mMost of the time all counters are not operated
2.	Inexperienced staff	Computerized system has introduced typing errors due to lack of experience of RPO staff with data entry. Computerization has introduced delays in the whole process Often the RPO staff members are not polite
3.	Increase in Costs	Costs have gone up due to slow printing and lamination processes of passports
4.	Benefits not fully realized	Computerized system has benefited only the RPO staff in minimizing their work through automation. It did not result in improvement of service to citizens or agents. Time allotted to agents (2 PM to 6 PM) can be decreased by 2 hours
5.	Incomplete e-Passport Service	Time is saved in entering data at the counter and definitely saved the time of all agents standing in queue with their application. However, it did not relieve them completely as they have to fill the form manually again. Often there are inconsistencies between the actual status and web server stored status of an application. This inconsistency has contributed to delays in application processing. For example, though the PCC has arrived according to manual register, the computerized status does not display the same. Agents experience that the web enabled service is currently very slow. They attribute it to the system not being equipped to handle simultaneous log-ins by all agents, to enter the application details.

7. Summary

The RPO through the computerization and e-Passport system has improved its system of processing and quality of services. At the time of this evaluation, the project seems to be passing through early stages of learning. The citizens are not fully aware of the system in the RPO as well as the services offered through RPO web site. Agents are critical of the quality of work after computerization. Our study indicates that attention is required on staff training, user education and technology tuning. It is clear that for the degree of complexity and sensitivity of the task handled by the RPO, and with a large user demand, there is no alternative but to use computers and extend e-services through web site effectively.

Annexure -1

Architecture of Systems and Applications

I. System Architecture

1. Servers :

- 2 Servers: Unixware 2.1 OS, Oracle 7.1 DBMS; 2*18 GB Hard disk drives. One of the Servers is used as a main server and other one as backup.
- 1 Server with Linux OS and 5* 18 GB Hard Disk Drives
 - Used as Image server to store the images of the photographs and signatures of the citizens. No backup for image server is available.
- 1 Server with WindowsNT

2. Nodes

- 50 dumb terminals attached to Unix server for data entry
- 20 windows clients for imaging and printing

II. Application Architecture

Application has been designed using Oracle Forms for the front end. The Client application for passport printing and scanning of images of photo & signature are designed using VB as front end.

2.1. Indexing

Indexing is a system of identifying retrieving the applications. The system followed at RPO is as follows:

1. For new applications, develop index using: Name, Father's Name, Sex and Date of Birth (4 index keys)
2. For the old data Index Cards are scanned and the whole card is stored as an image. It takes around 30-40Kb space per card for storage.

Each applicant's form goes for Indexing after the detailed entry of the application is done. The index key is generated automatically by a VB based application. But its altogether a different activity carried out by people dedicated to this task.

2.2. Printing

Passports are printed with the help of a special printing device, which prints the photograph and the basic entries on to the passport. It takes around 40-50 seconds to print one passport. This printing process has helped in eliminating fake passports, since it is difficult to print photos on the fake passports and it is not possible to replace the photos on the genuine passports.

2.3. Record Keeping

Each data record of each passport application takes around 2Kb of storage. Images of each applicant's photo and signature take around 10 Kb. This 12 kb of data of each record are stored in the Image Server. Total size of the data till now is around 3 GB. So they have around 15 GB disk space still free and it would take around next 10 years to fill the complete storage.

Each image is stored in the following way to locate file easily. The format is Image/Year/Month/Date - These all are the folders and photo file and the signature file are stored inside the date folder. Eg. Image/2003/Jan/22

2.4. Website

The website for the online passport office is hosted at National Informatics Center (NIC), Gandhinagar. The URL is: <http://quj.nic.in>

Every evening, minimal information of all applications is extracted from the database on RPO server and sent to the NIC, Gandhinagar as a text file. At Gandhinagar this is imported into the SQL Server and made available on the site.

In its current form, the website accepts only few details from an applicant. These data elements are accessible by the RPO staff to prepare the applicant files. However, he has to take the print out of the data and fill up the manual form, physically get index card, fill it up and then execute all the manual processes.

