Study Report on Assessment of Model e-districts

State Mission Mode Project e-district

Department of Information Technology
Government of India
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# Study Report on Assessment of the Model e-districts

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I. Introduction

I.1 Project Background

E-district is a Mission Mode project under National e-Governance Plan (NeGP) initiated by Department of Information Technology (DoIT), Government of India. It proposes to adopt an integrated approach for delivery of citizen services by district administration through automation of backend, workflow based on process redesign and data digitization across participating departments. District Administration in the context of e-District refers to the administrative set-up led or coordinated by the District Collector / Magistrate including Subdivision / Tehsil / Block / Village level units responsible for service delivery. It may be mentioned that the scope of this project will not include the Panchayati Raj services, as this is being addressed as a separate Mission Mode Project under the NeGP. However pilot projects of Panchayati Raj institutions may be aligned in the same pilot districts taken up under the e-District program in order to synchronize both the initiatives.

The initial phase of the project would involve establishment of a pilot for an effective model for delivery of citizen services for the district administration. In the long run, the services are expected to be delivered via the proposed Common Services Centres (CSCs) scheme under the National e-governance Plan (NeGP) of the Government of India. Therefore, the service delivery strategy should be oriented in such a way that the individual departments would use the CSCs as the primary front-end channels to the citizen as envisioned under the NeGP. This will be over and above any channel that Government could maintain to meet legal requirements.

The objectives for implementing the project as mentioned in the Request for Proposal Document (RFP) are as follows:

- Districts are the primary delivery channel for Government Administration and electronic delivery of large number of services at the district would improve the quality of life of the citizens
- Significant improvement in delivery of Government services by integrating other e-Governance initiatives by different departments (Land records, Property Registration, Agriculture, Passport, Police etc.) could also be provided
- Establishing a multi-disciplinary centre for information accessibility for capacity building of the district administrative processes would also be created
- Formulation of strategies for creating a Central data repository at the district level for all associate activities for improving district administrative processes by ensuring data and information are collected, stored, retrieved, used and exchanged in an efficient manner at all levels from ‘top to bottom’
• Leverage and integrate core e-Governance infrastructure initiatives of the Government such as State Data Centres (SDC), Common Service Centres (CSC) and State Wide Area Networks (SWAN)

Consultants from five different companies have been empanelled for the e-district project, which aims at realization of the objectives at about two pilot districts in each State. The objective behind this exercise was to develop a model that can be optimally replicated in all other districts within the State.

It is in this background, members of the joint team of the empanelled consultants visited five designated districts within the country, where significantly visible e-governance initiatives have taken root. The purpose of these visits was to consolidate the e-District scope and evolve guidelines based on experiences and practical learnings from these initiatives. Accordingly, the following ‘model’ districts were studied during the months of March and April 2007:

- Ahmedabad, Gujarat
- Gandhinagar, Gujarat
- Palakkad, Kerala
- Thiruvarur, Tamil Nadu
- West Godavari, Andhra Pradesh

I.2 Objectives of the Study

The objectives for the assessment of model districts were to study the delivery of citizen services at the five model districts across India. The study is to help assess the existing models in terms of:

- Scope of services
- Project approach
- Process re-orientation
- Data migration & Digitization
- Change Management Strategy
- Implementation challenges
- Implementation partners involved
- Technology used
- Sustainability model, including scope for Public-Private-Partnership
- Identification of innovative and exemplary practices
- Consolidation of key lessons

The outcome of this study is expected to support the:

- comprehensiveness of the proposed e-District project scope
• establishment of criteria for selection of citizen services (with a view to consolidating the set of services that need to be scoped into the e-District project)
• segregation of data driven services and workflow driven services and their feasibility in e-district project
• understanding of interfaces between district administration and line departments at district level in terms of authority, facilitation and control
• understanding of challenges related to process reengineering and change management
• establishment of a shared and uniform vision for implementation of pilot e-districts by the consultants in different states
• identification of best practices and critical success factors with each of the model districts, including the potential for re-use of solution components or their design
• Identification of the key challenges/mitigation strategies which will help in timely completion of the projects

This document is also expected to serve as a ready reference for the States, enabling institutions, empanelled consultants and associated agencies who will be involved in the design, implementation and operation of the e-District project, including the Pilot stage.
I.3  Limitations of the Study

Limitations of our study were:

- No reference model was available for the study.
- The information provided by the key personnel has not been validated either through observation or verification with other independent sources.
- In most of the model districts the original project champions were no longer available for interaction.

I.4  Structure of the Report

This report consists of two main parts. The first part is a consolidated report on the assessment of the model districts that has been prepared jointly by the empanelled consultants. The second part consists of detailed individual reports of the model districts. The main report also contains the summary findings of all the model districts taken up during the study, with key learnings, issues and challenges and best practices. We have also presented an evolving model and recommendations for pilot e District in the main report.
II. Assessment of Model districts

II.1 West Godavari - Rural e-Seva

Project Objective: Establish a sustainable service delivery model, wherein the Government services are delivered to the citizen through a single window system, accessible at close proximity. Value to Citizen: (a) Service delivery centre located at close proximity to the citizen thereby enhancing convenience (b) Reduce citizen interaction with the Government functionary/office for a service and (c) Evolve these e-Seva centre into single stop shops for other routine citizen needs.

Services Covered & User Charges (as may be applicable):

<table>
<thead>
<tr>
<th>Service Description</th>
<th>User Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue of Certificates: Caste, Income, Residence, Integrated Etc</td>
<td>Rs 10/-</td>
</tr>
<tr>
<td>Posting of Grievances</td>
<td>Rs 5/-</td>
</tr>
<tr>
<td>Download of applications/ static information like mandi rates</td>
<td>Rs 5/-</td>
</tr>
<tr>
<td>Acceptance of Electricity bill payments</td>
<td>Rs 2/- per bill</td>
</tr>
<tr>
<td>Computer aided education in collaboration with Azim Premji Foundation</td>
<td>Rs 2/- per child per month</td>
</tr>
<tr>
<td>By designating the local schools to the collocated e-Seva center</td>
<td></td>
</tr>
<tr>
<td>Co-location of general facilities like, photocopying, fax/STD/ISD, internet</td>
<td></td>
</tr>
<tr>
<td>Browsing lamination and binding works etc to augment the revenue of the center</td>
<td></td>
</tr>
</tbody>
</table>

Service Selection Criteria:

- Issuance of Certificates: The Revenue Department hierarchy extends through the block/mandal up to the village level. Certificates provided by the revenue department are utilized by the line departments. Hence this service was considered a good starting point.
- Availability of data in the MPHS database was a key factor in determining the viability of the services that could be delivered.
- Grievance redressing was handled through a simple process by providing connectivity to all the offices at the district level and making them accountable to view and act on the posted grievances, with a process for reporting and escalations.
- B2C and C2C services were introduced to contribute towards the sustenance of the delivery centres e.g. utility payments.
Implementation Highlights:

- Front-end automation where service requests are accepted
- As the citizen kiosk was critical to success, effective model was envisaged and enforced without leaving this to the choice of the private entrepreneur. 46 rural e-Seva centers at the rate of one per Mandal was established and augmented by another 150 RSDPs across the district.
- Minimal computerization of the backend departments as the project did not do away with the manual backend processing and the paper work involved
- As services are completely data driven, the onus was on the citizen to obtain necessary authorization of basic data that was entered into the MPHS database, if the same was not available.
- Project was conceived in Sep 2002 and the first version of the model started working from Jan 2003 with a limited set of services. Application was developed by NIC and is being supported and maintained by NIC.
- Coordination Committee was formed to work out the financial scheme, facilitate the establishment of kiosks and provide transparency.

Success factors and key takeaways

- Availability of certified and department owned MPHS data has alleviated challenges like backend enablement, process reengineering and change management
- Championing of the entire initiative from visioning to implementation by the District Collector leveraged the necessary support from all quarters and ensured sustainability
- Empowerment of the Mandal Revenue Offices (Mandal is a revenue administration unit at par with Block in other states) for delivery of services related to the Revenue Department
- Involvement of key stakeholders such as self-help groups and leveraging subsidies from other programmes to provide financial viability to the establishment of the initial infrastructure
- Citizen awareness and appreciation of the services had put the onus on the department to sustain the service levels and explore enhancements
- The maturity of service delivery ensures sustenance of the processes and delivery model
II.2 Thiruvarur - e-district

**Project Objective:** Establish a comprehensive ICT based solution for improving public service delivery, with proof of operation established up to the taluk level.

**Value to Citizen**
- The entire land record transactions have been made online thus providing up-to-date electronic records related to land purchases recorded in the Taluk and village land record registers.
- Birth and death certificates provided within 10 minutes for the period 1997-2001.
- The acknowledgement and follow-up of Public grievance redressal mechanism was facilitated through a software application to enable citizen response within two weeks.
- Prompt despatch of Old Age Pensions (OAP) to beneficiaries within the first week of each month.
- Disbursal of scholarships to eligible Pre & Post Matric students within one week after receipt of fund allocation from Government.
- Annual accounts settlement (Jamabanthi) completed on time, every time.
- Monitoring of development programmes.

**Services Covered & User Charges (as may be applicable)**

<table>
<thead>
<tr>
<th>Service Description</th>
<th>User Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutation related documents for land purchases at Taluk and village</td>
<td>Rs.20</td>
</tr>
<tr>
<td>Cultivation and harvest certificates (Adangal extract) (Issue of RoR)</td>
<td>Rs.20</td>
</tr>
<tr>
<td>Other land record extracts</td>
<td>Rs.10</td>
</tr>
<tr>
<td>Issue of certificates/cards</td>
<td>Rs.10</td>
</tr>
<tr>
<td>Citizen Grievance redressal</td>
<td>Nil</td>
</tr>
<tr>
<td>Social Welfare Scheme (Pensions and Scholarships)</td>
<td>Nil</td>
</tr>
</tbody>
</table>

**Service Selection Criteria**
The pilot e-District rolled out over 20 e-Governance software packages covering various areas of citizen interface with the Government. The concept was to comprehensively computerize all the services which are directly being delivered through the district administration. This is the only model district where an attempt has been made to cover all services delivered by the district administration, including those emanating from Taluk offices and Block offices, and, those related to program monitoring and fund utilization.
Implementation Highlights

- The functional specifications and solution development was carried out under the personal initiative of the then District Collector and his team.
- The district had set up a software development centre in the DC’s office, employing over 30 outside software professionals. Software was developed approximately in 12 months.
- Staff training was provided at the centralized training facility on a continuous basis and majority of the training sessions were conducted by the senior officials including the District Collector himself.
- To administer the Taluk/Block computer systems, clerical grade employees from each of the 20 offices volunteered to undergo training to act as software administrators. Two staff members per office were identified for intensive training on server administration.
- Funds were mobilized from various sources and schemes such as Members of Parliament Local area development Programme (MPLADP) and MLA Constituency development fund. No State support was provided. Total funding for this project was Rs. 2 Cr for infrastructure; development and associated tools were provided gratis by a leading IT vendor, IBM.

Success factors and key takeaways

1. Of all the model districts visited, Thiruvarur system seems to be the most comprehensive in terms of functional coverage. The e-Governance applications are characterized by simplicity and effectiveness which is a clear reflection of clarity in Requirements.

2. Designing a Project Plan with well defined milestones is necessary for successful e-Governance outcomes including development and training. The collector was the de facto Project Champion.

3. Continuity of Financial Support is essential for implementation of e-district. Currently there is an urgent requirement for upgradation of the software and computing infrastructure that have hitherto become obsolete and to support software maintenance.

4. Data related to various applications were built ground-up through actual involvement of the officials which have been critical from the standpoint of data quality and ownership of data. But there are no standards governing data that would be a key requirement for building capacity / replication.

5. To manage change effectively (a) a permanent facility for training of users was established at the collectorate and (b) a Bilingual database interface (Tamil/English) was put in place.

6. Creation of Public Awareness through public grievance redressal camps. Eight such camps were conducted in wedding halls and about 3055 citizens were provided on-the-spot sanctions for various requirements.
The effective grievance redressal system enabled the capturing of petition details online and effective monitoring of disposal. There is a strong operational process that was institutionalized along with a simple software application which needs to be highlighted.

### II.3 Ahmedabad - Jan Sewa Kendra

**Project Objective:** Reengineering of structures and processes in the Collectorate to achieve the goal of good governance with the use of information technology as the backbone of the project, with predominant focus on the citizen interface.

**Value to Citizen**

1. Single-point front end for information dissemination and submission of applications for the 75 services and handling citizen grievances at Taluka level.
2. Standardized, freely available application forms in Gujarati for each of the listed services providing clear and concise information on the procedure that will be adopted, competent authority who can decide, time taken to process, a checklist of attachments along with a blank application form.
3. One Day Governance for seven services. Jan Sewa Kendra provides one day delivery to save the citizen from the hassle of traveling to and fro Taluka / District headquarter.

#### Services Covered & User Charges (as may be applicable)

<table>
<thead>
<tr>
<th>Service Offered at Taluk level</th>
<th>User Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Day Governance</td>
<td>Rs 20/-</td>
</tr>
<tr>
<td>Seven services typically issue of various certificates, affidavits are provided in a single day.</td>
<td></td>
</tr>
<tr>
<td>68 other services related to revenue, magisterial and civil supply</td>
<td>Rs 20/-</td>
</tr>
</tbody>
</table>

**Service Selection Criteria**

75 services of the Collectorate’s Citizen Charter - the Citizen Charter was introduced by the Vadodara District Collector Office in 1997-98 for various services provided by the district collector’s office to citizens. This is a set of 75 events/ occasions wherein a citizen comes in contact with a collector’s office, a mamlatdar’s (tehsildar’s) office or a municipal corporation. These 75 issues are broadly divided into 3 categories - land related issues, magisterial issues and civil supplies.

**Implementation Highlights**

1. Public Private Partnership, in establishing, application development and running the Jan Sewa Kendra.
2. Standardization of forms and procedures related to 75 citizen services.
3. Process reengineering by introducing level jumping, internal query formats, shortening of processes etc. associated with the standardization of forms.
4. Full State Government support and backup of Government GR (General Resolution) to the initiative ensured smooth adoption of the revised processes.
5. Extensive focus on employee skill upgradation and employee involvement in the whole process of reengineering and automation.
6. An e-district society has been formed headed by the collector
7. Of all the model districts, Ahmedabad as attempted Computerization of revenue court cases, which might be replicated in e-district pilot project.

Success factors and key takeaways

1. Business process reengineering involving standardization of forms and process
2. Establishment of kiosk that have become single points of contact for service delivery.
3. Despite the lack of a computerized backend, the service delivery to citizen has improved considerably. This has been achieved by establishing service levels (citizen charter) that are part of the process realignment.
4. There are existing systems and databases like land records, land revenue records, land registration databases, voters list, ration card databases, which if used would reduce the requirement of manual documentation work. Government support in the form of Government Resolution or Government Order is a must to legitimate the use of various government records to provide e-District services.
5. Employee involvement - All the employees of the Collectorate were involved in some way or the other in the project at every stage.
6. The effort at Ahmedabad district was initiated in July, 2003 and still it has not been completed. It takes time to change the attitude, behavior and practices of employees and any Business Process Reengineering effort should take into account the delays on these accounts.
II.4 Gandhinagar - Jan Sewa Kendra

Project Objective: To offer the citizen various types of services in a transparent and efficient manner through an improvised, single interface called the Jan Sewa Kendra.

Value to Citizen
- Jan Sewa Kendra is the single point contact for delivery of citizen services and acts as a bridge to the district administration.
- All services are forms based, where the procedure is very clearly laid down in the form itself including the upper time limit for service delivery.
- Select services are delivered the same day under the head “one day governance”
- Once a citizen is identified in the system, the identification details of the citizen is preserved for future use
- Officers are deputed to the Kendra on a round-robin basis who provide spot authorization of data and affidavits made out by citizens free of cost
- Senior citizens have established a help desk in the Kendra to support scrutiny of the forms for accuracy

Services Offered and User Charges
About 95 Services are offered from the Jan Sewa Kendra. Bulk of these services delivered pertains to those related to Issuance of certificates, Ration Card, Land Revenue payments and Affidavits.

A uniform service fee of Rs. 20/- is charged for all the services except RTI.

Service selection Criteria
No specific criteria were applied to the selection of services and all services were considered for inclusion in the project scope. This was evident from the fact that there was not even a single request in respect of 20 services.

Implementation Highlights
- The prime objective was to have a single front end to the citizen and progressively improving the efficiency of the back office and build-up of data. As a consequence there is no back end automation.
- The implementation was carried out using Ahmedabad as a model.
- Private vendor was brought-in to develop and implement the solution.
- The payment to the vendor is made through the collections that are made from user charges.
- The plan of proposal was prepared in January 2006 and operations commenced in October, 2006. Taluks at Mansa, Dehgam and Kalol were added in February 2007.
- An e-district society has been formed headed by the collector; Deputy Collector is a Member of the society.
- Further plan to expand through a franchisee network that can serve the remote areas and software being upgraded to make it amenable for submission of service requests through the Internet.