Annexure -2: Perceptions of Representative Citizens

No	Purpose of Visit	Experience	Remarks
1.	To meet PRO regarding problem with application	<p>Applied for passport 8 months back at Bhuj collection center.</p> <p>Came from Bhuj was waiting for his turn in the queue to meet PRO.</p> <p>RPO web site also remarked that a letter has been sent to him on this. Did not receive such letter till now.</p>	<p>Happy with RPO website services. Could check application status from Bhuj (450 km away). Saved time, effort and money.</p> <p>Thinks that IT literacy helps in solving problems easily. But it may take some more time to see complete results.</p>
2.	<p>To collect Passport.</p> <p>Used RPO web site from Bharuch (220kms away).</p> <p>Status indicated that the passport is ready.</p>	<p>Required passport immediately to write exams.</p> <p>Applied through the normal mode, stating the reason for immediate requirement.</p> <p>Met the PRO twice, got dates to check out but not the passport yet. Has to take leave from job for each visit.</p>	<p>One more location to distribute passports speeds up the process</p> <p>A queuing system should be in place. Enquiry time of 5-6 hours should be reduced.</p> <p>Opening RPO on Sundays and holidays would benefit citizens (charge additional fee if required).</p> <p>Corruption is still on. Staff accelerate the application processing on speed money.</p>
3.	<p>Renewal of son's passport.</p> <p>Applied 2 years back. Renewal not done so far.</p>	<p>This is second visit in the week.</p> <p>on the first visit, waited at the enquiry counter 3 hours, was asked to fill the P Form and submit at the counter.</p> <p>After submitting the form, was told that it is not required and was asked to stand in the enquiry queue again.</p>	<p>Feels misguided by staff.</p> <p>Feels that old system is better as there exists scope to get the job done much faster by offering some speed money.</p> <p>Not aware of the internet facility.</p>
4.	New Passport application for wife	<p>Applied 8 months back.</p> <p>Did not get the passport even after several trips.</p>	<p>RPO staff members are not cooperative.</p> <p>When applied for passport in 2001, got it without hassle.</p>
5.	To collect the Police Clearance Certificate (PCC) Applied for a new passport through Tatkal scheme. Obtained passport within a month	<p>First waited in enquiry counter queue for around 2 hours.</p> <p>Was informed that PCC has arrived (through computer query at the counter) and was given appointment of PRO.</p> <p>Standing in queue to meet PRO. It may take around 3-4 hours more in PRO queue.</p>	<p>Quite aware of all the things and so was satisfied with the service.</p> <p>Only problem he experiences is long queues and waiting times, since office is understaffed.</p>
6.	Applied for change of name of his wife through Tatkal.	<p>On the first given date, after waiting long in the queue, was informed that the work is still pending and was given a new date (after 10 days).</p>	<p>Not satisfied with the efficiency of computerized office.</p> <p>Processes must be much faster and certain manual</p>

		On the stipulated date (today) was told (through enquiry queue) that the passport is ready. Now waiting for his turn to meet PRO who will give him the counter number to collect the passport.	steps should be cut down. Loosing salary and time as the passport was not given on the stipulated date.
7.	Son's passport	Ahmedabad RPO is slowest in issuing of passports. Each time original documents are required. Computerized system seems to be taking much more time than the manual system. Information on checklist of documents can be obtained by calling up agents on their mobile and there is no need to stand in a long queue at the enquiry counter for this.	One has to stand in a queue for hours outside RPO premises. Good sitting arrangements inside the RPO. Security officials are very rude in their behavior. Drinking and toilet facilities available, not very hygienic. Service charges have gone up from Rs. 150 to 1000 without any additional benefits.
8.	Wife's passport; to find PCC status (NRI). PCC has arrived but passport not issued yet.	This is his fifth visit to RPO. On the fourth visit, he could not get the service as the counters were closed by the time his turn came. Enquiry official refused to process his case. Not happy with the attitude of staff.	Feels that there are no citizen services at RPO. Security is very rude. Not aware that a facility to fill the application is provided at a nominal fee of Rs. 20.
9.	Re-issue of damaged passport. Applied on Tatkal scheme	Second visit to RPO, from Anand (90 kms away); first visit was to find out the list of documents required for a damaged passport case. Queues are very long. Missing the turn implies another visit next day from Anand, without any guarantee of turn on the next day also. A number of additional proof certificates required by the collector to issue a VCC needed by the RPO in damaged cases.	The queues are very long In the manual system earlier, got the passport in 2 months and now it is almost 7 months. No separate queues for senior citizen and handicapped people. Not aware of RPO web site and services

Chapter 5: Mahiti Shakti of Godhra District, Gujarat: An Evaluation⁴

1. Introduction

Godhra is the largest taluka of Panchmahals district in Gujarat lying on the border of Gujarat and Madhya Pradesh. It lies in the “tribal belt” as the majority of the population in rural Godhra belongs to scheduled tribes category. The population of Panchmahals district, as per 2001 census, is approximately 20 Lakhs, out of which the working population comprises of 48.29 percent. Overall literacy rate is 61.5 percent with male literacy at 76.62 percent and female literacy at 45.43 percent.

The Mahitishakti project was started as a personal initiative of the then district collector of Panchmahals district, Ms. Jayanthi Ravi, with the major objectives of providing:

- Transparency:
 - Periodic display of the progress/status of schemes and plans.
- Right to Information:
 - Empowering the consumer of information.
- Demystifying the office:
 - Addressed with due support & access mechanisms

The proof of concept model including the portal software was developed by Centre for Electronic Governance, Indian Institute of Management, Ahmedabad (CEG-IIMA) as a research project. This portal was launched in October' 2001 across 14 locations. Subsequently, Gujarat Informatics Limited (GIL), the IT agency of Gujarat government, has engaged a private solution provider for development and servicing a packaged version of the portal. At the time of study, the Mahitishakti portal was fully developed and hosted by the private vendor and 78 Mahitishakti Kendras were supposed to be operational in Godhra taluka. Broad project details are given in Annexure -1.

2. Mahitishakti Services

The Mahitishakti project offers the following services:

1. Government forms along with list of documents to be attached with the form at the time of submission at 10 Rs. per form. Details, of the office to which each of these application forms are to be submitted, are also indicated along with the time prescribed for the disposal of the application.
2. Information pertaining to ongoing schemes like those under the DRDA (District Rural Development Agency), DPB (District Planning Board), TASP (Tribal Area Sub Plan). Details like the name of the scheme, names of beneficiaries sanctioned in the last financial year, details of work undertaken, name of agency implementing the scheme and current status etc. are also made available under this service.

⁴ Evaluation Study conducted by Professor Rekha Jain and Mr. Asish Bhatia, CEG, Indian Institute of Management, Ahmedabad

3. The web-enabled version of the Gujarat Geographic Information System (GGIS) developed by RESECO giving details of the resource availability in terms of 95 parameters of every village of the district is available on a query- based system.
4. Electronic newsletter in the portal Mahiti Mahisagar featuring medical help, Legal help, Science corner, Children's corner etc.
5. Grievance Redressal Forum
6. Electronic form submission for applications such as NOAPS (National Old Age Pension Scheme), Water related grievances and the Ration card application.
7. Opinion Poll on important issues pertaining to the public
8. Chat with the Ministers and Senior officers of the district.
9. Access to the electoral roll for anybody requiring the information for a useful purpose.
10. BPL List (List of people Below Poverty Line)
11. "Lok-Upyogi Mahiti" is a very important feature which provides useful information for citizens based on the experience, case studies and documentation of NGOs and other Agencies.
 - a) Material on Irrigation from Development Support Center, an NGO specializing in that field.
 - b) Material on Legal Literacy carefully prepared by the State Legal Aid Authority.
 - c) Material in the local tribal dialect prepared by the BHASHA Sansthan on various features of the IPC, CrPC etc.
 - d) List of over 1000 tested blood donors with details of their group , addresses and telephone numbers prepared by the initiative of LARA Foundation, Godhra.
 - e) Useful information on over 30 specific crops grown in Panchmahals giving details of the seeds, fertilizers, insecticides , pesticides and organic manure etc. carefully and exclusively prepared for the portal by the GSFC (Gujarat State Fertilizer Corporation) Foundation.

3. Service Delivery Model

The Mahitishakti project is designed to offer its services through internet kiosks called Mahitishakti Kendras (MSK), which can be operated at STD-PCO (Subscriber Trunk Dialing – Public Call Office) booths, cooperative society collection centers, cooperative banks, and provisional stores. Every MSK owner has to pay a deposit amount (refundable) of Rs. 5000/- and a yearly fee of Rs. 3000/- for the administrative and maintenance expenses of the portal. In return, the MSK owner gets a CD (compact disk) every three months containing the offline website and support in form of one time

training session in which they are taught about using the computer, internet and other popular software like MS-Office, Acrobat Reader etc.

There is a central project office which co-ordinates with MSK operators and the managing committee. Details about the project office and management committee are provided in later sections. The website maintenance and development has been outsourced and is being carried out by an Ahmedabad based firm. For technical assistance, help of the local NIC (National Informatics Center) officer is sought from time to time on informal basis(NIC is not officially attached with the project).

4. Evaluation

Evaluation of the project is done by visiting the project locations, interviewing users, kiosk operators, and management of the project and observing the actual usage pattern of MSKs. The project was studied on the dimensions of its service delivery, Infrastructure, Users, Project Personnel, Kiosk operators, Project Team and Management Structure. Sections below summarize our observations of this study.

4.1 Service Delivery

The day-to-day operations of Mahitishakti are being handled by a government official of the rank of deputy mamlatdar. The local National Informatics Centre (NIC) officer informally supports him in data entry and software maintenance.

It was observed that forms were being sold at a brisk pace from some of the MSKs surveyed. However, the shopkeeper in question was keeping a photocopy of the forms and selling it to the customers. In some cases, the shopkeepers had not even bothered to keep the mandatory computer at their premises. Partly, the department is responsible for this, as they have been promoting forms more than any other section and partly because forms have a ready market which was flourishing before the website came into existence.

Apart from the forms, comprehensive information about various government schemes is available on the web-site. Also, the electoral rolls at the time of research visit were almost complete and were being sent to MSK operators in a CD format. However, there is very little usage of this aspect of Mahitishakti owing to poor publicity / awareness levels.

Other parts of website, like contacting the government departments for grievance redressal are not functioning to a large extent. The reason for this partly lies in poor back-end integration and support, wherein the complaints first come to the website manager then they are distributed to the concerned government officials. Also, the fact that most of the government officials at the district level are not comfortable with usage of computers adds to the whole issue.

The dynamic aspects of the project like chat with ministers, senior officers and opinion polls were not functional at the time of this study.

At present, there is no separate mechanism for follow up of complaints made either online or off-line and the complaints made are taken up during the monthly meeting of district collector with various department heads. In practice, the MSK owner often acts as an agent between the customer and the government department and often gets the complaint solved on his own. The complaint redressal is dependent, largely on the personal initiative of the officers concerned.