Success factors and key takeaways

a) The concept of Citizen ID has helped minimize the paperwork as well as data entry work in case of entering the application information. Citizens re-use previously-submitted documents in new applications to the Jan Sewa Kendra.

b) Use of SMS for automatic alerts and on demand information, IVRS for 24x7 status information, Barcode and Smart Electronic Trackers for tracking, registry and error-free data entry, Website for status track and form information, Fingerprint Biometrics for recognition have offered convenience, speed and transparency to citizens.

c) Time lines are being given to all the departments for the completion of request (SLA with the departments)

d) Close monitoring by the collector on a weekly basis to review operational status

e) Reforms related to process changes have been formalized through orders promulgated by the collector
II.5  Palakkad - DC*Suite

**Project Objective:** The project aimed at improving the back office efficiency related to District Administration, the solution consists of a set of modular applications covering key areas of work in the District Collectorate integrated through a workflow automation platform.

**Value to Citizen:** As this is a focused back office automaton, Citizens benefit from the ability to track the status of a file / application or work status within the Collectorate on the basis of a file number. There is also transparency in terms of processing steps and help desk features.

**Services Covered & User Charges (as may be applicable):** There are about 400 subjects handled by Collector office of which about 20 subjects are often used. Major services offered are the online tracking of application (that is built on the workflow and tracking feature) and these could pertain to any type of service that is sought by the citizen such as Revenue Recovery, Grievance Redressal, Arms licenses etc. There are no user fees collected for the services.

**Service Selection Criteria:** DCSuite is essentially an electronic file flow (workflow) management system. The functionality is modeled on the basic structure of a government file and its processing related to the disposition of work within the Government office. Any document, including ‘dak’ (or ‘thapal’) or request reaching the Government office is either appended to an existing file or is created as a new file. The file is processed at various levels where inputs are added in terms of data, information, similar previous orders, government laws, rules and regulations etc. The generic nature of the functionality has enabled this software to handle any type of service request. The software modules that are ‘plug-ins’ have been created for the high volume / critical services which is around 20. Out of these, only about 11 modules have been completed.

**Implementation Highlights**

1. DC*Suite is one of the pilot projects where Work Flow based automation of Collector Office has been tried out successfully.
2. BPR efforts have been well-supported by State Government and to that extent the paper has been reduced in the backend.
3. The software has the ability to be developed into a product with minimum initial investment as Open Source technology is used for development.
4. Creation of excellent infrastructure at District Headquarters including a data center and a training centre, and a disaster recovery mechanism.
5. Availability of multi-lingual interfaces in the software enhanced the acceptability of the system.
6. The software also covers activities of sub-offices like Taluks also. Hence the system can be implemented at any offices with supporting module and workflow system in the core.
7. Different modules have been developed to process different requests. Out of 20 envisages modules 11 have been already developed.
8. Forms have been created for interfaces with select departments like police, banks etc.
9. DC*Suite is developed in such a way that transactional specific data is segregated from the file noting part.
10. MIS can be generated from the transaction specific data while the file notings get archived.
11. Messaging and Collaboration facilities have also been provided to staff through intranet.
12. Work on the project was started in 2003 and the project was inaugurated on 26th October 2004. Presently DC* Suit is operational in Collector Office at Palakkad and at Palakkad Taluk office besides, being replicated four other districts in Kerala State. Application was developed by NIC and is being supported and maintained by NIC.
13. The project was funded under the Modernising Government Program (MGP) of Asian Development Bank which was in the tune of 2.15 crores.

Success factors and key takeaways

1. The system has been developed keeping in mind the need for multiple implementations and hence has been taken-up as a State-wide initiative.
2. Change management is a continuous process. The project also involves modernization of offices and this can be considered as a reference design in the pilot project. The office set up includes a permanent training centre that has been created to cater to initial and refresher training programs.
3. The data collected in the back end modules are used for generation of MIS. This is a very great benefit as there is no manual collation of data that is needed for reporting.
4. While these kinds of projects would need more time than normal for the purpose of development, it has the potential to sustain benefits such as standardization of functionality enforcement of automated processes, uniformity in design and deployment of technology, change management, etc. which are key to ensuring success.
5. This project is wholly funded by the Government and the full functionality has not yet been completed due to paucity of funds, though the current level of automation has the ability to provide value.
6. It is also pertinent to mention that the office design at Palakkad collectorate can be considered as a reference model for office modernization.
**III Key Learnings**

Having studied and analysed the initiatives in each of the selected model districts, the learnings need to be integrated into the e-District project so as to benefit from the past experiences. Each of the learning is discussed in detail with an aim of absorbing the key takeaways from the model districts into e-District project in an appropriate manner.

**No single model e-district**

None of the district visited can be recognized as Model e-district - the model e-district has to be a combination of best practices from all districts. Ahmedabad and Gandhinagar have very good front end processes for delivery of citizen services, Palakkad has very efficient workflow automation and grievance handling process, West Godavari has MPHS database while Thiruvarur has automated backend processes for revenue related services at block levels. A model which has all these components would be the model e-district.

Most of the districts studied have demonstrated the services primarily from the revenue department. Small volume services like issue of gun licenses, permits etc, which are still a part of the revenue department, are not likely to gain the necessary visibility to consolidate the e-District project. In some districts, the automation of district Collectorate, mail registries and office workflow automations have been observed. These were implemented with an objective to improve the efficiency in the working of the department and staff functions and do not directly relate to services but as enablers to service delivery through backend computerization. This backend computerization is expected to be automatically achieved, by focusing on a set of services, reengineering the processes and enabling the back ends to effectively deliver such services. Experience at Ahmedabad and Gandhinagar districts shows that Business Process Reengineering while identifying and standardizing citizen contact points / services to be delivered through e-District is a necessary prerequisite. At both the places despite the lack of an automated / computerized backend, the service delivery to citizen has improved considerably. This has become possible by the transparency brought in by monitoring the receipt of request for a service and delivery status of the service. The applications are accepted and monitored for their processing. This monitoring has improved the timely delivery of citizen services in most of the cases.

**Individual driven initiatives with 3-5 years time frame**

All the Initiatives at the districts visited have been individually driven, by the district collector, with 3-5 years timeframe for implementation. Championing of the initiatives from visioning to implementation by the District Collectors leveraged the necessary support from all quarters and ensured sustainability till the time the Collectors were there. But this also resulted in loss of
leadership and momentum once the District Collector was shifted. There is a need to institutionalize the system so as to make it sustainable after the project champions leave. Empowerment of the Officials and awareness among citizens of the initiatives, so that there is continued demand for the services, would help in institutionalizing the system.

The time frame for various districts indicate that it has taken 3-5 years for achieving a significant milestone, and the effort is yet not complete.

<table>
<thead>
<tr>
<th>District</th>
<th>Start Date</th>
<th>Launch Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmedabad</td>
<td>07'2003</td>
<td>01’2004</td>
<td>Phase II &amp; III still under implementation</td>
</tr>
<tr>
<td>Gandhinagar</td>
<td>01'2006</td>
<td>09’2006</td>
<td>Phase II still under implementation</td>
</tr>
<tr>
<td>Palakkad</td>
<td>05'2003</td>
<td>10’2004</td>
<td>Only 12 modules operational, work remaining 8 still in progress</td>
</tr>
<tr>
<td>Thiruvanur</td>
<td>02’1999</td>
<td>06’1999</td>
<td>By 06’2001, 85% automation of district offices completed, DC transferred, no further development, maintenance is an issue</td>
</tr>
<tr>
<td>West Godavari</td>
<td>09’2002</td>
<td>01’2003</td>
<td>SHGs sustaining the initiative, no further development, maintenance is an issue</td>
</tr>
</tbody>
</table>

It takes time to change the attitude, behavior and practices of employees and any Business Process Reengineering effort should take into account the delays on these accounts. Further, governance is a dynamic process and e-district model should provide for sufficient flexibility to address the dynamism. Ms. Karwal, former DM of Ahmedabad quoted, “it (automation at Ahmedabad district) can not, and in fact should not ever reach its logical end, because government systems are very dynamic and must change with every change in policy/approach”

**Use of existing databases**

Availability of certified and department owned MPHS data alleviated challenges like backend enablement, process reengineering and change management in West Godavari. Similarly, land related database created at Ahmedabad, helped in backend automation of Non Agricultural Land Use Permission. In Thiruvanur, the land records have been digitized, which helps the conduct of annual settlement of village accounts (Jamabandhi) including recovery of current dues and arrears and preparation of Demand Collection Balance register.

The government creates many records related to citizens like Voters’ list, Ration Card Database, Land records, BPL Survey etc. The use of these different databases is to be legitimated for delivering citizen services electronically. Government support in the form of Government
Resolution or order is a must to legitimate the use of various government records to provide e-district services.

**Incremental creation of citizen database**

Data entry and digitization of the legacy data for the defined set of services has been identified as a focus area. Creation of digital data for some services is essential as the services can only be data driven, for example, the regular disbursement of social security pensions is possible only with the availability of digital data. Similarly, ration card related services can best be processed through availability of data. However certain other services like issue of certificates cannot commence with data, as the citizen database does not exist and needs to be incrementally created. The recommended process is to incrementally develop the data while services are rendered through reengineered workflow processes fully enabled. Once the data is built up over a period of time, the same can be utilized for an across the counter delivery of the possible services. The inference is that, wherever legacy data exists, the same needs to be digitized to commence services. However, creation of a database where none exists may not be possible during the given schedule and cost of the e-District project. Suggested list of services for which legacy data can be digitized are as follows:

a. Beneficiary data with respect to social security pension schemes  
b. Data pertaining to existing revenue cases at district, taluk and RDO courts

For the remaining services, it is suggested to incrementally create citizen database by linking the data inputs to service delivery. Incentives through discount in service charges to encourage data capture and validation and ownership of the data by the concerned departments can strengthen the emerging data.

In Gandhinagar, the Jan Sewa Kendra operator assigns a unique applicant ID number for the applicants who are requested to give one of the four government issued photo IDs: (1) Election card, (2) PAN Card, (3) Driving License, or (4) Passport. In case a person cannot produce one of the above IDs, the software assigns a unique number in sequence. Once the applicant ID is issued, the applicant is requested to fill out personal details in the form for the applicant ID. Thirteen types of personal particulars are mandatory. These include Name, Residence, Religion, Gender etc. If the applicant comes again to Jan Sewa Kendra, then one page of the form is automatically printed with pre-filled out information. The applicant does not have to re-submit the same information. This approach might be adopted. In Thiruvarur, data related to various applications were built ground-up through actual involvement of the officials which was critical from the standpoint of data quality and ownership of data. But there were no standards governing data collection that would be a key requirement for building capacity / replication.
Funding for entire project life cycle
For e-districts to be sustainable and effective, the funds should be budgeted for the entire project life cycle. A typical IT project would have a lifecycle of 4-5 years, and if the funding is not budgeted for the full lifecycle, the IT project would be prone to failures. As observed in the model districts, the IT infrastructure and software were put up during the project implementation / launch stage, with no provisions for maintenance and upgradation afterwards. At Thiruvarur, currently there is an urgent requirement for upgradation of the computing infrastructure that have hitherto become obsolete, due to lack of funds available. Similarly, at Palakkad, the project was launched with ADB grant, but now there are no funds for the maintenance or further development of software. Continuity of financial support is essential for implementation of e-district. Funding for the project life cycle can be budgeted either with the setup cost or from the revenue model.

Financially sustainable revenue model
As e-district is proposed to be the backend for delivery of services through CSCs, there is a need for a financially sustainable model of revenue generation for e-districts to remain viable and operational after the initiation and establishment phase. The e-districts are going to incur additional expenses in terms of stationery, consumables, hardware and software maintenance and upgradation, digitization etc. In the districts visited, the revenue model for the automating and sustaining backend processes is thought of in case of Gandhinagar and Ahmedabad, where capital expenses on Computer Hardware and Software are being met by the government, and operational expenses and maintenance expenses are being met with through the PPP model. At Palakkad, there are no citizen services being delivered from which user charges can be levied. At Thiruvarur, the user charges are sufficient only for operational expenses, the maintenance and upgradation expenses can not be met by the user charges. As it was seen at West Godavari, utility payments and other B2C services help ensure sustainability of the CSC’s, and a centralized approach might be adopted to provide various B2C and utility services as part of e-district MMP.

Service levels between e-district and the departments, CSCs
In e-district MMP, the service levels for the delivery of citizen services are well defined, a back to back commitment from the CSC and departments for providing these services would be essential. Citizen awareness and appreciation of the services would put the onus on the departments to sustain the service levels and explore enhancements. As observed in Ahmedabad and Gandhinagar, due to lack of backend computerization, the emphasis and burden of bringing the documentary evidence is shifted to the citizen to deliver the required services in prescribed time limits. This does not result in lesser service delivery time for the citizen in effect, as he is running around to gather all the documents required here and there. A true BPR effort would result in the use of existing systems and databases like land records, land revenue records, land registration
databases, voters’ list, ration card databases etc. to do away with the requirement of asking citizen to submit documentary evidence for most of the services. While preparing the project report, the consultants need to identify BPR requirements and commitment required from the departments for effective completion of the project.

**Application Software for e-district**

The districts visited had a varied mix of application software like open source v/s licensed, stand alone v/s client server v/s Internet based, NIC developed v/s private vendor developed, native language support v/s transliteration etc. Three districts which have private vendor for software development, could not replicate the software elsewhere in other districts. Two districts where NIC has been the application developer, these software have been replicated in other districts within same state as well as outside state also. All the districts had vernacular software, with forms and data entry options in local languages. The experience shows that there is a need for a strategic control of software application and development strategies for e-district in the state.

**Need for Service desks**

The e-District project envisions the delivery of services through the Citizen Service Centers, another MMP of DIT. All the model districts except for West Godavari have adopted a common approach wherein the service delivery centres were kept under the control of the district administration within the premises through a PPP model.

In the initial phase each of the service delivery facilities required the presence of departmental staff to augment the service delivery process. This ensured ownership of the initiative on part of the staff and facility for the citizen to meet the preliminary requirements at a convenient single window. To quote an example, the Jan Sewa Kendra at Gandhinagar and Ahmadabad are supported by Tehsildar level officials to approve affidavits where necessary and complete the process of servicing a request where possible. Such facilitation is not imaginable with CSCs owned by small entrepreneurs. The state level agencies that are expected to guide and support the CSC initiative will need their time to establish the framework to be effective.

There is an inherent risk wherein the e-District and CSC projects in the state can be totally out of sync and phase. Dependency on CSCs can be a serious impediment in the way of e-District. Further, it would be difficult for the government to eliminate the existing channels of service delivery in totality, even after new channels of service delivery like CSCs, internet etc. are introduced. In our view, then the question is about the number of service desks to be put up till CSCs come up rather then the existence of service desks. The suggested method is to have a Government supported service delivery centre on the lines of Jan Sewa Kendra of Ahmedabad and Gandhinagar on a BOOT model with higher number of service desks for initial period of say 2 to 3 years until the CSC
network is operational. The number of service delivery desks can be progressively reduced based on the actual requirements after CSCs are operational.

**State-wide rollout**

The ultimate objective of pilot e-district project implementation is the state wide roll out at the end of the pilot. Strategies need to be designed for State-wide rollout during pilot implementation itself. The system is to be developed keeping in mind the need for multiple implementations, scalability and interoperability. Consultations with the stakeholders, not only for the pilot e-district, but for other districts as well need to be taken up on a regular basis to create awareness about the project.

While this kind of approach towards pilot project would need more time than normal, it has the potential to sustain benefits such as standardization of functionality, enforcement of automated processes, uniformity in design and deployment of technology, change management, etc. while doing the state wide roll out.
IV. Issue and Challenges

The following key issues have been identified during our model district assessment:

- **Lack of Standardization in replication of initiatives in other Districts**
  
  It was observed that after a successful creation of model in a district the same model was not adopted in other districts. For example Thiruvarur uses a different application for delivery of services in comparison to the application used in other districts of Tamilnadu. In case of initiatives at Ahmedabad and Gandhinagar, despite the same model being adopted, separate initiatives were undertaken by the respective district administration.

- **Limited capacity to manage and sustain the project**
  
  The creation of infrastructure in terms of Hardware, software, network and people always poses a challenge to district administration. There are no separate funds made available for infrastructure development. As a result it becomes a more of a localized initiative for arrangement of funds and hence the buy-in at State level is not there. The manpower required for managing and sustaining such an initiative is not available in the district. The only technical manpower available in any district is from NIC, which is not adequate to sustain such an initiative.

- **No sustainable model for operational expenses - Hardware maintenance / upgradation, consumables etc**
  
  In most of the districts studied, financial model for long term sustenance was not envisaged during the project conceptualization. At Palakkad district the initial funds were made available by the state government under MGP program and at Thiruvarur, MP & MLA local area funds were used. At Ahmedabad and Gandhinagar, public-private partnership was formed for delivery of services. However the site was provided by the district in Collector office. The maintenance of the infrastructure was responsibility of PPP service provider. There was no backend computerization done hence the maintenance of the infrastructure used in backend computerization has not arisen yet.