A table containing names and other details of kendras visited by the evaluation team is given in Annexure 2.

There are problems of clashes in business practices with different types of businesses. For example, a customer in an average village retail shop never comes inside the shop. Instead he /she places the order from the counter itself and the shopkeeper gets the goods required to the counter and takes the money. Applying the same sequence to Mahitishakti transactions, the only service which lends itself readily to the existing process is the sale of government forms, which can be sold in a short time span and the decision to buy the form is usually pre-determined on the part of the customer.

The only shops, which require customers to come inside the premises, are STD-PCOs or those providing some other services like DTP, typing etc. The infrastructure in the villages make it difficult to access the Internet. Phone lines often do not connect to the ISP server (on an average, it takes about 30 minutes to connect to the server and the connection does not sustain for more than 10-15 minutes in the rural areas). Hence most of the work is being done offline.

4.2 Infrastructure

Mahitishakti is an Internet based project. All the MSKs have to log on to the website and download information. Alternatively, CD's, containing static information, have been provided to each MSK operator.

At the project office level, the officer-in-charge of the project, a deputy mamlatdar, sits in the collectorate compound. The office consists of a room for the project manager and a computer. Apart from the project manager, some data entry staff were sitting in a separate room.

At the MSK level, it is usually a existing shop with some other business like retail shop or STD PCO, which function as Mahitishakti kendra. Therefore basic infrastructure like electricity, telephone is usually available from existing business itself.

4.3 Users

Panchmahals district in Gujarat lies in the tribal belt and majority of the population in rural Godhra belongs to scheduled tribes category. Most of the users are traders / large farmers / government employees, who prefer to buy the forms from Mahitishakti kendra instead of going to the concerned government office.

Women have been mainly using the services (<5% of total users, as per our estimate from the registers of MSK owners) to buy forms related to Old Age Pension and Mother Child Allowance etc. There are no services specifically targeted towards women.

After a form has been bought from an MSK, it is either submitted by the citizen directly to the concerned department of the district administration or the shopkeeper deposits it on the citizen's behalf for a fee. Thus the citizens currently realize the benefit to the extent of saving trips to the district offices to obtain the forms.

Almost all the interviewed users are not aware of services other than forms from MSKs.

4.4 MSK Operators

Many MSK operators own stationery or STD/PCO shops and before Mahitishakti started, were selling government forms on their own. MSK operators being local persons, they have good knowledge of local conditions. The MSK operators have taken a MSK in order to earn good profits from it in addition to the initial 8000 Rs charged by the Mahitishakti samiti as empanelment fee.

The training imparted to the MSK owners is perfunctory. The training included an officer going through all the functions on a computer and MSK owners watching the same on a projector screen. Almost none of the MSK operators got a chance to use the computer by themselves. This, coupled with a very little understanding of computers / internet and the possibilities of internet is also responsible for low usage of the portal.

Since the MSK operators are not social workers and are not trained on other information dissemination features of Mahitishakti, they have not attempted to understand and promote such services which are stated to be the main objectives of the project.

4.5 Project Officer

The day to day operations are handled by a deputy Mamlatdar (who also has a charge of a separate department). Apart from the Deputy Malatdar, there is no other senior or technical person designated for the project. The project officer is responsible for co-ordination with management committee and the operators. He is also responsible for arranging for day-to-day operations of the project.

Absence of support staff to carry on routine functions of the project means that the project manager has to run around for every small thing that crops up during the day. Symbolically it also conveys administration's disinterest in the project, as resource allocation is often a good indicator of a project's importance in a bureaucratic setup.

4.6 Management Structure

A trust at district level has been set up with the district collector as the chairperson and District Superintendent, District Development Officer, District Registrar of co-operative societies and District Treasury Officer as members with the project nodal officer as the member secretary.

Mahitishakti project has a very similar setup to Gyandoot and has similar strengths and weaknesses. Major weakness of this system, as pointed out in the Gyandoot study, is that the top team gets transferred every two to three years resulting in a change of pace and direction for the project. On the other hand, District collectors are normally IAS officers with a good grasp over administrative matters and are in regular touch with end users. This can be a strength for the project if collectors are involved in strategy formulation and service delivery aspects of the project.

In our opinion, the project needs to have a project champion in the government setup at the central or state level. Unless this is done, sustainability of the project would depend upon the district administration which may or may not have an interest in running the project.

5. Conclusions

Our observations are summarized below:

1. The project champion was dynamic during the project conceptualization stage and networked with several contributors like CEG-IIMA, RESECO, NIC, etc. Thus the Mahitishakti portal turned out to be feature rich with most of the useful data populated.
2. A factor that is important to the success of e-Governance projects is to ensure acceptance of the project by the government/administrative machinery by
 - Specifying clear role of the project in terms of its place in the overall IT and or development policy of the state and,
 - Designating a "project champion" with sufficient authority to address the interests of the project.

Mahitishakti project is the creation of a prominent 'project champion', the collector of the district. However, the employee buy-in appears to be the weak link in the project. That is why, the back-end services did not integrate well with

the portal promises. The officers in various departments have not demonstrated interest in the computers and computer based services of Mahitishakti.

3. It is important to address the efficiency and efficacy of kiosk operations by following rigorous standards of training the operators, since the services are delivered through them.

At Mahitishakti, the operators were trained by “showing” them how to operate a computer, as the instructor operated the computer without giving them hands-on practice. This training program was conducted over a period of two days. Most of the operators had minimal previous knowledge of computers. It is obvious that an operator trained in such a way would not be able to deliver services effectively. Due to this limitation, the MSKs have turned out to be just forms vending shops that too only by the existing forms agents.

4. Credibility of the project, as perceived by the end-user, has been neglected in this project. Gaining credibility involves building trust in the services offered by delivering the promised services and a constant feedback loop between project implementation team and the end-users. The project leadership, as well as the concerned government employees could have addressed this problem seriously.
5. For the success of social development based e-Governance projects, it is important to design the project to address social realities in terms of caste, gender and wealth and incorporate measures in the project design that deal with these issues. Mahitishakti’s implementation failed in addressing the social factors such as gender bias and caste equations.

Annexure -1: Project Details

Project Title		Mahitishakti
Objectives		Dissemination of Government information
Delivery Mechanism		District Administration
Management Structure (Trust)	Head	District Collector
	Management Team	District Superintendent, District Development Officer, District Registrar of co-operative societies and District Treasury Officer as members Project nodal officer as the member secretary
Operations team		Deputy mamlatdar District information Officer
Manpower		<5
Governing Body		District administration
Implementing Agency		District administration
No. of Sites		78
Budget		Rs 78*8000 + Rs 1.3 million
Source of Funds		Internal + UNDP
Operational Since		October 2000
Technology Used		Internet

Annexure 2: MSKs in Panchmahal District

No.	Name of MSK Owner	Place	Operational Since	Status	Computer Skill*
1	GirishKumar Joshi	Godhra	August 2001	Fully Operational	4.5
2	Akbari Saifuddin Dalal	Godhra	May 2002	Partially Operational	3
3	Raval Rupaben Vinodkumar	Godhra	August 2001	Fully Operational	5
4	Ashish Prajapati	Halol	March 2002	Non - Operational	4
5	Bhatt Kishorkumar	Halol	February 2002	Non - Operational	-
6	Shah Pragnesh Jayeshkumar	Halol	February 2002	Partially Operational	3.5
7	Shah Jyoti Rakeshkumar	Jambughoda	April 2002	Non - Operational	1
8	Patel Binita	Kalol	May 2002	Partially Operational	3
9	Gohil Ajaysingh	Kalol	April 2002	Non - Operational	3
10	Parmar Vijaysingh	Kalol	August 2001	Fully Operational	3

* Skill Attributes:

Skill	Capabilities
1	Can switch on /off a computer
2	Can use the interface to navigate
3	Can connect to internet and use basic functions of MS Office and Acrobat reader
4	Can use MS Office and Acrobat reader without any difficulty
5	Has some programming skills

Chapter 6: E-Government at Road Transport Office, Ahmedabad: An Evaluation⁵

1. Introduction

The Road Transport Office (RTO) at Ahmedabad in Gujarat has completely automated three of its major services as an e-Governance initiative. These services are:

1. Issuing of Driving Licenses
2. Registration of Motor Vehicles
3. Collection of Vehicle Taxes

Gujarat state has 25 RTOs and 10 check posts in all. At the time of this study, 19 RTOs are computerized. Amongst them, three RTOs (Ahmedabad, Rajkot, and Surat) are the largest ones. The driving license and vehicle registration systems are computerized at all 25 RTOs of the state. The vehicle tax collection system at check posts is also working at all 10 check posts of Gujarat.

This evaluation study captured and analyzed responses of citizens, agents, and RTO employees to understand the impact created by this e-Governance project. Subsequent sections of the report present the e-Governance systems at RTO and their assessment by the study team.

1.1. Driving License System

Smart Card based Driving License System was introduced in India, for the first time in Gujarat. With the introduction of this system, the process of issuing of fresh licenses and renewals was significantly simplified. The time and effort required by an applicant to complete the process and obtain the license is drastically reduced from few days to few minutes. In addition, the smart card offered benefits such as storing and retrieving vital information about the citizen (name, address, blood group, finger prints etc.). Systems were also developed to record traffic offences on the smart card memory.

To facilitate the license services the RTO office is equipped with 15 nodes spread across three locations. At each location one node is dedicated to card printing and the other nodes are used for the data entry, capturing thumb impressions, signatures and photographs of the applicants. Each applicant is given a token number upon submission of the form. On an average, one complete transaction takes around 6 minutes. An electronic display board displays the token number of the applicant whose card is ready, so that the applicant can utilize his time better rather than waiting in the queue.

The driving license counters are managed by a private service provider. These counters are open from 8:30 AM to 6:00 PM. and extend to 7 PM, heavy rush. A license fee of Rs. 250 is charged from the citizen and the service provider is paid Rs. 50 per license issued through its counter.