  The infrastructure at West Godavari and Thiruvarur are already obsolete and requires urgent upgradation. The wireless infrastructure developed at W. Godavari does not have any procedure for annual maintenance.
Challenges:

- **Availability of data and amount of Data Digitization**
  
  Most of the services provided depend on either the data collected by the Government itself through various surveys or the data verified by any government official. In W. Godavari, the MPHS data is used for providing different services. In Ahmedabad and Gandhinagar the citizen gets all the required supporting documents signed and receives the certificate within a day. There is lot of data available with different departments like Election, Land Records, Food & Civil Supplies, BPL etc. Availability of citizen data and regular updation of this data is one of the major challenges for eDistrict.

- **Synchronization between the SWAN, CSC and SDC and any other MMP with e-district initiative**
  
  There are various initiatives taken by Govt of India and State Govt being at various stages of conceptualization and implementation. There are few initiatives which have definite synergies with eDistrict project. Most important of them are SWAN, CSC and Sate Data centre. The various challenges which require resolution include
  
  - Will the software being developed for eDistrict be used by CSCs also,
  - Should e-District application be hosted at SDC or at district level only
  - Would SDC be used for hosting the application at the state level or would be used a backup of district level data
  - How the SWAN can be used for eDistrict as the project is envisaged to be run on a PPP model?

  It may be mentioned that the scope of this project will not include the Panchayati Raj services, as this is being addressed as a separate Mission Mode Project under the NeGP. However pilot projects of Panchayati Raj institutions may be aligned in the same pilot districts taken up under the e-District program in order to synchronize both the initiatives.

- **Standardization of formats for availing the services**
  
  Presently the application forms for availing different services are different. These forms sometimes differ in different districts of the same state. For implementing eDistrict one of the major BPR activity would be to create a standardized format, which can facilitate multiple services.

- **Continuance of the Project team and manager for at-least 3 years**
  
  It has been observed in all model districts that the initiatives were successful due to diligent efforts of a motivated team of officers. There was also a tendency of losing the
motivation, if the team disintegrates before completion of the initiative due to reason such as transfer of team members. Hence the challenge would be to build a team for pilot project and then keeping the team for a period of at least three years. The three years period was arrived at after considering the time required for various activities involved from project conceptualization, BPR, design, development and implementation.

- **Integration with existing and future systems**
  Since departments are at varying levels of automation and have different types of applications implemented, the challenge is to integrate these departmental initiatives with the e-district project.

- **Horizontal integration with the other departments - Ensuring commitment**
  Many line departments like transport, Food & Civil Supplies, Commercial Taxes, Revenue etc have either implemented or in the process of implementing their own departmental computerization project. To ensure commitment from the line departments is one of the biggest challenges.

- **Legal Changes for initiating the BPR**
  For effective implementation of the e-district project process reforms are necessary, which in turn would require legal sanction and changes. However initiating and implementing legal changes is a time-consuming process and requires commitments from political and administrative authorities.
V. Approach to e-districts

V.1 Evolving model

This section presents an overview of the evolving model for the e-district, based on the learning’s of the visited districts by the project team. After the field visits, it can be concluded that none of the districts can be qualified as model e-district; however a combination of the best practices across these districts can be conceptualized as an implementation model for the pilot e-districts. The focus during implementation of the five districts visited was variant and different methodologies had have been adopted. The key factors, which had impact on designing different e-district models include:

- Focus of the project champion (Front-End, Back-end, Middleware)
- Availability of funds
- Focus on workflow automation
- Application deployment model
- Decentralization of the functions (PPP models)
- Selection of Application developer
- Resources available for implementation (MPHS database)

The figure provided overleaf presents an overview of the best practices of the model districts, details are provided further in the section.
The table below provides the list of best practices, which could be used for implementing the pilot e-district applications with regards to Front-end, Back-end and Middleware (details of the individual district initiatives are provided in the Annexure)

<table>
<thead>
<tr>
<th>Front-end</th>
<th>Middle-ware</th>
<th>Backend</th>
</tr>
</thead>
</table>
| • Single window delivery of 75 services/points of citizen contact (Ahmedabad and Gandhinagar)  
• Identification and Standardization of forms with defined service levels with the backend departments (Ahmedabad and Gandhinagar)  
• PPP model- Application development and management of the Jan Sewa Kendra (Ahmedabad and Gandhinagar)  
• E-district society created for management of the Jan Sewa Kendra (Ahmedabad and Gandhinagar) | • Work flow automation (Palakkad)  
• All files and note sheet movement through the application (Palakkad)  
• Online tracking of the application status (Palakkad)  
• Inbuilt escalation mechanism linked with service levels (Palakkad)  
• Forms created for select departments interfaces-Land Records, Police etc (Palakkad) | • Coverage of services (Thiruvarur)  
Taluk administration services (RoR’s, Birth/Death Certificates, OAP)  
Block development services (Scheme Monitoring, Fund Utilization)  
• MPHS database |
An indicative architecture of the e-district application is presented in the figure below. A citizen can access the e-district services either through the portal or through the citizen service centres. The citizen service centres are connected to the e-district application hosted at the district level through state wide area network or through alternate connectivity (if SWAN has not been established).

The different components of the e-district architecture include:

- **e-district application**: It will be hosted at the district level and should be web-enabled. The application may be developed by NIC or outsourced vendor. The constraints for statewide rollout of the application need to be considered during the selection of the
application vendor and design of the application. The three layers of the application should consists of

1. **Front-end Services:** The application should have the ability to provide citizen services. This would include acceptance, acknowledge and forwarding it to the backend departments with a defined service level. It should have the ability to track and generate alert messages if the application is not processed within the defined service level.

2. **Middleware:** The application should have a workflow automation facility with connectivity to different applications. The middleware should be connected to gateway, which in turn helps application integration with different departments. The gateway will help define standards /guidelines for integrating different departments. This gateway should integrate with the State gateway proposed in many e-governance roadmap

3. **Backend digitization and delivery:** For the identified services, backend digitization in terms of creating databases and applications for electronic delivery of the services.

- **Common service centres:** Front-end delivery channels for the e-district services. The revenue model for implementation of these CSC’s are being designed by DIT, however till the CSC are in place the need for service desks counters is felt at the pilot e-districts. Synchronization with the CSC can be established during the rollout of e-district, however for pilot implementation , we need to have counters established at the district/block level for delivery of services

- **State wide Area Network:** It will facilitate the connectivity between the CSC and the district for real time delivery of services with online monitoring of the activities at the district level. Since SWAN is getting established in many states, it is assumed that for pilot implementation the state may have to use alternate connectivity for availing the services. During the rollout the SWAN synchronization needs to be considered

- **State data centre-** The e-district data needs to be uploaded to the state data centre on a real time basis. The State Data Centres are proposed to act as a central repository of all the applications in the state. The decision to have low end servers for local storage of data at the districts needs to be considered by DIT. The decision of having local servers connected to one centralized server or only one dedicated centralized server (SDC) needs to be discussed and finalized by DIT.

**V.2 Services Framework**

There is a need to integrate the learning’s of the district visited into the e-District project so as to benefit from the past experiences. The e-district envisages a set of services to be included for the project. Based on the districts visited we have designed the feasibility and
extent of realization of these identified services which is presented in the figure below and discussed in the subsequent sections.

1. **Certificates:** *Domicile, Nativity, Caste, Marriage, Income, Employment: Application / Issuance / Updation*

   The database of the certificates is huge and cannot be created upfront in the prescribed timelines, unless database already exists. There is a need to create Incremental creation of database by linking the data inputs to service delivery. For implementing this model we need to create a parallel processes, i.e. manual workflow for processing the request in the backend and electronic workflow to track and report on the request until the process can be fully supported by data. This process will also include complete set of services under issue of certificates to ensure uniform reengineered processes. One of the recommendations of this service includes getting an administrative order for online consumption of these services by downstream departments. To quote an example, a caste certificate generated should be electronically utilized by the Education and Social Welfare Departments while providing reservations for admissions, scholarships and hostel facilities, by accessing the certificate data provided by the applicant.

2. **Social Welfare - Pensions (Old age, Widow, Handicap, Destitute): Application, Sanction, Updation, Payments, etc**
The processes of application, sanction and updation are activities involving departments in addition to Social Welfare. It is a joined-up service across two or more departments. Also the processes are defined differently across different states. In most cases, it is the Panchayati Raj / Revenue Department that determine and approve the beneficiaries while the Social Welfare Department manages the pension disbursals of an approved beneficiary and accounts to the State. This can be an exclusively a data driven service. Functions like disbursals, updation, verifications and acknowledgements can be fully automated.

3. **Revenue Court - Scope to include (Case listing, Case adjournment, Filing, Stay orders, Final orders / Disposition):** This service can be digitized and online information tracking of the applications can be done. The concept was well implemented in Ahmedabad District Collectorate and this design/solution can be further evaluated for re-use/replication.

4. **Government Dues and Recovery - Issue of notices, Record payments, Track default processes, Updation of treasury receipts, Information and Tracking.**
   
   This service was implemented in Thiruvururu district for land records. It included conduction of annual audit of village accounts (Jamabandhi) including collection of current and arrears and preparation of Demand Collection Balance register, which includes administration of all types of revenue / loan collection. There are different types of government dues and recovery, the guidelines needs to clearly define the type of recoveries/dues by the district authorities. The feasibility of accepting this service, as part of the standard set across the e-District project needs reconsideration.

5. **Public Distribution System - Ration Card related services - Registration, Change of address, Addition of members, issue of duplicates, including Information / Application / Issuance / Updation**

   Ration card related services (post issue of a ration card) like change of address, resulting in reassignment of a fair price shop, addition and deletion of family members, etc are the services that are delivered through the department. However, issue of a new ration card by determining the status of the family to fit into BPL, APL etc is a joined up service that involves more than one department. For example, the determination of BPL families is a function exercised by the Gram Panchayat in the rural areas. The Panchayati Raj department is being taken up through a separate MMP and the functions may not be included in the e-District project. Given these circumstances, it is suggested that this category of service may be restricted to services related to an issued ration card that can be exercised by the revenue department at district, taluk and block levels.

6. **RTI services including redressing of Grievances - (Application, tracking, monitoring, redressal, appeals etc.).** (Education, Electricity, Drinking Water, Panchayats, Health, Police, Revenue, Road, Treasury, Social Welfare, Irrigation, Woman & Child, Public Distribution System, Transport, Disaster Relief....
The data necessary to respond to any RTI related query is to be currently retrieved from paper documents in most cases. The service can be restricted to receiving a request, and delivering the same at the doorstep of the concerned department to be processed. The workflow can take care of tracking of the request with necessary escalations and MIS built in. Redressal of grievances can follow the same process. West Godavari model has demonstrated the feasibility of implementing such service. The request for information/posting a grievance is done through a web interface. The request/grievance is acknowledged through a unique ID and routed to the inboxes of concerned department/official to be addressed within the stipulated timelines under citizen charter. The request/grievance is escalated to the next level on failure of action within the timelines and also denies the access to the first level official. This helped in imposition of timelines and escalations and MIS helped the administration control the effectiveness of the service. The general visibility of all the requests made and responses received will help in improving the awareness among the citizens and support change management. Effective models have also been implemented in Thiruvarur and Palakkad, which could be replicated across the country.

Four services need to be identified by the state government and the criteria for determining these services have been also prescribed. We would like to re-emphasize the following two key parameters to be considered while selecting the services:

- Citizen Centric Services
- Volume of data digitization could be completed within the prescribed time frame

V.3 Services Delivery Strategy

Based on our assessment we have analyzed all the six core services and have designed steps for each of the services for delivery through e-district. As e-Governance services evolve, they generally fit into a framework of the four levels of maturity. The four levels of maturity could be classified as Information, Interaction, transaction and integration. At the information level, the district provides information and downloadable forms but no further interaction is possible. At the level of interaction, for instance, the form could be filed online and the validation is done offline and communicated separately to the application. At the Transaction level, for instance validation occurs instantly and some form of acknowledgement/action is delivered online, which is different from a mere acknowledgement of the filling of form. At the integration level, which is the highest, for instance, the income particulars of a citizen are available to multiple departments in the government and includes joined up service in effect.

An attempt has been made to analyze the various services in the model districts with respect to the afore mentioned maturity levels and has been summarized in the following table:
## Services

<table>
<thead>
<tr>
<th>Services</th>
<th>Information</th>
<th>Interaction</th>
<th>Transaction</th>
<th>Integration</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificates</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes*</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Pensions</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Revenue Courts</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Only in Ahmedabad</td>
</tr>
<tr>
<td>Land Revenue</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Only in Thiruvarur</td>
</tr>
<tr>
<td>Public Distribution System/Ration Card Services</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Only services related to ration card already issued</td>
</tr>
<tr>
<td>RTI Services / Grievances</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Only grievances</td>
</tr>
</tbody>
</table>

* Indicates Partial Conformance

As may be seen from the above analysis, the initiatives are at their very elementary stage of information sharing and partially fulfilling an interaction, though with minor exceptions. The existing models have not matured to an end to end e-transaction levels with a capability to integrate across the departments for joined up services. This is a clear indication that these services would need to evolve and this is certainly going to be a time consuming process.

The ideal for e-district project would be end to end, online, and on demand delivery of citizen services. This ideal can not be achieved overnight; still the efforts should be targeted towards achieving the ideal. The extent to which a state wants to go for and the aspiration levels are to be decided by the state based on its e-readiness. The idea here is to set the paradigm in place, not the project in one day.

The government services can be categorized based on the physical interface requirement for the delivery of the service as follows:-

1. Services where physical interface can be eliminated
2. Services where physical interface can be reduced
3. Services where physical interface can neither be reduced nor eliminated

The selection of services should be made keeping in mind their suitability for delivery through CSCs. Then these services need to be categorized according to the physical interface requirement as mentioned above. Finally, micro level process reengineering for each service needs to be undertaken to ensure that the desired service levels are met. The debate for service level would
happen at the state level/district level. A service delivery strategy based on the physical interface requirement and data digitization is given below.

<table>
<thead>
<tr>
<th>SN</th>
<th>Type of Service</th>
<th>Services</th>
<th>Physical interface</th>
<th>Data digitization</th>
<th>Service delivery strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Issue of Certificates - Domicile, Nativity, Caste, Marriage, Income, Employment</td>
<td>Application Issuance Updation</td>
<td>Can be reduced</td>
<td>Incremental</td>
<td>Semi-automated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Can be eliminated</td>
<td>Migration Retrospective</td>
<td>Automated</td>
</tr>
<tr>
<td>2</td>
<td>Social welfare - pensions</td>
<td>Application Updation Payments</td>
<td>Can be eliminated</td>
<td>Migration Retrospective</td>
<td>Automated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sanction</td>
<td>Can be reduced</td>
<td>Incremental</td>
<td>Semi-automated</td>
</tr>
<tr>
<td>3</td>
<td>Revenue court cases</td>
<td>Filing Case listing Case adjournment</td>
<td>Can be eliminated</td>
<td>Retrospective Incremental</td>
<td>Automated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stay orders Final orders / Disposition</td>
<td>Can be reduced</td>
<td>Incremental</td>
<td>Semi-automated</td>
</tr>
<tr>
<td>4</td>
<td>Government dues and recoveries</td>
<td>Issue of notices Record payments, Track default processes, Updation of treasury receipts Information and Tracking</td>
<td>Can be reduced</td>
<td>Retrospective Incremental</td>
<td>Semi-automated</td>
</tr>
<tr>
<td>5</td>
<td>Public distribution system - Ration Card related services</td>
<td>Registration, Change of address, Addition of members, issue of duplicates, including Information / Application / Issuance / Updation</td>
<td>Can be reduced</td>
<td>Incremental</td>
<td>Semi-Automated</td>
</tr>
<tr>
<td>6</td>
<td>RTI services / Grievance redressal</td>
<td>Application, tracking, monitoring, redressal, appeals</td>
<td>Can be reduced</td>
<td>N.A.</td>
<td>Semi-Automated</td>
</tr>
</tbody>
</table>
VI. Recommendations

A project of this magnitude at the district Level needs to take into consideration multiple elements in order to derive a suitable implementation model. The proposed e-district model can be conceptualized using some of the best practices that have been observed and documented during the assessment of the model districts. The following recommendations are proposed for inclusion in the e-district pilot project:

Channel for Citizen Service Delivery
At least one (or more depending upon the size of the district) Government owned service delivery point should be established for delivery of G2C services at the district level. This will be necessary considering availability of other channels such as the CSC at the district level might not be feasible. More importantly, the introduction of the e-district cannot shut down any of the existing channels for the citizen to approach the Government as this would be a legal requirement. The establishment of such a unified delivery channel will also provide fillip to any other service centers (existing or planned) and their integration into the solution as part of project scope.

Help desk for citizens
Experience at West Godavari and Gandhinagar showed that the provision of telephone help line, IVRS was much appreciated by the citizens. It is recommended that provisioning of telephonic help, IVRS, internet help, etc. be made mandatory for e-district initiative.