⁵ Study conducted by Mr. Dhawal Bhatia, Mr. Kalpesh Mehta and Monica Raina under the guidance of Prof. T.P. Rama Rao, CEG, Indian Institute of Management, Ahmedabad

1.2. Vehicle Registration System

Optical Card based Vehicle Registration System was introduced simultaneously with Smart Card License system in Gujarat. The main objective was to simplify the procedures associated with the registration of motor vehicles.

Through this computerization, the time required by an applicant to complete the process and obtain Vehicle Registration on Optical Card, is drastically reduced from few days to few minutes.

In this system, the citizen or the vehicle dealer or the agent approaches the RTO registration counter with the vehicle registration form after the vehicle is examined by the concerned department and cleared by it. At the counter, the data entry of the registration details takes approximately 10 minutes. The next step which takes another 5-6 minutes, involves capturing of finger prints and photograph of the owner and the chassis number of the vehicle into the database. The subsequent steps involve obtaining a printout of the complete record, sending it manually to the head clerk for verification, receiving the verified file with any recommended changes, printing the registration card, after incorporating changes in the database, and sending it to the RTO from where the citizen collects his optical card. The complete process takes two days.

The optical smart card (OSC) used for vehicle registration contains two chips into it. One is used to record one time write data which contains the vehicle number and the chassis number. The second chip can be updated as and when required and contains penalty information, taxes and other variable information required.

The project is into its initial stages but once complete connectivity is established, offences can be written on the OFC on the spot by the inspectors having the gadgets to write onto the OFC.

The system does not have any facility of rewriting or making any changes in the smart card issued. For any transfers or renewals a new smart card is issued. RTO gives the option of obtaining the manual RC book along with OSC at an additional charge. The optical smart card is issued to the holders along with a print out of the form no 23 which is equivalent to an RC book so that the holder can use it in other states which do not have a smart card reader.

The charge for a vehicle registration card for two wheelers is Rs. 200, four wheelers is Rs. 400 and for heavy vehicles it is Rs. 600. This is in addition to the RTO fee for obtaining a registration book.

The counters are kept open from 10 AM to 6 PM.

At the time of study, there are very few citizens opting for the OSC based vehicle registration. Getting a smart card is optional and citizens can opt for an RC book issued through the manual system. Currently, citizens prefer the manual process since any changes or renewals can be done in the book itself and are done with the help of an agent and he need not come personally to the RTO office for the second time.

The RTO staff find that in the manual system, access to data was taking very long time and entry of stolen vehicles was done but without any advantage to the police. In the

computerized system, entry of stolen vehicles is immediately done and any information regarding a vehicle is available at click of a button. Till date around 100,000 OSC registrations have been issued

1.3. Vehicle Tax Collection System

The third major e-governance application at RTO is computerization of vehicle tax collection system. It has simplified the process for the citizens as well as the RTO staff.

Typically, the tax payment process involves: filling the prescribed form, get it assessed from the sub accountant, paying cash and get a receipt (before 2:00 PM), and finally getting an entry in the tax book and tax index card.

For transport vehicles, a government schedule containing the information related to tax is available with the head clerk in which the percentage tax depending on the vehicle type is given. Commercial vehicles such as auto rickshaw have to pay a life time tax while trucks have to pay every six months or twelve months. The tax is collected according to the financial year.

For cases pertaining to transfer of vehicles, a clearance certificate is required to verify that no pending penalties/memos or offences are registered on the vehicle number. In addition, an order form from the RTO is also required to be submitted.

Demand notices are given to those who have not paid the tax for their vehicles. *Vehicle under stoppages* are those against whom some complaint has been registered with the RTO or some action is to be taken.

The Taxes and Permits System can go online but it requires vehicle database to be first created. The data entry for 70 lacs vehicles is under process and approximately 20 lacs of vehicle have been entered.

In the six cash receipt counters a total of 5000 to 6000 transactions take place daily

Around 100 transactions are processed per day in the tax department, of which 90% are from agents. This is since the citizens are not aware of the documents required and filling the form.

1.4. Service Management

The Gujarat government has outsourced the software development activity to a private partner. It also appointed a software and hardware consultant to speed up the computerization process. The National Informatics Center (NIC) is helping the State Vehicle Transport department by offering technical guidance since last few months. The NIC software systems like "Saarathi" and "Vahan" which are being implemented in other states are also being considered for Gujarat.

The day to day operations service is contracted to a private service provider. The service provider's staff manages the smart card driving license and the vehicle registration counters.

Policy decisions on sharing of data between the RTO staff and the staff of the third party service provider (who is running and maintaining the software), are being taken, so that a complete integrated solution gets in place. Right now only printing rights on old data and entry of new records is given to the private service provider.

2. Evaluation

The study team conducted the evaluation by collecting the data on site through structured instruments as well as unstructured interviews. The stakeholder wise observations are presented in the sections below.

2.1. Perceptions of Citizens

The following categories of Citizens were administered structured questionnaires:

1. Citizens applying for Driving Licenses on their own
2. Citizens applying for Driving Licenses through Agents
3. Citizens applying for all other services (OSC, Tax) on their own

Data was collected through structured instruments on several attributes of the project. Six of them found to be significant. These are – procedures, timings, helpdesk, location, ambience and overall satisfaction. A summary of their responses is presented in the tables below. To get the over all picture, a weighted score for each attribute is obtained by multiplying the percent respondents of each option by a weight and dividing the weighted sum by 100. The weights assigned are: Excellent -5, Very Good – 4, Good -3, Fair -2, and poor -1. The last column of each table has the weighted score as WScore.

2.1.1. Citizens applying for Driving Licenses on their own

S.No	Attribute	% of Respondents perceiving the attribute to be:					WScore
		Excellent	Very Good	Good	Fair	Poor	
1	Procedures	30	10	10	40	10	3.1
2	Timings	30	10	20	30	10	3.2
3	Helpdesk	20	0	20	20	10	3.0
4	Location	10	0	20	20	50	2.0
5	Ambience	10	0	20	50	0	2.6
6	OA Satisfaction	10	0	50	20	10	2.8

It can be seen from this table that these citizens are quite satisfied with the timing, procedures, and the helpdesk. However, they are dissatisfied with the location, and have mixed opinion on ambience of the service location. The overall satisfaction is above average.

2.1.2. Citizens applying for Driving Licenses through Agents

S.No	Attribute	% of Respondents perceiving the attribute to be:					
		Excellent	Very Good	Good	Fair	Poor	WScore
	Procedures	30	10	10	40	10	3.1
	Timings	30	10	20	30	10	3.2
	Helpdesk	30	0	30	30	10	3.1
	Location	10	0	20	20	50	2.0
	Ambience	12	0	25	63	0	2.61
	OA Satisfaction	20	0	50	20	10	3.0

It can be seen from this table that these citizens are quite satisfied with the procedures, timings, and the helpdesk. They are reasonably satisfied with the ambience (since they do not spend much time at the location). These citizens are also dissatisfied with the location. The overall satisfaction is quite good compared to those citizens who get the service on their own.

2.1.3. Citizens applying for all other Services

S.No	Attribute	% of Respondents perceiving the attribute to be:					
		Excellent	Very Good	Good	Fair	Poor	WScore
	Procedures	18	3	21	48	9	2.7
	Timings	18	12	21	44	6	2.9
	Helpdesk	25	4	28	39	4	3.1
	Location	6	0	26	47	21	2.2
	Ambience	6	0	52	39	3	2.7
	OA Satisfaction	11	0	56	22	11	2.8

Citizens obtaining all other services like tax payment, vehicle registration etc., are highly satisfied with the helpdesk. They are also satisfied with timings, ambience and procedures, but not to the extent of other categories of citizens. Interestingly, this group is dissatisfied only with the location.

2.1.4 Observations based on unstructured interviews

- The electronic display system kept outside the RTO building helped them in knowing the approximate time of their turn and planning their time productively.
- It still takes around 4-5 hours to complete the process of obtaining driving license. Should try to cut down this time.
- Ahmedabad being a big city, the current location (RTO office) is far and the service must be distributed to more convenient locations in the city.
- The amenities provided are not hygienic and the directions to their locations are not clear or absent. Quite a few citizens were not aware of the locations of these amenities.
- The optical smart card is very costly. Since the service providers are using government infrastructure, they should bring down their charges. No government receipt is given for the component of fee charged by service providers.

2.2. Perceptions of Agents

Since the population was low, responses from agents were obtained only through interviews. Following is the summary of responses of the agents:

The agents in general are critical of the new system. They feel that there are loopholes in the computerized system. Their feedback is summarized below:

- The process at optical smart card counter for issuing new cards is faster than the manual system but slower in case of older registration books coming for renewal or transfer.
- Though the same optical card was issued still the rates were different for different category of vehicles.
- No official government receipt was given for the additional money collected for the optical card to the citizen.
- The quality of smart card issued has significantly reduced as compared to earlier smart cards
- The quality of printing has come down
- The number of computers operational and working staff had decreased over time
- There is no check on the number of smart cards a citizen was getting issued
- Duplicate smart cards are not issued. Instead, a new smart card with different number is issued every time an application for duplicate smart card came.
- In the Computerized system, for renewals or changes, the citizens are forced to get a new optical smart card, which is costly. Where as in the manual system, only a simple entry was made in the RC book.
- The RTO has adequate staff and there is no need to have private service provider's staff for the routine work.
- Optical smart card vendors have lost the case in High Court still are not returning the form back or closing their counter.
- For every transaction in registration process one had to pay the government fee as well as the additional smart card fee for which private vendor's receipt is given and not a government receipt.
- While in manual system, only the columns in the RC book are to be filled as and when a transaction is required.
- The process of becoming an official agent has stopped now. Earlier on a deposit of certain amount of money, an agent was registered as an official agent.