Institutional mechanism for availability of resources
There is a high degree of dependency on various resources that are required to make the project operational. There is a need to create an institutional mechanism for ensuring that all resources critical for success of the project are made available in a timely and cost effective manner, and all external and internal dependencies are factored in at time of preparing the project proposal. Some of these components include Application Software, Databases, Human Resources, project site, etc.

Standardization
A standardized approach needs to be adopted for implementation of the e-district project. While it is appreciated that it would be difficult to have a “one-size fits all” model at a National level, there has to be a uniformity that should be maintained at the State level, which is to be ensured by the participating State agencies. Standardization should cover elements such as forms/templates, procedures, processes, application software, outputs, service levels, user charges, etc. However, it is duly recognized that there could be certain differences from one district to another within the same state and standardization can help achieve optimization at least at a macro level.
Empowerment of functionaries
There needs to be a provision for empowering local functionaries to be able to delivery services with speed and certainty. While this is possible with some amount of standardization, it would be necessary to make the data necessary for service delivery very comprehensive and reliable. This single factor alone would enable efficient service delivery by personnel lower down the hierarchy, while only exceptions can be escalated up the organizational hierarchy. During the project implementation stage, empowerment of functionaries is expected to be conducive to assist in change management, disseminating information locally and providing a system of checks and balances.

Continuity of project team
The team of field officers involved in these projects has been instrumental in conceptualization and implementation under the guidance of a project champion. To ensure that there is continuity and sustained activity through the project life-cycle, there should be a mandate to ensure that the project team remains the same at least for three years, as far as possible.

Focus on service delivery rather than work flow automation
During the assessment phase, several models that were studied have focused on work flow automation and building efficiencies in the working of the Government back office e.g. Collectorate, rather than on delivering services to the beneficiaries. The scope of the project should be clearly delineated in a manner wherein stress is laid on provisioning of services to benefit the citizens and to provide an efficient mechanism for delivery of these services. From this perspective it may be necessary to lay more emphasis on the automation of specific application software that is necessary for enabling service delivery. In other words, simple automation/computerization related to service delivery functions would suffice without going through the rigors of introducing electronic workflows.

Inter-operability
Several processes are hitherto manual, although there have been efforts to introduce automation at various stages especially at the front-end. It is envisaged that large scale process automation will be carried out through various Central and State initiatives. The system should be designed in a manner that it is interoperable with both existing and future applications of the line department where interaction is necessary for service delivery. Since the e District project has been conceptualized primarily as a service delivery model, DIT should consider integration with the National Gateway MMP, which is being positioned as standards based communication window to all the State and National Depts.
Selection of pilot districts
There are a few common characteristics of all the Districts where the model assessment was conducted. These include a generally conducive economic and social environment, higher per Capita income, high IT adoption rate, high literacy, well established local industries including agriculture, well established civic infrastructure, etc. In light of this, it is recommended that adequate consideration to these factors may be given at the time of selection of pilot district by any State.

Identify similar initiatives to create common platform
Inter-linkages between various initiatives exist at the District and State-level. These need to be well understood and as part of the project assessment need to be high-lighted so that a common platform for information-sharing can be created and no efforts are duplicated and there is no conflict between multiple systems. The identification of existing software solutions should be the responsibility of the State nodal agency while the evaluation for potential reuse would vest with the selected consultant.

Citizen “buy in” - service beneficiaries
The project should have a simple barometer for measuring success criteria- accrual of benefits to the citizen. All stakeholders should ensure that this focus is maintained during project conceptualization and implementation. The only way to ensure that citizens play a vital role in the project is to have a participative approach and a communication plan specifically to apprise the community of the benefits. From an implementation point of view, the design of the change management plan should incorporate an extensive citizen-focused communication plan so that the citizen can start utilizing the system and derive the benefits.

Remove co-existence of manual procedures
The systems and procedures established under the scope of this e-District project should be the primary system for service delivery and all parallel systems should be discontinued once the primary system has been enabled. This would specifically include the manual systems that are in practice. Mandating use of electronic systems can also be considered in a phased manner and use of computerized systems for service delivery can be introduced in a progressive manner for one or more services.

Authorization for reuse of existing data
It has been observed that data for specific purposes have been collected and some of them also happen to be current e.g. Voter ID Database. Since availability of reliable data is the key factor for
the success of the proposed system, guidelines may be evolved and due authorization may be accorded for use of existing data.

**Incremental creation of citizen database**

As the citizen database does not exist and it needs to be incrementally created. The recommended process is to incrementally develop the data while services are rendered through fully enabled reengineered workflow processes. Once the data is built up over a period of time, the same can be utilized for an across the counter delivery of the possible services. The inference is that, creation of a citizen database may not be possible during the given schedule and cost of the e-district project.

**Budgeting for the entire lifecycle of the e-district project**

The e-district project would have a lifecycle of 4-5 years, and if the funding is not budgeted for the full lifecycle, this project would be prone to failures. If the IT infrastructure and software are put up during the project implementation / launch stage, with no provisions for maintenance and upgradation afterwards, e-district project might not sustain over the complete lifecycle. For e-districts to be sustainable and effective, the funds should be budgeted for the entire project life cycle.

**Selection of application development agency (NIC/Outsourced)**

The Application Software is an integral part of project implementation. During the assessment phase, it was seen that District Authorities governed the selection of the software to be deployed and the source for the same. While NIC played a role in some cases, private vendors were also involved in this process and a PPP model was devised to make the software development process continual and sustainable. In light of this, due consideration should be given to the various options available for Software development.

**Localization - technologies, languages, etc.**

The ownership of the project will be with the District Administration. Given the regional focus of the project, implementing agencies should ensure that there is very high degree of localization in the project in terms of service modes, transaction modalities, communication techniques, languages, technologies, etc. This will give the project a higher degree of adoption and recognition amongst the final beneficiaries. Since the pilot implementation will form an input towards Statewide rollout, language could be used as the common denominator for ensuring consistency for this initiative. However, for some designated fields, data should also be in English so that the data can be interfaced easily to other projects and also provide value to citizen for any national / international use.
Revision of Timelines
Based on the experience observed in the model districts, timeline of 18 months to evolve a state wide model appears to be stringent. While best efforts should be made to meet with the given timeline, the actual timeline can be assessed only while preparing the Detailed Project Report for a particular state.

Context of BPR
It has been indicated that BPR is one of the critical parts of the Project. However, the BPR approach is likely to vary as per specific outputs expected and the enabling factors that would drive the project. As a result, while it is appreciated that BPR will form a part of this project, the definition of BPR needs to be defined on a case to case basis.

Office layout design
While introducing e-district project, a conscious effort should be made to improve the office layout and environment. The office layout design of Palakkad district can serve as a reference design for e-district pilot project.
Annexure I: Assessment of the West Godavari District

1. Project Background

West Godavari district in Andhra Pradesh has its headquarters in the town of Eluru. The district had a population of 3,803,517 of which less than 10% were urban as of 2001 census. The district is located in delta region of the Krishna and Godavari rivers and is popularly known as “Annapurna” i.e. rice bowl of Andhra Pradesh, rich in agriculture, rice and sugar are important crops. Sea food cultivation is also significant activity that is carried out in the district. Besides a small number of industries, there is no significant industrialization in the district and hence this is predominantly an agrarian economy.

The Rural e-Seva, implemented in West Godavari is among the early e-Governance initiatives in the country that attracted attention. This initiative was envisioned by the then District Collector, Shri Sanjay Jaju and implemented by the District Information Officer (DIO), NIC supported by his small technical team. The project was conceived in Sept 2002 and launched in Jan 2003.

Rural eSeva is an e-governance initiative undertaken by the government of Andhra Pradesh, to facilitate the use of IT in rural villages and has bagged about five awards for its innovative practices. The project essentially bridges the digital divide in the rural areas and has served as a role model in the effective use of ICT. The project provides access to over 20 C2C (citizen-to-citizen) and C2G (citizen-to-government) services to the people living in rural areas of this district. The project also enables users to post grievances, communicate with the government, pay electricity bills, apply for and check the status of certificates amongst a host of other facilities offered to them.

2. Project Achievements

The objective of the project was to establish a sustainable service delivery model, wherein the Government services are delivered to the citizen through a single window system, through conveniently accessible kiosk locations. The dependencies and critical success factors were clearly identified and focused upon from the very beginning to ensure the success of the project. The delivery channels comprised of service centers set up in large numbers across the Mandals in the district (i.e. ‘Revenue Block’ equivalents).
An important aspect of the project is that it replaces the traditional form of governance and its accompanying deficiencies with a modern, more open, transparent and responsive service delivery system.

A unique feature about these centers is that they are run and managed by persons (mostly women) from self-help groups, positioning them as information leaders, and helping to bridge the gender divide. The women's groups act as key change agents while drawing strength from the project.

Within a period of approximately six months, 46 kiosks in the district were established in each of the Mandal to provide single window government and other services. The funding and subsidies for this were aggregated from multiple sources and a well defined model of the rural kiosk was evolved and implemented.

Long term financial viability was established by levying a small user fee from the service seeker for various G2C services provided by the local administration. In addition, the collection of electricity bills were also introduced and the local electric company paid a service fee for every bill collected.

### 3. Services Provided - key Functionalities

The services essentially comprised of issuance of certificates, grievance redressal, provision of static/dynamic information through web linkages, utility payments and C2C services. The details of the services delivered by the e-Seva centers are as follows:-

- **Issue of Government certificates related to Caste, Income, Residence etc at Rs 10/- per certificate (there is no government fee to be rendered)**
- **Electricity bill payments. APTRANSCO pays the service center a service charge of Rs 2/- per bill (this was possible through a tie up with APTRANSCO)**
- **Rendering of computer education to government school children under a MOU with Azim Premji Foundation. This is a captive income regulated by the district administration, by earmarking schools to e-Seva Centres. The center gets Rs2/- per child per month, with a captive market of those families whose children attend the classes in the local area.**
- **The Administration has negotiated a deal with Hindustan Lever Limited to market their products through these kiosks at an enhanced margin of 11%. This led to Lever (UK) offering a series of public health care multimedia content free of cost to these kiosks.**
- **Other facilities seen with these kiosks to enhance their earnings are**
  - Photo copy facilities
  - Digital photography
  - Internet access
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- School note books
- DTP Works
- Handicrafts
- One time activities like result printouts of public examinations etc.
- Private data entry jobs
- STD PCO

4. Implementation Strategy

There is a clear delineation between the Front End and the Back End in the way the solution has been implemented, where there is a significant attention on the Front End and very little focus on the Back End.

Front End:
The front end delivery channels comprise of rural e-seva centers which are 46 in number. These centers were further augmented by integrating the erstwhile “Rural Service Delivery Points” thereby spreading the reach to deep inside the district. The challenges involved in setting up of these centers and ensuring its sustenance have been addressed with clear focus from very inception. Some of the key features observed are as follows:

- The 46 centers have been set up by enabling the SHGs and entrepreneur groups, through various Government supported schemes from DRDA, SC, ST and BC Corporations and such similar agencies and institutions. Additional financial support as required was provided by local banks.
- The centers were further augmented by enabling and integrating the “Rural Service Delivery Points” (A GoI initiative) into the project, thereby increasing the number to 200.
- The understanding was clear from the very beginning that the centers will not sustain on G2C services alone and need to be augmented with such services that can ensure viability. One of the easily identifiable service was the electricity bill payments. This service was facilitated with APCPDCL through a local arrangement and with participation of rural bank branches. The arrangement ensured equitable distribution of household segments tied to local service center which brought in fixed revenue every month.
- Integrity and creditworthiness of the service center was an important factor to ensure safety of public money during the electricity bill payment transactions. This thought process resulted in setting up of an agency called “Usha Max” which comprised of all the service centers as an association. Creation of this agency ensured the necessary checks and balances through peer pressure and collective responsibility. This also helped the
association grow in stature and clout, whereby they successfully bid for meter reading and spot billing of domestic connections of APCPDCL.

- The district administration helped all possible avenues to aggregate services in B2C and C2C domains with the sole aim to ensure sustenance of the service centers. Some of these services aggregated are:
  - Delivery of computer aided education content through alignment with Azim Premji Foundation and Sarva Shiksha Abhiyan
  - i_Shakthi services of Hindustan Lever Ltd
  - C2C services that include matrimonial, emails, chats etc
  - With a captive segment of the households turning up at the service center to pay their utility bills, the centers used the opportunity to stock and sell general merchandise and other utilities like photocopying, fax and internet services.
  - Success and sustainability of the centers largely depended on the entrepreneurship, despite the enabling environment provided by the district administration.

**Backend:**
The initiative has laid very little emphasis on backend enablement. The flow of work are allowed to remain manual and outside the scope of the application. However, timelines for processing at various levels are clearly defined so that the outcome to the citizen is predictable. The built-in MIS takes care of reporting, escalation and exception handling. The language used for all user interfaces is English only. It may also be mentioned that the grievances are also in English and is a transliteration of the local language.

The service request accepted at the service center was physically and electronically delivered at the doorstep of the department; from where it was picked up and manually serviced. The electronic delivery helped in MIS and progress tracking. MPHS data was the enabler in ensuring speedy delivery of the service. Linking of service delivery to SSID of the MPHS has helped streamline the process and workflow. The service is delivered by determining the data as reflected by MPHS and on the basis of supporting documents. In case, a citizen seeking a service cannot be identified in the MPHS, a format for registering data into MPHS is provided to the service seeker. The onus is on the citizen to provide this data with due authorization from the Village Accountant. Upon submission of the complete data, the Kiosk operator once again feeds the data to update the MPHS database and the system generates an SSID paving the way for issue of the certificates as explained above. The entire backend processing was carried out by a team of operators, who would verify the declared data from MPHS and print the necessary certificates for issuance by Mandal Revenue Officer.
With regard to the utility bill payments, technical support from the backend played a major part to ensure integrity of data and reconciliation. Extensive human intervention was necessary in the model to support this service.

5. Technology and Data Digitization

The business model has been translated into an offline functional model, where the emphasis is on the ability of the local kiosk to render the required service in most circumstances. The software has been developed using resources recruited via the “Sarva Shiksha Abhiyan” project. The implementation takes shape in the main database server, application server and RAS server hosted out of the NIC premises. Each kiosk has a telephone connection and a modem, via which they can dial into the RAS server, and hence the NIC LAN. Technically, the following are to be noted:

- Each kiosk has a Windows desktop environment. A typical Kiosk will also have a printer and sometimes, a scanner.

- Each kiosk has a local database. This is Postgress SQL.

- The e-Seva application is created using Microsoft Visual Basic 6.0 and has a series of Forms. Depending on the service required, the service provider is trained to select the required form from the Menu, and fill in the necessary data.

- As mentioned above, the Forms have been created in VB 6.0. Using the Menu, each form can be selected and displayed on the screen. Again, there are some data that can be selected using a Drop Down Menu on the forms, and others which need to be typed in.

- Each of the forms will have a Submit button.

- Since the emphasis is on offline availability of data, these VB 6.0 forms are tied into a local Postgress SQL database. The table structures in these databases reflect the type of data for each form.

- In order to synchronize the data with the main server, the kiosk owner connects to the central RAS server regularly (eg. Daily), and uploads the incremental data using the tools provided with the application. This uploaded data automatically updates the central database, which, in this case, is on Oracle.

- Typically, one local call is all it costs to completely upload a day’s data.
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- The Oracle database is also exposed as a read-only to the Internet. This is done using a web server, with appropriate ports open on the Firewall. JAVA as well as ASP has been used to populate the web pages when seen from the Internet via a web browser.

- Aggregated information (Total number of applied, approved, pending, and rejected applications per Mandal), along with a finite drill down using simple HTML links provides the District authorities, and the rest of the citizenry readily available information. This has also resulted in good MIS reporting.

- For those entrepreneurs who also wish to offer Internet browsing as a service, WLL connectivity has been provided, which connect to the central WLL server. This also can act as an alternate means to upload the e-Seva data. Video conferencing may also be allowed. However, the bandwidth, of these WLL links may not be sufficient to provide an acceptable Quality of Service.

Data Digitization

The project has made use of the MPHS data which was already in existence. The MPHS data was linked with the Social Security ID (SSID) as explained earlier. So no specific digitization or data migration was carried out specifically for this initiative and services that could be rendered using the MPHS data alone were taken up for implementation.

The solution architecture diagram has been shown below:
6. Challenges and Mitigation Strategies

Since the District Collector conceived and championed the project, he had the access to the resources and the authority to ensure implementation by directing the key players at every level. The emphasis was more on setting up viable kiosks through PPP model, while the application development was taking place. The efforts were on to aggregate as many services as possible to generate more revenues and improve the earning power of these kiosks.

The initial framework was evolved wherein the service request processing was confined to the Mandal Revenue Office (MRO) level, while leaving the internal processing at the MRO to be evolved by the concerned officer himself. In this manner the system was not burdened by the backend processing involving the Government officials like the Village Accountant, Revenue Inspectors and so on. This was one of the reasons for quick acceptance both by the departments as well as the citizens.

Channeling of electricity bill payments have assured a captive income to the kiosks and established viability.

6. Current Status of the Project

The project is currently operational the way it was originally conceived. The rural eSeva centers have been able to deliver 750,000 certificates while over 16,000 grievances have been redressed using the facilitation provided by the eSeva system. In excess of Rs 16 Crores has been collected for the payment of electricity bills without any hitch. More than Rs. 4 crores of Panchayat Taxes has been collected.

All the centres are doing good business and have become self-sustainable. They are earning anything between Rs 3,000 to Rs 15,000 per month depending on the location and average number of monthly transactions.

The system has also facilitated the rectification of incorrect data of citizens to as much as about 10,000 cases.
7. **Critical Success factors**

Sustenance of the Kiosk: From the inception, the kiosk was identified as a critical success factor and serious work went into modeling them. It was also very clear that the model cannot sustain only through delivery of government services and must be augmented with other entrepreneur businesses, sponsored or otherwise, to bring in value addition and make them self sustain. It was not left to individuals’ imagination to come up with viable means to start a kiosk. Rather, a well-defined approach was adopted by the administration. A Coordination Committee was formed, which identified all government schemes that encourage self help groups to become entrepreneurial. Though the individuals may not be aware of such schemes, the committee that was formed had this task cut out. Some of the schemes of this nature were identified with SC Corporation, NSFDC, and Women Welfare Department etc. The schemes involved an element of subsidy, and easy loans from banks. Setting-up of this committee has also brought in the element of transparency. Continuous efforts were on to encourage organizations and business houses to deliver their products through these centers.

Financial Viability: The sources of income are generally captive. Unhealthy competition was avoided by regulating the centers in terms of location versus population.

Citizen Awareness of the Facility: The comfort and convenience of the facility through which the citizen is getting served is another key factor. Once used to this facility, the expectation of the citizen to demand such service levels in future would help prevent the withdrawal or collapse of the system.

Extent of Change: The initiative was more of automation of the front end and nothing to do with backend enabling. The processing at the backend got simplified in such a way that the services were delivered on the basis of MPHS data. There was no major acceptance of change issue or changes effected on existing workflows.

Leadership: As this initiative was being driven under the personal involvement of the District Collector and the services mostly pertained to the revenue department that is directly under the district collector, the adoption of the system was both quick and effective.
8. Key Learnings

- Creation of Mandals and empowering them has provided natural institutional units that can effectively deliver routine citizen services. In the absence of the Mandals, the flow of work would have been more cumbersome and effective turnaround could not have been met like the way it has been achieved now.

- Like all other similar initiatives that are driven by champions, the rural e-Seva appears to be unstable after the exit of the visionary and the execution team. One of the critical success factors, i.e. the electricity bill payment, was not institutionalized with administrative orders to ground the service. Once this service exits from the service centers, the entire model is likely to become untenable.

- Availability of MPHS data is a key enabler for G2C services, simplifying workflows, minimizing change management challenges.

- Championing an initiative of this nature, by a person with authority is a necessity. The pilot e-district implementations will require such strong championing.

- G2C services alone cannot ensure viability of the service centers. Aggregation of B2C services particularly from the private sector must be initiated from the very beginning.
Annexure II: Assessment of the Thiruvarur District

1. **Project Background**

Thiruvarur district of Tamil Nadu State was a new district carved out from Thanjavur and Nagapattinam districts on 1-1-1997. Thiruvarur is a riparian district of the Cauvery delta. Its annual contribution to the paddy production of the state is about 5,50,000 tonnes. Wetland agriculture forms the backbone of Thiruvarur’s economy. Thiruvarur district has over 1.1 million populations. Over 80% of the population lives in villages. UNDP had classified Thiruvarur district under ‘highly disaster prone’ list. Cyclones, floods and droughts are a recurring phenomenon there. The literacy level is 68% as per the latest census. The district has very high level of poverty and associated backwardness. Geographically, Thiruvarur is located at 350 KMs from Chennai. The Government of Tamil Nadu declared Thiruvarur district as the pilot-e-district on 13th June 1999 thus paving the way for experimenting various application software tools to automate the government processes aimed at reducing the troubles of the citizens in their interface with the government machinery in their day to day life.

As part of e-District initiative, for improving public service delivery, Thiruvarur has developed various computer applications for office automation of various departments like land and revenue record, registration deeds, domiciles, rural department, Taluk offices and Block offices. The pilot e-District rolled out over 20 e-Governance software packages covering various areas of citizen interface with the Government. The major beneficiaries were agriculturalists, land owners, students, widows, agricultural labourers above 65 years of age, schools etc.

- The district has 7 Revenue Talukas, which are computerized with many services being provided online.
- Hardware and Software have been installed in all the Taluks
- Taluk Automation Application is being used in all the Taluks
• All the Officials of the Taluks have been trained in the usage of the Computer Applications and troubleshooting network problems
  
  The district has 10 Blocks, which are computerized with few services being provided online.
• Hardware and Software have been installed in all the blocks
• Block Automation Application and RAPID is being used in all the Blocks
• The District Collectorate is under Local Area Network and for high speed networking between the various offices; Wireless LAN towers/Microwave radios have been created.

2. Project Achievements

The key achievements and benefits to the citizens and the district officials due to the pilot e-district in Thiruvarur are summarized below:

• The entire land record transactions have been moved from manual register to online mode. Citizens could have their land purchases recorded in the Taluk and village land record registers just by paying Rs.20. Agriculturists could get the cultivation and harvest certificates (Adangal extract) within minutes just by parting with Rs.20. Other land record extracts were made available to the citizens at a cost of Rs.10 in all the Taluk office counters.
• The entire Public grievance redressal mechanism was made online. Each petitioner was given a computer generated acknowledgement online and action taken report was sent within two weeks. Almost 3000 grievance petitions were received and disposed within two weeks. Service levels were defined for different departments for receiving reply to the grievances.
• The OAP beneficiaries who were hitherto getting the money orders after a delay of one month started getting the Money orders on the 2nd or 3rd of every month.
• A citizen can get a birth or death certificate within 10 minutes as the entire data is maintained online(1997-2001)
• Delay in disposal of Distress Relief Scheme and Accident Relief Scheme was removed with the entire sanction procedure and fund disbursement procedure being online with appropriate checks and balances.
• Before the pilot e-district implementation the pre and Post Matric students were getting Scholarship between February and April. After the introduction of e-governance package in Collectorate scholarship section, the task could be accomplished within one week after receipt of fund allocation from Government. That means, the students could get the Scholarship assistance well before August every year.
• Rural Development: The family oriented rural development schemes which concentrated the poor among the villages and the SC/ST people had no transparent elements. This had resulted in delay in processing. The Indira Awaas Yojana (IAY) which offers free grant for construction of rural house had been fully automated, right from the receipt of application stage. Similarly, the credit cum subsidy scheme aimed at providing self employment opportunity to the rural masses was fully automated at the DRDA and Block level with vertical linkages. In addition to the above, the entire scheme and financial accounting areas of rural development department were fully automated.

• The Revenue officers before the implementation used to work for nearly two months during the beginning of every calendar year due to preparation of Jamabanthi (annual audit of village accounts) accounts. The Jamabanthi accounts are comprehensive accounts that require a minimum of 40 days to prepare the same. After computerization the system generates all the Jamabanthi accounts within 2-3 minutes thus saving hundreds of man months.

3. Services Provided- key Functionalities

The list of initiatives for computerizing various citizen-centric services and support departments, as part of Thiruvarur being an e-District is detailed out in this section. All these initiatives were taken between the year 1999 and 2001.

Module1: Land Records Application

Computerization of Land records and administration of land records has been done for the following sub-services covering:

- A-Register correction
- Chitta correction
- Patta transfer - simple
- Patta transfer - involving sub-division
- Patta transfer - adding or deleting names
- Maintenance of Patta transfer register
- Change of classification of land
- Land transfer

The following sub-services are inbuilt into the application however are not being used.

- House site assignment
- Land assignment administration
- Land alienation procedure
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- Land acquisition procedure
- Land relinquishment procedure
- Land exchange procedure

In addition, following components of monitoring the collections from land revenue also has been computerized:
- Conduct of annual audit of village accounts (Jamabanthi) including collection of current and arrears and preparation of Demand Collection Balance register, which includes Administration of all types of revenue / loan collection

A unique feature was built-in the TAS system, which was introduction of concept of unique transaction number, which meant, generation of automatic stamp of unique encoded number for each transaction. This has lead to two advantages:
- This enables to track down the identity of the data entry and approving authority, while identifying the exact transaction itself
- At any time one can identify the orders issued, by giving the unique number that was printed in the order copy

Module 2: Issue of certificates/cards

The Collectorate supported by the Taluk offices are responsible for issuance of certificates through the e-district application as detailed below:
- Administration of birth and death records including issuance of birth and death certificates
- Issue of community certificates such as income / solvency / nativity certificates

Module 3: Effective Citizen Grievance redressal system

The entire grievance redressal mechanism was made online in the year 1999. This system enables the capturing of the petition details online and monitoring the disposal of petitions by various Government Departments online. It was one of the most successful initiatives under the e-district implementation. It had an efficient backend operational process with e-district system functionality.

The stepwise procedure for the Grievance redressal is mentioned below

Step 1: Petitions were received from the citizens and the system provides an acknowledgment to the petitioner as soon as the petition is given. The acknowledgement contains details like:
  - Serial number of the petition for tracking purpose
  - Department name
  - Subject of the petition
  - Date within which action has to be taken

Step 2: The district collector every week calls all the departments and the grievances and handed over to the various departments with timelines for redressal. Service levels are defined for each department.
Step 3: Each petition has to be addressed within a month. If the petition does not get addressed within the time frame, department-wise pending list is generated for the review of the District Collector.

Step 4: Automated reminders were being generated by the system to the various departments and constant monitoring was being done by the district collector.

Step 5: The respective departments sent the action taken information to the Grievance Handling cell at the collectorate, which is updated into the system. After the updation the grievance is closed by the system.

More than 3000 applications were received and monitored every week. This helped gain acceptance of the citizens for the e-district application.

Module 4: Monitoring of Developmental schemes - Currently not in use

District Rural Developmental Agency (DRDA) is the direct representative of the Central and the State Government responsible for implementing the rural development schemes sponsored by Central and State Government. In Thiruvarur, Project Officer (DRDA) reporting to the Collector heads DRDA. Some of the schemes that are being implemented by DRDA are:

- Indra Awas Yojna
- Sampoorna Grameen Rozgar Yojna
- MLA Development Scheme

The bilingual software is used for online administration of DRDA’s schemes as well as for accounting purpose. It enables the issue of administrative sanction and technical sanction. This enables the Collector and the PO (DRDA) to review the physical and financial progress of the projects being undertaken for the State.

This Software was being used extensively till 2004. As the Department is facing some technical problem with the Software, they have starting using RAPID software along with DRDA.

Module 5: Monitoring of citizen beneficiary schemes

The Collectorate is responsible for monitoring various social benefits schemes, like:

- Old Age Pension Scheme (OAP)
- Distressed Agricultural labourer’s Pension Scheme (DALP)

The workflow involved under this system is as given below:

- Taluk office receives application under each scheme
- The application is forwarded to the Revenue Inspector
- Status of the application is verified
- Once the Tahsildar sanctions the beneficiary, the applicant’s name is automatically updated in the Beneficiaries’ Register
- Every month the system automatically prints the money order in a prescribed format to be paid to each beneficiary
Module 6: Office Manager

This is a one-stop solution for managing the establishment related activities in the Government offices. Most of the offices in the district like Taluk offices block level offices and Revenue divisional offices are using this software. The modules under the systems are:

- Payroll processing
- Leave maintenance
- Loans and advances disbursal
- Monitoring of recovery of loans

The reports that are generated through this software are:

- Payroll and treasury schedules
- Master and installation reports
- Increments certificate, order copies and increment register
- Individual Payslip

This feature is inbuilt into the application however currently not in use in the district

In addition to the above, some more Applications were developed as part of e-District initiative but not being used at present due to lack of software personnel for the maintenance of software.

- Block level services: This software was to be used for entire accounting of the Block Development office for monitoring all schemes undertaken by the Blocks
- Town Panchayat level services: This software was aimed to have features related to preparation of demand for effecting tax collections such as property tax, professional tax etc., water tax collection, stock maintenance, staff salary, bank account maintenance and other payments like work payments, funeral payments etc.
- Estimator 2000: This software enables preparation of road estimates, building estimates, estimated for bridges etc.
- Police Station related services: A package was developed for computerization of the Police stations covering General diary, Roll call, Duty allocations, FIR, Arrest card and memo, Prisoners search, Sentry relief, Village roaster, History sheet and Criminal Master

4. Implementation Strategy

4.1 Project Team

The entire technical and functional areas of Thiruvarur e-governance initiative were headed by the District Collector Mr.C.Umashankar and well supported by the Project Officer, PA (General), PA (Development) and Chairmen of respective Panchayat Unions. The district had set up software
development centre in the District Collector’s office, employing over 30 software professionals in the Project team for the development of e-governance application software packages.

The pilot-e-district rolled out over 20 e-governance software packages comprising of various areas of citizen interface with the government. The major beneficiaries were agriculturists, land owners, students, widows, agricultural labourers above 65 years of age, schools, local body population, rural population, below poverty line people benefiting from social welfare schemes such as marriage assistance scheme, pregnant women assistance scheme etc.

4.2 Phased Implementation Strategy
The implementation strategy for the Pilot e-district was based on the citizen’s requirements. The project had a phased implementation. The first two application software packages was introduced within 90 days of commencing the e-district project were the Grievances handling software and National Old Age pension software. These packages had been commissioned in the Collectorate and all 7 Taluk offices on the 16th May 1999.

Earlier OAP section in the Taluk offices was the neglected area in Taluk administration. This wing was in charge of serving the citizens in distress such as agriculture labourers who had crossed 65 years of age and have lost the ability to do labour anymore, widows, physically challenged persons, deserted house wives etc. The beneficiaries under the OAP scheme get a life long pension of Rs.200 per month. The problems faced by this segment of citizens were two fold. Firstly, the application processing took as long as one year or more. Secondly, the selected beneficiaries got their monthly pension through money orders very late, usually next month. With the introduction of process based automation software for handling all the OAP schemes on 16th May 1999, the entire district migrated to paperless stage with regard to OAP schemes. The paper based registers were done away with. All the transactions were routed through the online procedure. The money orders were generated by the system instead of manually being written. The turnaround took place in less than 9 months. Due to the no backlog of work, whenever the visitors from outside wanted to see the OAP software functioning, the district administration had to send out an alert to the Taluks to keep at least some work pending so that the visiting team could see the online functioning. This was followed by the other difficult areas such as land record administration online, DRDA online and Block offices online.

4.3 In-house Software development centres
Part of the Collectorate building was converted into a software development wing. Four software development centres were set up in the Collectorate building and 32 programmers were recruited
in these centres. These software development centres were provided with quality infrastructure including air conditioning, LAN and continuous power supply facility.

4.4 Change Management Strategy
Staff training was undertaken on a continuous basis. In majority of the training sessions, the senior officials of the district administration, including the District Collector took part. The trainees were given hands on experience during these sessions. The District Collectorate was the centralized training facility.

Whenever any new module was about to be introduced, the resource persons from each office was called to Collectorate and training was imparted. The software professional in charge of the application development was made the nodal officer for handling the technical requirements of the training. Training manuals were prepared before each such training session. User feedback was obtained then and there and necessary modifications were carried out thus making the packages acceptable to the users. Training was an integral part of the e-district exercise. Weekly training schedules were announced well in advance to enable the officials to attend the same.

Software administrators: To administer the Taluk/Block servers, clerical employees from each of the 20 offices were chosen on voluntary basis to undergo training to act as software administrators. In each office two such staff has been selected for a one week intensive training on server administration. Their main role was to administer the software installed in the server and to serve as server operators. They had not been given system administration password nor database administration password. The main role of the software administrator is to start the server in the morning and close the operations at end of the day. Other users had no right to shut down the system. In addition to this, the software administrators had the powers to assign and revoke rights on each of the application software. This enables them to handle the day to day variations in availability of staff. If the Software administrator goes on leave, then the standby software administrator takes over charge. A software based tool had been provided for such online handing over of charge. This procedure had enabled the staff to take complete ownership of the IT infrastructure and the database. To provide continuity to these software administrators, an order was issued barring their transfer to other assignments without the written orders of the District Collector.

Public awareness campaign: To educate the citizens that they could avail online services in the Taluk and block offices, a special campaign in the name of ‘Power of e-governance’ was organized in 8 places, starting from 30th September 2000. The modus operandi was to move the Taluk office server from the Taluk office to a public place such as marriage hall on the day prior to the
campaign. Through advertisement and publicity the citizens were requested to come to the campaign centre to avail of the online services. The promise was that the services would be provided within a maximum of 2 hours, including enquiry time, if any and no paper based register would be used in the whole exercise.

5. Technology and Data Digitization

5.1 Technology - Development Platform
In-house Software Development team had developed the various Applications for the citizen services and these have been developed in Visual Basic with DB2 as the backend. Accel ICIM had supplied the Hardware for the Collector office, Taluk offices and Block offices.
During development of the application IBM provided free DB2 and its technical support for project implementation, which helped in reduction of the cost. The application developed by NIC in the rest of the 29 districts is in VB as front-end and SQL as backend. The overall e-district application development was done in 12 months.