2.3. RTO Employees

The RTO, ARTO, and staff at cash collection centers were interviewed and their responses are summarized below:

2.3.1. Regional Transport Officer

- Positive in his attitude to computerization.
- Concerned with the risks of transfers and its impact on the computerization.
- Critical of the politicians for the ignorance towards IT. Thinks that the types of workshops recently held at IIMA for politicians could bring the desired change

- Service performance getting influenced by shortage of staff. By not recruiting new employees, government is losing money since collections/recoveries on tax and penalty could be significantly improved with more staff.
- Too much of hardware and software with inadequately trained staff is becoming counter productive.

2.3.2. Assistant Regional Transport Officer

- Computerization of processes is helping in better management of citizen records. Old paper based records get damaged over time and occupy a lot of space.
- Searching the required information, in the manual system is time consuming.
- With the increase in volumes (16 lac vehicles) compounded by shortage of staff, computerization is required in all areas.
- Most of the staff members are over 45 years of age and not very enthused about the job. There have been no recruitments after 1983.
- Decentralization through weekly counters at all locations in Gujarat is desirable to reduce workload at the center, and travel cost and effort of the citizen.

2.3.3. Public Relations Officer

- The citizens do not read the notice boards kept outside the cabins; they mostly prefer to enquire details of officials to meet and counters to visit at the helpdesk.
- Though the high court has ordered to increase the staff but there have been no fresh recruitments and the workload is increasing day by day.

2.3.4. Staff at Cash Collection Counters

- The tax collection system is computerized only for non-transport vehicles (scooter and cars) and not for transport vehicles such as trucks. Should be extended to all.
- Counters are closed at 2:30PM. After that, validation of cash, summary reports and integration of data on the server are being done. It will be more beneficial to citizens if the time is extended to 3:30 PM.
- The computerized process is faster if there are no errors. Currently, time is wasted in editing the errors and setting the printer right (often). Something should be done to minimize the time taken for editing and printing.
- Computerization and connectivity with the RTOs outside Gujarat will make processes simple and faster.

2.3.5. Staff at OSC Vehicle Registration

- The Data entry operator does a maximum of 50 transactions per day with approximately 25 minutes per transaction. The counter is open from morning 10 am to 6 p.m.
- In the computerized system, entry of stolen vehicles is immediately done and any information regarding a vehicle is available at click of a button.

- Citizens prefer the manual vehicle registration system since any changes or renewal can be done in the book itself and are done with the help of an agent and he need not come personally to the RTO office for the second time.

2.4. Service Provider

The manager of the service provider and the staff managing the counters were interviewed. They feel quite involved and see a vast scope for improvement of citizen services through computerization and proper training. Following is the summary of the responses given by them.

2.4.1. Manager of the Service Provider

- Quite an amount of paper work still exists in RTO, which can be minized
- RTO staff need to be training better
- Data storage capacities are inadequate, they have to be augmented soon to meet the demands
- Connectivity between all RTOs is important and needs to be improved.

2.4.1. Staff at the Counters of the Service Provider

- Implementation of a finger print matching system at the smart card license counters is necessary to make system fool-proof.
- Since the databases are not connected, even for renewal of driving licenses citizens go through all steps: capturing of finger prints, digital signature and the camera taking his picture.

3. Summary

This evaluation study attempted to study the the e-Governance project at the RTO in Gujarat, which has automated three of its major services: Issuing of Driving Licenses, Registration of Motor Vehicles, and Collection of Vehicle Taxes. The evaluation results indicate that the project has successfully offered benefits to its stakeholders and proved to be sustainable.

The overall observations of the study are:

- Citizens are satisfied with the improved services, but want more. They are happy with the helpdesk facilities. They are happy with the smart card driving licenses but not with vehicle registration OSCs. They want the services to be distributed in the city. They feel that process time can be further improved.
- Agents are not too happy with the computerized system. They feel that loopholes do exist in the system. They feel that RTO is charging more without delivering the benefits to citizens.
- The RTO employees feel quite involved, but seem to be handicapped by lack of adequate training. They also experience that transfer of project champions has dampened the pace of work and realization of full benefits.

- The service providers feel that there is plenty of scope to improve the services at RTO. They feel that government should speed up the decisions and improve the connectivity between RTOs to realize the benefits. Similarly they feel that vehicle database must be populated quickly so that online applications can be launched.

On the whole, the project seems to have been well conceived, executed and delivered benefits to the stakeholders. The project needed attention on creating better amenities for citizens, total employee buy-in through more training, and in spreading the services to more convenient locations in the city. Longer tenure of e-champion would have helped the project to maintain the pace of activities and perhaps offered all conceived benefits as per schedule.

Annexure

Technology at RTO, Ahmedabad

The central server runs on Solaris and local servers on Win2000.

An additional central server is used for backup and swapping of data.

Oracle 9i is used as backend database with developer 2000 forms and reports for the front end.

The local Server has 2 GB SD RAM, 5 HDDs of 20 GB; of which one has RAID system.

A DAT drive of 12 GB is used for back up.

A CD writer and a zip drive are also available for backup.

Three connectivity options are available for porting of data between RTOs at different locations. These are:

1. Two leased lines from BSNL for internet connectivity
2. GSWAN (Gujarat State Wide Area Network) connectivity,
3. VSAT based connectivity from an internet service provider (GNFC).