The e-district application also uses an optimal mark reader Technology, using scan facility for the civil supply department (PDS) to detect malpractices

The Supercop application serves as a back-up package. All the entries pass through this and a copy of each entry is stored here. In the event of system crash, the data are restored a matter of two hours or less. Limited officials have access to the back-up floppies and usage of the Supercop application.

5.2 Hardware details and the procurement process
The district had acquired servers, fat client machines, thin client machines, UPS, laser and dot matrix printers, LCD projector and power back up generators for the Collectorate, Taluks and blocks

<table>
<thead>
<tr>
<th>S.No</th>
<th>Hardware Items</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Servers</td>
<td>32</td>
</tr>
<tr>
<td>2.</td>
<td>Fat Clients</td>
<td>180</td>
</tr>
<tr>
<td>3.</td>
<td>Thin Clients</td>
<td>100</td>
</tr>
<tr>
<td>4.</td>
<td>Laser printers</td>
<td>18</td>
</tr>
</tbody>
</table>
Due to scarcity of organized funds, the district went ahead with open tender procedure and finalized the lowest bidder before mobilizing the funds. By the time the tenders neared their logical end, the requisite resources were mobilized from various sources. In this way there was no wastage of time in the acquisition of hardware. When the hardware acquisition process was on, the application software were developed using the minimum infrastructure available. The hardware infrastructure at the Taluks/Blocks in Thiruvarur is different from the rest of the 29 districts.

### 5.3 Network infrastructure

For the purpose of high-speed connectivity to link all the offices of the District of Thiruvarur with the Collectorate through wireless Local Area Network, it was planned to install wireless LAN towers and Microwave radios. For the purpose, the project was designed to install three central access points. One at the Collectorate, one at Muthupet and another at Mannargadi and remote access points at the Taluk offices, Block offices and RDOs offices. The vendor (M/s Unity Electro System, Coimbatore) has installed all the towers, but currently, the wireless LAN is not being used. This is due to the statutory requirement of furnishing License fee and Royalty of Rs. 3.21 lacs to the Ministry of Communication, GOI, which the District is unable to pay.

The following infrastructure were built as part of this initiative

- 50 metre towers at Collectorate - one
- 45 metre tower at Mannargudi (Police tower) - one
- 30 metre towers in Tiruthuraipoondi and Muthupet - Two
- 24 metre tower at Valangaiman Taluk - one
- 18 metre towers at Kodavasal, Needamangalam and Nannilam Taluks - Three
- 6-12 metre towers - 6
- 802.11b wireless bridges (CISCO) - three
- 802.11b wireless access devices - 5. (six more to be installed)

### 5.4 Data Digitization

There were a large amount of manual records digitized during the project implementation, which include

- As on April 2001, total number of 15.4 million land records was digitized for the entire district.
• Administration of birth and death records including issuance of birth and death certificates was digitized
• Issue of community certificates such as income / solvency / nativity certificates
• Old Age Pension Scheme (OAP) - Details of the pensioners are automated in the database
• Capturing the grievance and petition details- The system stores grievance details and tracks the progress/status of the details

Data ownership: IPRs of the application software packages are owned by the Government thus giving scope for the Governments to adopt the packages in their respective areas of governance. The data created at the Taluks is also owned by the government

5.5 Financial resources
The district did not receive any formal commitment of funds from the State budget. A Non Profit Organisation named District Welfare Committee, which was headed by the District Collector and participated by the people’s representatives was formed for funding this initiative. This Non Profit Organisation mobilised funds from various sources and schemes such as Members of Parliament Local area development Programme (MPLADP) and MLA Constituency development fund.
A total of approx. Rs. 200 Lakhs was mobilised and utilized for implementing the project. These funds were used for procuring Hardware/Infrastructure facilities for the 7 Taluks (1 Server, 9-11 Client nodes, Laser Printer, High Speed Dot Matrix printer, UPS) and block offices (1 Server, 3 Client nodes, 6 Thin clients, UPS etc.) The software development centres also were funded from this source.

Details of the Fund utilized in the Thiruvarur

<table>
<thead>
<tr>
<th>S.No</th>
<th>Items</th>
<th>Cost ( in Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Computer hardware ( Server + Client Nodes - 271 No.s )</td>
<td>1,17,49,438</td>
</tr>
<tr>
<td>2.</td>
<td>Printers ( Laser + Dot Matrix) - 47 No.s</td>
<td>14,70,449</td>
</tr>
<tr>
<td>3.</td>
<td>UPS Purchased - 20 Nos</td>
<td>20,07,350</td>
</tr>
<tr>
<td>4.</td>
<td>Wireless Towers Installed</td>
<td>18,47,000</td>
</tr>
<tr>
<td>5.</td>
<td>Purchase of Materials for LAN Connection ( Networking)</td>
<td>10,94,107</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,81,68,344</td>
</tr>
</tbody>
</table>
5.5 Sustainability of the operations

The entire land record transactions have been moved from manual register to online status. For providing these services user charges are being collected by the district administration which include:

- Citizens could have their land purchases recorded in the Taluk and village land record registers just by paying Rs.20.
- Agriculturists could get the cultivation and harvest certificates (Adangal extract) within minutes just by paying up Rs.20.
- Other land record extracts were made available to the citizens at a cost of Rs.10 in all the Taluk office counters.

Taluk wise Revenue generation post implementation (Period: 1/1/2005 - 22/6/2005)

<table>
<thead>
<tr>
<th>S.</th>
<th>Taluk Name</th>
<th>Number of us for viewing</th>
<th>Total View Amount</th>
<th>Total Print request</th>
<th>Total Print amount</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thiruvarur</td>
<td>43</td>
<td>86</td>
<td>1365</td>
<td>27300</td>
<td>27386</td>
</tr>
<tr>
<td>2</td>
<td>Kudavasal</td>
<td>28</td>
<td>56</td>
<td>1327</td>
<td>26540</td>
<td>26596</td>
</tr>
<tr>
<td>3</td>
<td>Valangaiman</td>
<td>0</td>
<td>0</td>
<td>1206</td>
<td>24120</td>
<td>24120</td>
</tr>
<tr>
<td>4</td>
<td>Thiruthuraipoor</td>
<td>0</td>
<td>0</td>
<td>1091</td>
<td>21820</td>
<td>21820</td>
</tr>
<tr>
<td>5</td>
<td>Mannargudi</td>
<td>166</td>
<td>332</td>
<td>953</td>
<td>19060</td>
<td>19392</td>
</tr>
<tr>
<td>6</td>
<td>Needamanglam</td>
<td>23</td>
<td>46</td>
<td>835</td>
<td>16700</td>
<td>16746</td>
</tr>
<tr>
<td>7</td>
<td>Nannilam</td>
<td>0</td>
<td>0</td>
<td>333</td>
<td>6660</td>
<td>6660</td>
</tr>
</tbody>
</table>
|    | Total            | 260                      | 520               | 7110                | 142200             | 142720       

The following table provides a summary of the issues faced in different areas and the key mitigation strategies initiated.
## Area of Challenge

<table>
<thead>
<tr>
<th>Description</th>
<th>Implementation Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data</strong></td>
<td>In-house Data Digitization operations, complete the data.</td>
</tr>
<tr>
<td>Huge volume of 15.4 million manual records</td>
<td>Data Entry Operations carried out in 3 Shifts Round the Clock.</td>
</tr>
<tr>
<td>Quality of data. In some cases manual records were of poor quality.</td>
<td>Decision to have Data Entry at the Collector's office helped achieve better supervision</td>
</tr>
<tr>
<td>Dynamic nature of data</td>
<td>and control on the activities of the Talatis and Data Entry Operators.</td>
</tr>
<tr>
<td>Managing Data Entry Operations</td>
<td></td>
</tr>
<tr>
<td><strong>People</strong></td>
<td>Staff training was undertaken on a continuous basis.</td>
</tr>
<tr>
<td>Resistance to change</td>
<td>In majority of the training sessions, the senior officials of the district administration</td>
</tr>
<tr>
<td>Change in Mindset of the officials towards e-governance</td>
<td>including the District Collector took part.</td>
</tr>
<tr>
<td>Lack of exposure to technology</td>
<td>To administer the Taluk/Block servers, clerical employees from each of the 20 offices</td>
</tr>
<tr>
<td>Managing queries raised by Public Representatives</td>
<td>were chosen on voluntary basis to undergo training and act as software administrators.</td>
</tr>
<tr>
<td>Interdepartmental co-ordination and software upgradation, manpower deployment, funds, hardware procurement, system upgradation etc</td>
<td>In each office, two such staff has been selected for a one week intensive training on server administration.</td>
</tr>
</tbody>
</table>

Educate the citizens that they could avail online services in the Taluk and block offices, a special campaign in the name of ‘Power of governance’ was organized in 8 places.
<table>
<thead>
<tr>
<th>Area of Challenge</th>
<th>Description</th>
<th>Implementation Strategy</th>
</tr>
</thead>
</table>
| Financial resource| - The district did not receive any formal commitment funds from the State budget.  
- Audit objection on the utilization of funds. | - A Non Profit Organisation named District Welfare Committee, which was headed by the District Collector and participated by the people representatives was formed for funding this initiative.  
- This Non Profit Organisation mobilised funds from various sources and schemes such as Members Parliament Local area development Program (MPLADP) and MLA Constituency development fund.  
- Declared e-district through a Government order.  
- Support from the Political power. |
| Technology        | - Lack of awareness  
- Technology  
- Computerization  
- No existence of application  
- Resolving bugs/errors/functional gap during operationalization phase  
- Software stabilization | - A well designed Graphical user interface was developed for ease of Use.  
- The software was developed in the local language to ensure acceptance and ease of understanding by the lower level officials.  
- Part of the Collectorate building was converted into software development wing. Four software development centres were set up in the Collectorate building and 30 programmers were recruited in the centres. |
| Sustainability    | - Sustainability of operations | - Citizens could have their land purchases recorded in the Taluk and village land record registers just paying Rs.20 in person.  
- Agriculturists could get the cultivation and harvest certificates (Adangal extract) within minutes just parting with Rs.20.  
- Other land record extracts were made available to the citizens at a cost of Rs.10 in all the Taluk office counters. |
Project Management

- Support from the district officials and administration

- Project Champion Mr. Umashankar had willingly accepted the task of Pilot e-district and was involved in the Head of Functional and administrative components of the project.
- He also created Technical team in Collectorate and was involved directly in the software development.
- He organized many training programmes for the citizen and employees

7. Current Status of the Project

The way-forward for the Thiruvarur e-district project was implementation of the wireless technology to connect all the 7 Taluk offices, 2 revenue divisional offices, 10 Panchayat Union offices with the Collectorate. The concept was to convert the Collectorate into a paperless environment. However it was not implemented due to lack of funds.

- Due to lack of timely funds and project ownership the project progress has not been significant after year 2001. However the e-district application has been running in the Taluks for the last several years and user charges are being collected. The Taluk automation software is widely used application amongst the 20 e-governance application developed. We had visited the Taluk office of Thiruvarur and the Collectorate, some of the issues that needs to be resolved in the existing scenario.

- The Taluk Automation application is the main application which is in use. Other key applications such as Block Automation, Transport, and Estimator etc are not in use.

- Based on the discussions with the existing officials information technology and its use is not a current priority of the district.

- Software was developed by an in-house application development team; all the programmers involved have left the district administration. Since NIC was not involved in the application development, it is not able to provide the software troubleshooting and maintenance.

- The Hardware installed at the Taluks and Blocks needs to be upgraded. The AMC of the hardware has been expired and hardware support is not provided at the Taluks or blocks.

- Absence of Diesel Genset for operating at the Taluks. Since there is shortage of electricity supply in Taluks, there is need supplement the UPD with Gensets.
• There is a need to standardize the processes and re-focus on the e-governance initiatives by providing full commitment (Technical and Financial resources) from the state and district administration.

• NIC has implemented land records and registration application in the rest of the 29 districts, however in Thiruvarur the old application is still in existence. There is need to standardize the applications across the state.

• Currently there is a regular monitoring of the e-governance activities are being done

8. Critical Success factors

1. Total Commitment from the Project Champion - One of key success factors for Thiruvarur e-district implementation was the involvement of the district collector and his project team in all aspects of project implementation. The district collector in Thiruvarur the Project Champion Mr. Umashankar had willingly accepted the task of Pilot e-district and was involved as the Head of Functional and administrative components of the project. He had mobilised funds from various sources for implementing the project. He also created Technical team in Collectorate and was involved directly in the software development. He organized many training programmes for the citizens and employees.

2. In-house Software development- Part of the Collectorate building was converted into a software development wing. Four software development centres were set up in the Collectorate building and 30 programmers were recruited in these centres. 20 application packages covering many e-governance services were developed.

3. Bilingual database interface - Thiruvarur had developed Tamil/English bilingual interface. The application uses a DLL which by replacing in the Windows system directory, the database interface can be changed to any other language. This helped in widespread acceptance of the application by the citizens and officials.

4. Public Awareness - For creating public awareness by conducting 8 online public grievance redressal camps. Over 3055 citizens got sanction orders for various requirements online during these camps. During these camps, the Taluk servers were taken to third party places such as Marriage Halls and the petitions of the citizens were received there and decisions/orders were issued on the spot. Majority of the citizens were below poverty line

5. Continuous Training to the Officials - Training was provided to many officials on an ongoing basis at the district collectorate. 560 Village Administrative officers( VAO) , over 150
revenue officials of various categories, 60 survey officials and 150 officials from the rural development department were provided training on the new application software.

6. Administrative Changes - Administrative changes have been done for delivering the automated services and the district was declared e-district through government orders. Administrative orders for collection of user charges for delivering the citizen services was also implemented. Some of the decisions include:

7. Citizens could have their land purchases recorded in the Taluk and village land record registers just by paying Rs.20 in person.

8. Agriculturists could get the cultivation and harvest certificates (Adangal extract) within minutes just by parting with Rs.20.

9. Other land record extracts were made available to the citizens at a cost of Rs.10 in all the Taluk office counters.

9. **Key Learnings**

Based on our experience in Thiruvarur and assessment of the current scenario in the district we have documented the following key learning’s of the Pilot e-district implementation. These learning’s are derived from the current issues and requirements of the Thiruvarur district and our experience in other districts.

1. Role of the Project Champion is critical for the success of a project. In Thiruvarur the Project Champion Mr. Umashankar had willingly accepted the task of Pilot e-district and was involved as the Head of Functional and administrative components of the project. He had mobilised funds from various sources for implementing the project. He also created Technical team in Collectorate and was involved directly in the software development. He organized may training programmes for the citizens and employees.

2. Another critical learning related to the first point is while a champion is always a need, but to continue the e-governance initiatives, support during the complete life cycle of the system and proper transfer of information is equally important. There needs to be clearly defined procedures and documentation for transfer of information and sustainability.

3. Continuity of Financial Support is essential for implementation of e-district. Currently there is a requirement for upgradation of the Hardware at the Taluk and block level. AMC for the Hardware has expired and funding is required to renew the AMC and replace the old hardware. We feel organised funding is necessary to carry on an e-governance initiative in the long run.

4. The district has implemented a revenue model by collecting user charges for different services (Issue of Record of Rights, Certificates etc). Currently the collection of these user charges is not able to meet the operating and upgradation costs. There is a need to study
the types of PPP Models applicable in the district in context with different Scenarios, depending on the amount of investments to be made by the Private or Govt. Party.

5. Maintenance/upgradation of Hardware/equipment, upgradation of the software on regular basis, has to be planned and Budgeted, otherwise, systems have their natural death, sooner than expected.

6. Ban on issue of manual records: Government Order (GO) from Commissioner of Revenue Administration for use of computerized receipts had also issued during the e-district implementation.

7. Designing a Project Plan with well defined milestones is necessary for successful e-Governance outcomes. Project plan with handholding and maintenance support of the Application development and key activities should be designed. Currently in Thiruvarur the software developers of the various applications have left without sharing the software Application code or flow with any other Technical team or NIC. There is a need in the district for a Technical team to understand the various applications (more than 20) for enhancement and maintenance at the Taluks and blocks

8. The Project Team should continue throughout the life cycle of the project implementation. Systematic handholding procedures needs to be designed in case of exit of any project team member for smooth implementation of the project

9. The Application should be user friendly and language interface should be bilingual for wide acceptance.

10. The success of the e-District project in Thiruvarur was also due to the training of the users and mitigating all the change management issues. This should be part and parcel of the implementation strategy for converting a District into e-District. Training at all levels was provided to the users. Every VAO is updating his records at Taluk and reconciliation happens.

11. The success of Thiruvarur also was dependent on an effective online grievance redressal mechanism this system enabled the capturing of the petition details online and monitoring the disposal of petitions by various Government Departments online. More than 3000 applications were received and monitored every week. This helped gain acceptance of the citizens for the e-district application
Annexure III: Assessment of the Ahmedabad District

Ahmedabad is the largest city in Gujarat, perhaps also one of the largest districts in the country in terms of population. The draft Census Report of 2001 estimates the population of the city itself at over 46 lacs and that of the district as approximately 58 lacs. There are 11 Talukas, one Municipal Corporation, and 15 Municipalities in Ahmedabad district. The number of citizens visiting the district office is also correspondingly high. The demand for services here was more linked to land related issues. Rapid industrialization and increasing demand for residential and commercial property has resulted in a large number of cases for Non Agricultural Land Use Permission cases.

We visited Ahmedabad district on 2-3 April, 2007. We started our visit by meeting the District Magistrate & Collector, Mrs. D. Thara, who explained to us various steps undertaken by her previous collector to streamline the processes for Jan Sewa Kendra, the front end for citizen services delivery. Her emphasis was on back end process reorganization done to enable the functioning of Jan Sewa Kendra. She detailed the specific cases of Non Agriculture Land use permission, Appeal Cases of Collector court, and Inward registry computerization. She highlighted the reduction of number of days to deliver services to citizens from as high as 2-3 years to 4 months in Non Agriculture Land use permission cases, manifold increase in revenue to the government due to higher number of cases being processed in the same time and online monitoring of various files, cases by the Collectorate office and citizens on the web.

2. Project Achievements - Jan Sewa Kendra

Ahmedabad district became one of the pioneer districts in Gujarat in establishing Jan Sewa Kendra (Citizen Service Centre) in January, 2004. This project had its root in an earlier attempt by a Collector of the district who tried to introduce e-Governance in the Collectorate, though in a small way. Due to problems at various levels, particularly related to funding and space, that project never took off. The project was revised and presented in the present modified form in the conference held at Kevadiya (Narmada District) of all District Collectors and district Development Officers, under the chairmanship of Shri Narendra Modi, Hon’ble Chief Minister of Gujarat, on June 28, 2003 by the then Collector, Ms. Anita Karwal. The concept of public private partnership was mentioned for the first time and it was given oral approval by the Hon’ble Chief Minister at the conference itself. The project aimed at the reengineering of structures and processes in the Collectorate to achieve the goal of good governance. The use of information technology was to be the backbone of the project.
The Jan Sewa Kendra acts as the single point front end for information dissemination about government services, accepting applications for the 75 services and handling citizen grievances. The Jan Sewa Kendra at Ahmedabad city Taluka was established through private / industry sponsorship of Rs. 1.7 Crores. For this, State Government approval was taken and a General Resolution was passed by the State Government. The money was collected in a fund named “Mehsool Bhawan Fund”, and a receipt was given to the donor. There is a provision of waiting rooms and waiting area for visitors along with clean toilets and clean drinking water at Jan Sewa Kendra at Ahmedabad city Taluka. There are 16 computer terminals functioning, the PCs used are Pentium P-IV, 2.4 GHz. These are connected to Intel Xeon Server with a 10/100 MBPS LAN. This LAN in turn is connected to GSWAN.

After establishment, the Jan Sewa Kendra is being run by a private operator, M/s Microtech Systems in Public Private Partnership mode. This private operator also developed the software for Jan Sewa Kendra. For every application at Jan Sewa Kendra citizen is charged Rs. 20/-. These 20 rupees are divided between the Government and Private operator in the following manner:-

- Rs. 5/- for software development charges upto Rs. 20 lacs
- Rs. 9/- for running the Jan Sewa Kendra
- Rs. 6/- for the e-District Society of Ahmedabad

Daily number of visitors to Ahmedabad Jan Sewa Kendra is on an average 350 people as told by the private operator. During the heavy rush season, like in April - May, when students need to take OBC, SC ST certificates etc. for admissions, the average number of visitors is as high as 1500 people per day. The private operators arranges for Shamiyana, additional computers, operators etc. to handle this heavy load.

At other Talukas of Ahmedabad district, the private operator was supposed to extend the Jan Sewa Kendra in the same manner as agreed upon for Ahmedabad City Taluka, but due to lack of technical support, meager revenues and other constraints at other Talukas, the operator has not extended Jan Sewa Kendra to any other Taluka of Ahmedabad district.

### Services Provided- key Functionalities

1. **One Day Governance** - This is a separate state wide e-governance initiative of the Government of Gujarat, under which citizens are promised one day delivery of seven certificates, affidavits and a few other services as listed in Appendix III at every Taluka of the state. NIC has developed and deployed the software, e-JanSewa across the state for this purpose. There are one or two PCs with GSWAN connectivity at Talukas. Citizen is charged Rs. 20/- for each application, which is deposited with the revenue department. The software is capable of generating various MIS reports for tracking of applications.
To avail one day governance services, citizen is expected to provide some basic information, affidavits or certificates from field officer like Talati along with the form at respective Taluka. Earlier, the Taluka used to get these certificates, affidavits, information from field officers / concerned departments on their own while processing these applications. That resulted in unnecessary file movement between government offices and caused delays in service delivery. By shifting the responsibility of providing documents to citizens, administration has cut short the delays in getting these documents themselves. This has contributed significantly towards speeding up of services delivery. Seven types of certificates, which earlier used to take up to 25 days, now get issued in a day.

In Ahmedbad City Taluka and Daskroi Taluka, these one day governance services are being provided at the Jan Sewa Kendra only. The software being used is different from the NIC software and is not compatible with NIC software. The Ahmedabad district Collector has deputed a Mamlatdar to the Jan Sewa Kendra for signing of the certificates, affidavits etc. for one day delivery. There is a official from District Supply Office for handling Ration Card related services. Rest all services are being provided by Jan Sewa Kendra operator’s staff.

2. **Standardized, citizen friendly forms** in Gujarati for each of the 75 services separately and these forms are also made available on website. A typical form gives a set of information about the issue and also includes the application for getting the service from the government. It consists of:-
   a. legal provisions
   b. the final authority who can decide
   c. maximum number of days for movement and processing of application at each level
   d. a check list of accompaniments (all in brief)

followed by the actual application with relevant blank spaces, addressed to the concerned authority etc.

3. **Backend** - A citizen submits his application in the prescribed format with all addendums at the Jan Sewa Kendra, and is assigned a unique application ID. At the end of the day, Jan Sewa Operator segregates the applications and hand them over to respective branches at the Collectorate. These applications are then entered in the inward registry software and assigned a unique ID. A few of the branches like Non Agriculture Land use permission issue, PRO branch, recovery branch etc. are automated for handling these applications electronically. For remaining branches, the file is processed manually and the status is monitored through inward registry software. One of the process change done to speed up the delivery of service is by asking citizen to submit his application in triplicate, quadruplicate so as these duplicate applications are processed in parallel by different branches. This has resulted in reduced total time for the delivery of services.
4. The software for Jan Sewa Kendra has been developed by the private company, M/s Microtech Systems. It provides for easy retrieval of various forms from the website, online tracking of applications by the citizen, online grievance registration, online monitoring by the Collectorate Officials etc. The software is bilingual with all the forms and fields in Gujarati and option for certain fields like Name, Father’s name to be filled in English.

5. **Connectivity** - Gujarat is one of the first states in establishing SWAN in as early as 2001. GSWAN Connectivity is established up to Taluka level, which has enabled NIC to take the services of Jan Sewa Kendra up to Taluka level. In the Ahmedabad district Collectorate, a LAN with approx 80 nodes has been established and is connected to GSWAN. This enables the data aggregation and data exchange between Talukas and district office.

Apart from the Jan Sewa Kendra, Ahmedabad district has implemented following e-governance initiatives from Phase II and Phase III so far:

6. **Non Agriculture Use Permission Cases - Backend Process** - Ahmedabad district is one of the pioneering district in terms of achieving 100% computerization of land records as well as mutation records of the same being updated on a regular basis. It further has undertaken digitization of sub registrar’s data till 1994. It has online Record of Rights for the land at all Talukas which include 7X12 (Area), Form 8 (Details of owner) and Form 6 (Transactions on the land). Ahmedabad being the largest industrial city of Gujarat, it has a large demand for conversion of agriculture land to commercial and residential. The old system involved three departments’ clearances to grant NA permission, it used to take 2 to 3 years for the permission to come in, and there were a large number of applications pending. Now, a system of parallel processing has been established at NA section, where five copies of the application are taken from the applicant, and it is simultaneously send to the three departments for their NOC. Talati’s, Mamlatdar’s certificates for Record of Rights are also asked for, but these can be accessed online also to take a decision, if need be there. These initiatives have helped the district office to reduce the processing time to 3 to 4 months and it has also resulted in the increased revenue for the state.

7. **Inward Registry** of Ahmedabad Collectorate is fully computerized. All the incoming dak at the Collectorate is entered in a web based software capturing key information of the applicant, subject involved and the branch responsible for taking action on the application. Each dak is given a unique Tapal number and is traceable by this Tapal number. The average number of dak received daily is about 350 and there are three operators to process these daks, The dak is then sent to the respective branches where it is assigned the appropriate desk by the concerned staff. After processing the dak, the staff then updates the status in the software. The employees can also entered the suo moto dak generated by them for processing of received applications. To assess the work done by an employee, Online Worksheet can taken by each branch. This software enables monitoring of workload
as well as the work done at each branch/desk by Collectorate officials and results in timely action on these tapal (Dak). The software is capable of generating various reports like date wise outstanding tapals, overdue tapals, subject wise outstanding tapals, desk/branch wise outstanding tapals etc.

8. **Appeal Cases of Collectorate** at Ahmedabad are fully computerized. This software is developed by NIC district office and is in use since 2000. It maintains the details of about 1850 cases,
   a. Appellant details
   b. Second party’s details
   c. Subject
   d. Lower courts
   e. Appellant’s lawyer details
   f. next date of hearing.

Apart from this information, this software can also issue various notices, reminders, take care of caveat entry since 2000. This software provides for generation of Collector’s order in a day’s time, which earlier used to take a week’s time. This software also provides copy of the order of all the cases handled by this software at a click, which otherwise would be retrieved from the physical files stored in record room, which results in easy retrieval and access to previous cases. Previous year cases which are still pending in higher courts, are also entered in the software. Printout of the order of the Appeal Case is available at Jan Sewa Kendra at Rs. 5/- per page. Status of the cases can also be enquired in Jan Sewa Kendra.

9. **Record room** - All the files handled by the Collectorate are stored in the record room. There is a legal requirement to maintain different files for different durations. The Ahmedabad Collectorate provides for small storage spaces at the branch level and all the old files are stored centrally in the record branch. The record room has compactors to preserve space, to provide a very good storage and systemic retrieval of records. All the records in Record Branch are entered on the computer for easy search. These files are searchable on a number of parameters like applicant’s name, Section, case number etc. and the software gives out the exact rack number of the file in compactor system.
4. Implementation Strategy

The scope of the project included:

1. Setting up of a Jan Sewa Kendra or Citizen Civic Centre based on e-Governance, which included online tracking of redressal of grievances with the Citizen’s Charter and the citizen as its main focus.

2. The working environment of the Collectorate to be clean, green and welcoming.

3. Extensive focus on employee skill upgradation and procedure / process reengineering to provide hassle-free, accountable, transparent and speedy governance to the citizen.

4. One of the points of focus was employee motivation by making better basic amenities available to them.

5. The back office was to be computerized and made efficient to support the front office.

6. The system was to be set up at Headquarters and extended to the 11 Talukas in the district in a phase wise manner.

The support required from the State Government included:

1. Approval of the proposal to elicit sponsorships to the tune of Rs. 1.7 crores for furnishing, fixtures, facilities, computers at the Jan Sewa Kendra.

2. Unequivocal direction to PWD to adhere to their time schedule for the completion of the basic infrastructure and

3. A grant of Rs. 12 lacs for shifting of logistics (such as telephones, fibre optic network, records, furniture etc.) from old premises to the new one.

The operationalization of the system required a large component of system reengineering and motivation and attitudinal change on the part of the employees. Employee’s skill had to be upgraded and attitudes transformed, appropriate hardware was to be procured and software to be developed and the working environment also had to change simultaneously.

The planning was based on the premise that all the employees of the Collectorate would be involved in some way or other in the project at every stage. It also took into account the felt needs of the citizens culled out of several interactions that the Collector, Additional Collector, Resident Deputy Collector, Prant Officers, Mamlatdars etc. had with various groups of people (including citizen groups from both rural and urban areas). The project was divided into three phases and a time limit was decided for completion of each phase.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Completion date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>January, 2004</td>
<td>Completed</td>
</tr>
<tr>
<td>Phase II</td>
<td>January, 2005</td>
<td>Under implementation</td>
</tr>
</tbody>
</table>
Phase - I
This phase was the most crucial as it required the actual creation of infrastructure, procurement of the furniture, computer hardware, creation of software, changing the employee attitudes, and the most important ingredient, - i.e. ‘Management of this change’. Following activities were taken up during this phase:-

1. Shifting to new Collectorate building complete with all amenities including the Jan Sewa Kendra.
2. Make the 75 points of the Citizen's Charter effective / online through citizen friendly standardized formats.
3. Build an accountable mechanism for tracking of applications.
4. Process reengineering by introducing level jumping, internal query formats, shortening of processes etc.
5. Creation of the Collectorate Website which is updated constantly.
6. Track the file movement horizontally and vertically across the offices through connectivity using GSWAN and make additions to the WAN where the connectivity is not already provided.
7. Inward Registry.
8. Making services available to the citizen beyond office hours by using the Web.

Phase II
This includes computerization of the following in back office as well as front office. Specific activities in this phase were as follows:-

1. Ration card
2. Employee personal information system, HR, payrolls, pension, GPF etc.
3. Old age pension scheme
4. Collection and monitoring of Land Revenue (NA or permission of Use of land for non-agricultural purposes)
5. Collection and monitoring of luxury Tax and Entertainment Tax
6. Land records
7. Registration (i.e. Sub Registrar’s office)
8. Legal case system
9. MP, MLA grants - District Planning Board
10. Record management
11. Dead Stock management
12. Extending the Jan Sewa Kendra facility to all the Rural Taluka Headquarters.

Phase III
This phase included computerization and final movement towards an office relying more on IT than on paper. It included following activities in particular:

1. Alien recovery
2. Accounts and budgeting
3. Land Resource Management
4. Land acquisition
5. Planning for infrastructure development (Tourism, industry, etc.)
6. Database for scarcity relief, floods and other disasters
7. Disbursement of government relief in natural and manmade disasters
8. Government orders and amendments
9. Registration (i.e. Sub Registrar’s office)
10. Monitoring of various other government schemes
11. Publishing the Electoral Roll in the public domain

Responsibilities were distributed among various officers. These included the responsibility of coordination, shifting, day-to-day monitoring of sub-projects, fund raising, etc. At the macro level, a number of things had to be looked into. It had to be decided as to what part of the project was to be completed first and what later, in what phases shifting to be done, how to distribute the furniture, which issues to be computerized first, what kind of level jumping to be prescribed to enable the disposal within the prescribed time limits, etc. After the macro level planning, micro level planning continued for each activity with full participation of the employees. Development of the software also involved full participation of the staff of Collectorate, Prant Offices and Mamlatdar offices.

Various issues of the Citizen’s charter were distributed amongst various staff members as per their choice and expertise. A standard format design, which encouraged transparency, was decided in one of the brainstorming sessions and on that basis all the formats were prepared. These were then finalized in discussions during Shakha meetings and Revenue Officers’ meetings. There were mixed feelings about expecting citizens to provide some basic information in each format. It was felt that since the citizens are used to get their work done by putting in simple 5-6 line application, they would not take these formats positively. But the final view which prevailed was that unless citizens learn to take the responsibility for providing true and correct information upon themselves, the earlier system could not be speeded up. There could be no other way to deliver citizen services in the absence of any kind of validated and authenticated citizen databases.

In order to enhance the speed and accountability, level jumping and standardized internal query formats were introduced at Mamlatdar level (which is the cutting edge for scrutiny of almost all applications). The system’s reengineering process, which began in July, 2003 was completed for phase-I and is still ongoing for next two phases. According to Ms. Karwal, former DM of Ahmedabad,
“it can not, and in fact should not ever reach its logical end, because government systems are very dynamic and must change with every change in policy/approach”.

Best Practices Followed at Ahmedabad District

1. Identification and standardization of 75 points of citizen contact by way of standardized forms, processes
2. While standardizing forms, process reengineering was done by introducing level jumping, internal query formats, shortening of processes etc.
3. Tracking of file movement horizontally and vertically across the offices through connectivity using GSWAN.
4. Public Private Partnership, in establishing and running the Jan Sewa Kendra.
5. Extensive focus on employee skill upgradation and employee involvement in the whole process of reengineering and automation.
6. The clean and green working environment of the Collectorate.

5. Technology and Data Digitization

The software at Ahmedabad city Taluka is developed by the private vendor Microtech systems. It is windows based software and consists of a system of easy retrieval of the forms from the website, online tracking of applications by the citizen, online grievance registration, online monitoring by the Collectorate officials. There are 16 terminals functioning in Ahmedabad city Jan Sewa Kendra. The PCs used are Pentium P-IV, 2.4 GHz. These are connected to Intel Xeon Server with a 10/100 MBPS LAN. This LAN in turn is connected to GSWAN. The development platform for the software is as follows:-

- Win 2000 Server
- SQL Server 2000
- VB 6.0
- Crystal Report 7.0
- GIST 2.7, Web cam

At other Talukas, the software developed by NIC, e-JanSewa automates the procedures at the place where the software is running right from the receipt of application to approval to printing of various certificates. This software is developed in client server architecture.

The data generated at the Jan Sewa Kendra is given to district office on monthly basis on CD. The Kendra operator is not supposed to use this data in any way.

Ahmedabad district is one of the pioneering district in terms of achieving 100% computerization of land records as well as mutation records of the same being updated on a regular basis. The district has undertaken digitization of sub registrar’s data till 1994. It has online Record of Rights for the
land at all Talukas which include 7X12 (Area), Form 8 (Details of owner) and Form 6 (Transactions on the land). This data is put on the GSWAN, and is accessible to all the district officers. All of the ration card data for the Ahmedabad district is also computerized (as per their website) and the updation of the same is being done on a regular basis.

6. Challenges and Mitigation Strategies

This section details out the situation prior to introduction of Jan Sewa Kendra and now, how the presented situation has been achieved and what has been done to address various challenges faced while introducing Jan Sewa Kendra.

Situation before introducing Jan Sewa Kendra

1. Employees perpetually in the crisis response mode
2. The citizen’s charter not effectively implemented
3. Long drawn out and cumbersome procedures.
4. Red tapism abounded and absence of an effective mechanism for grievances redressal.
5. Spread out branches of the Collectorate and no single point of service delivery.
6. No single point of information for the citizen as well as officials.
7. Lack of motivation amongst the employees.
8. Discouraging physical environment for work.

Challenges faced during implementation of Jan Sewa Kendra

1. Planning - The government appointed a committee headed by the DM to look into the establishment of Jan Sewa Kendra. The committee included architects, software consultants etc. to provide comprehensive inputs for the development and establishment of Jan Sewa Kendra.
2. Funding for the Jan Sewa Kendra - The project proposal for Jan Sewa Kendra had a budget layout of Rs. 1.70 crores. The Government agreed for private / industry funding of the Jan Sewa Kendra and through a GR authorized the committee to seek funding from private / non government agencies for establishment of facilities at the Jan Sewa Kendra. Still it took almost a month to convince prospective private partners about the viability of the project. Once the work started on Jan Sewa Kendra, credibility was established, then there was no looking back.
3. Attitudinal transformation faced roadblocks at almost all levels. Its pace did not exactly match with that of the development of infrastructure and software etc. Persistence seems to have paid in most cases. The process is continuous.
4. Design of the standardized format changed several times in consultation with the Revenue staff and citizen groups. Implementing the system of online tracking by citizens and
monitoring by officials required very detailed process reengineering. This was finalized after several drafts were committed to the dustbin.

5. Office politics and rivalries crept in at times, but due to the initiative of some of the senior officers and leaders of employee union (who were taken into confidence), all matters were sorted out.

6. Sustainability - For running of the Jan Sewa Kendra, BOOT model was put in place. The revenue sharing agreement has been done with the software developer and service provider to maintain the Jan Sewa Kendra in the long run.

### 6. Current Status of the Project

1. Phase I of the project has been completed in time on January 2004. Phase II and Phase III of the project are being implemented till date. According to Ms. Thara, DM, developing a software is easy and could be done in a short duration, but changing the mindset, practices and attitude of the staff takes a lot of patience and hard work. And this is the reason for the delay in completion of Phase II and Phase III, which are being rolled out piece wise by including the staff in the change process.

2. The Jan Sewa Kendra at Ahmedabad city Taluka and Daskroi Taluka are operational. At all other Talukas, NIC developed eJanSewa software is being run by the government staff.

3. One day Governance has proved to be a success story despite any automated or computerized backend. For rest of the services, Jan Sewa Kendra has provided for online monitoring and tracking by government official, which has resulted in improved service delivery to citizens.

4. Forms for 75 services are arranged in a concise and simple application format mentioning legal provisions, officers responsible for taking decisions, enclosures and annexure expected from the citizens, number of days required for disposal at each stage in the Collectorate and its subordinate offices etc. These standard formats are also available over the internet, Photostate shops, etc.

5. The centre at Ahmedabad city Taluka is being run on public private partnership basis with the software consultants in BOOT form.

6. The MOU for the BOOT provides for keeping 50% of the data entry staff from physically disabled persons.
7. Critical Success factors

1. Collectorate’s Citizen Charter - the Citizen Charter was introduced by the Vadodara District Collector Office in 1997-98 for various services provided by the district collector’s office to citizens. The citizen’s charter is a set of almost 75 events/occasions wherein a citizen comes in contact with a municipal corporation, a Mamlatdar’s (Tehsildar’s) office or a collector’s office. These 75 issues are broadly divided into 3 categories - land related issues, magisterial issues, and civil supplies. It consists of two kinds of deliverables in terms of issues of governance i.e.,
   a. One day governance issues or same day deliverables, such as
      i. Issue of income certificate
      ii. Issue of certificate for persons from language/religious minority group
      iii. Certificate for socially & Educationally Backward class
      iv. Certificate for SC/ST
      v. Certificate of residential proof
      vi. Certificate of domicile
      vii. Widow certificate
   b. More than one day governance issues, 68 in number as listed out in Appendix-II with specific time limits for disposal.

2. Business Process Reengineering and Standardization - Ahmedabad Collectorate has taken steps to standardize the way government interacts with citizens on 75 occasions mentioned in the Collectorate’s Citizen Charter. Considerable thought has gone in designing and finalizing the formats and backend processes for these services. Level jumping, standardization of internal query format at Mamlatdar level etc. were used to cut down the delivery time.

3. Visibility - The state government has taken steps to ensure that the general citizen is aware of these initiatives and demands the services as laid out in the Citizen Charter. There are big hoardings displayed at the Jan Sewa Kendra itself.

4. Reach - All the Talukas are running One Day Governance software. This has standardized the delivery of citizen services across the state.

5. Monitoring - Swagat and Tele Faryad - Close monitoring by the Chief Minister and Collectors has ensured that the government officials respond in time and properly to citizen grievances and applications.

6. Employee Involvement - All the employees of the Collectorate were involved in some way or the other in the project at every stage.
7. Citizen centricity - The project took into account the felt need of citizens by way of several interactions between the government officers and citizens (both rural and urban).

8. Full State Government support and backup of Government GR (General Resolution) to the initiative has ensured smooth beginning for the initiative.

### 8. Key Learnings

1. Identification and standardization of citizen contact points / services to be delivered through e-district is a necessary prerequisite. The standard forms for 75 services along with the procedure to be followed, decision makers details is a giant step in business process redesign of government service delivery.

2. Due to lack of backend computerization, the emphasis and burden of bringing the documentary evidence is shifted to the citizen to get the required services in prescribed time limits. There are existing systems and databases like land records, land revenue records, land registration databases, voters list, ration card databases, which if used, then in large number of cases, the requirement of asking citizen to submit documentary evidence can be done away with. Government support in the form of Government Resolution or Government Order is a must to legitimate the use of various government records to provide e-District services.

3. Despite the lack of an automated / computerized backend, the service delivery to citizen has improved considerably. This has become possible by the transparency brought in by monitoring the receipt of request for a service and delivery status of the service. The applications are accepted and monitored for their processing. This monitoring has improved the timely delivery of citizen services in most of the cases.

4. Employee involvement - All the employees of the Collectorate were involved in some way or the other in the project at every stage.

5. Technology gap - The existing application at the Jan Sewa Kendra is in client server architecture, which can not be taken to internet as it is.

6. The software for Appeal Cases at Collectorate, despite being in use for last 5-6 years is not being replicated at other courts. There are recent efforts to take this software to other courts in the Collectorate. The problem in replicating the software is lack of dedication and commitment from the staff to use the software. In other courts, despite the computer and software being made available, there are no takers for the software. The software is also a single stand alone application, with no network and internet compatibility, and data back up is taken periodically by the operator, who runs the software.
7. The effort at Ahmedabad district was initiated in July, 2003 and still it is not yet complete. It takes time to change the attitude, behavior and practices of employees and any Business Process Reengineering effort should take into account the delays on these accounts.
Appendix I One Day Governance Services at Ahmedabad City

1. Issue of income certificate
2. Issue of certificate for persons from language/religious minority group
3. Certificate for socially & Educationally Backward class
4. Certificate for SC/ST
5. Certificate of residential proof
6. Certificate of domicile
7. Widow certificate
Out of the 75 services points, the demand for services linked to land related issues was high. Rapid industrialization and increasing demand for residential and commercial property has resulted in a large number of cases for Non Agricultural Land Use Permission cases.

<table>
<thead>
<tr>
<th>SN</th>
<th>Subject</th>
<th>Disposal days</th>
<th>Related to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assignment of Land for Village site</td>
<td>75</td>
<td>Revenue</td>
</tr>
<tr>
<td>2</td>
<td>Demand Of Land From Govt. Departments Under Administrative Order-3</td>
<td>40</td>
<td>Revenue</td>
</tr>
<tr>
<td>3</td>
<td>Demand Of Govt. Land For Non-Agriculture Purpose By Registered</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td></td>
<td>Organization/ Co-Operative Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Demand Of Govt. Land For The Purpose Of Agriculture By Co-Op Societies</td>
<td>90</td>
<td>Revenue</td>
</tr>
<tr>
<td>5</td>
<td>Demand Of Gaucher Land For Gram Van Project (Social Forestry)</td>
<td>65</td>
<td>Revenue</td>
</tr>
<tr>
<td>6</td>
<td>Demand Of Land For Fisheries /Prawn Farming</td>
<td>90</td>
<td>Revenue</td>
</tr>
<tr>
<td>7</td>
<td>Demand Of Govt. Land For Agriculture use through Land Kacheri</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>8</td>
<td>Demand Of Govt Land For The Purpose Of Non-Agriculture By Individual</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>9</td>
<td>Demand Of Govt. Land for Non-Agriculture use by Handicapped Person</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>10</td>
<td>Demand Of Govt Land For Non-Agriculture use by Govt. Servant</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>11</td>
<td>Demand Of Govt. Land For Non-Agriculture use by Ex. Serviceman)</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>12</td>
<td>Demand Of Govt. Land Of Road/City Survey Area For Sale Of Lease (Only For Nagarpalika/Nagar Panchayat Area)</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>13</td>
<td>Land Waste For Crematorium/Cemetery Ground</td>
<td>90</td>
<td>Revenue</td>
</tr>
<tr>
<td>14</td>
<td>Demand Of Land On Lease For Salt Industries</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>15</td>
<td>Regularisation Of Gamtaal/Simtaal Boundary Area Land</td>
<td>120</td>
<td>Revenue</td>
</tr>
<tr>
<td>16</td>
<td>Permission Of Cutting Trees (Panchayat Area)</td>
<td>25</td>
<td>Revenue</td>
</tr>
<tr>
<td>17</td>
<td>Permission Of Cutting Trees (Private Ownership Area)</td>
<td>15</td>
<td>Revenue</td>
</tr>
<tr>
<td>18</td>
<td>Non-Agriculture Permission Use Under Land Revenue Code 65</td>
<td>90</td>
<td>Revenue</td>
</tr>
<tr>
<td>19</td>
<td>Only For Agriculture Purpose Removed The Restriction On The Basis Of 60 Premium (Old Cond)</td>
<td>60</td>
<td>Revenue</td>
</tr>
<tr>
<td>20</td>
<td>Only For Agriculture Purpose Removed The Restriction On The Basis Of 60 Premium (New Cond)</td>
<td>60</td>
<td>Revenue</td>
</tr>
<tr>
<td>21</td>
<td>Permission under Tenancy Act Sec. 63 for the purpose of Non-Agriculture Use</td>
<td>90</td>
<td>Revenue</td>
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<tr>
<td>22</td>
<td>Permission under the Tenancy Act. Sec. 63 AA for the purpose of N.A. Use.</td>
<td>90</td>
<td>Revenue</td>
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<tr>
<td>23</td>
<td>Permission Under The Tenancy Act. Sec. 43 For The Transfer Of Land To Agriculture (Only For Agricultural Purpose)</td>
<td>90</td>
<td>Revenue</td>
</tr>
<tr>
<td>24</td>
<td>Permission Under The Tenancy Act. Sec. 43 For The Transfer Of Land To Agriculture (Only For Non- Agricultural Purpose)</td>
<td>90</td>
<td>Revenue</td>
</tr>
<tr>
<td>25</td>
<td>Permission Of Divide Of Block Under Fragmentation &amp; Consolidation Act Issue The Certificate</td>
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<td>Revenue</td>
</tr>
<tr>
<td>26</td>
<td>Under The L.R. Code 65-B For New Industrial Policy.</td>
<td>90</td>
<td>Revenue</td>
</tr>
<tr>
<td>27</td>
<td>Permission For Land Merge For Agricultural Purpose</td>
<td>15</td>
<td>Revenue</td>
</tr>
<tr>
<td>28</td>
<td>Agriculture Certificate</td>
<td>15</td>
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<td>29</td>
<td>Issue The Certificate Of Small Agriculturist</td>
<td>15</td>
<td>Revenue</td>
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30 License Of Stamp Vander | 60 | Revenue
31 Renewal Of Stamp Vender License | 15 | Revenue
32 Death Relief Under The Natural Climates Cases (Urban Areas) | 15 | Revenue
33 Agency Of Small Savings Schemes (For N.S.C./K.V.P./M.I.S. Schemes) | 7 | Revenue
34 Agency Of Mahila Pradhan Kshetriya Bachat Scheme (Recurring Deposit) | 15 | Revenue
35 Issue Of Solvency Certificate - Up To 50,000/- More Than 50,000/- | 15 | Revenue
36 Issue Of O.B.C./CRIMILAYOR Certificate | 7 | Revenue
37 Disposal Of Applicant For Certified Copies | 7 | Revenue
38 Old Age & Handicapped Pension Scheme | 60 | Revenue
39 Relief Under The National Family Benefit Scheme (Only Nagarpalika Area) | 45 | Revenue
40 Relief For Solarium Fund Hit And Run Cases | 60 | Revenue
41 Issue of Successor certificate in the case of death of Pensioners | 20 | Revenue
42 Renewal of license for self protection | 15 | Magisterial
43 License for booking premises | 45 | Magisterial
44 Storage license under explosives rules | 90 | Magisterial
45 New license for self protection | 75 | Magisterial
46 Duplicate license under explosive rules | 15 | Magisterial
47 License for explosive production | 60 | Magisterial
48 Permanent license for explosive items selling | 3 | Magisterial
49 Temporary license for explosive items selling | 21 | Magisterial
50 Renewal of explosive license | 15 | Magisterial
51 Storage license under the petroleum storage act | 120 | Magisterial
52 Poison license | 120 | Magisterial
53 Issue of Hotel Registration Certificate | 45 | Magisterial
54 Renewal of Hotel registration certificate | 15 | Magisterial
55 Issue of Video License | 30 | Magisterial
56 Dish antenna License | 14 | Magisterial
57 Issue of New ration Card | 30 | Supply
58 Issue of Separate Ration Card | 30 | Supply
59 Issue of Duplicate Ration Card | 7 | Supply
60 Name addition/deletion/modification in the ration card | 1 | Supply
61 Issue of Agency Card | 30 | Supply
62 License of retailer/wholesaler & manufacturer | 45 | Supply
63 Change of name/address/location in the license | 30 | Supply
64 Change of partner in retailer/wholesaler/manufacturer & Petroleum license | 30 | Supply
65 Sanction of new fair price shop | 120 | Supply
66 Issue of permit for kerosene to organization | 30 | Supply
67 License for solvent | 45 | Supply
68 Issue of free sell kerosene registration certificate | 30 | Supply
### Appendix III Citizen Services being Delivered at Taluka

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<td>Nana / Simant Kedhut</td>
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<td>Khatedar Khedut</td>
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<td>11</td>
<td>Banakhat for duplicate ration card</td>
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<td>Solvancy certificate</td>
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<td>Income certificate for Vrudh Niradhar Sahay</td>
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<td>Income certificate for Vidhva Sahay</td>
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<td>Income certificate for Dikari Rudi Sachi Mudi Yojna</td>
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<td>Navi Sarat to Juni Sarat order</td>
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<td>19</td>
<td>Tukda Ekatrikaran order</td>
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<tr>
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## Study Report on Assessment of the Model e-districts

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<td>26</td>
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### APPLICATIONS

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<tr>
<td>3</td>
<td>License: Fair Price Shop</td>
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<tr>
<td>4</td>
<td>Tota Permit App (For explosion required for well digging)</td>
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<td>5</td>
<td>Lagu Jamit Grant application</td>
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<td>6</td>
<td>Encroachment regularization application</td>
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</tr>
<tr>
<td>7</td>
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Annexure IV: Assessment of the Gandhinagar District

1. Project Background

Gandhinagar is the smallest district in Gujarat State with a population of 1,334,731 as per the census of 2001. There are four Taluks/Tehsils in this district. The empanelled Consultants visited Gandhinagar district on 4 & 5th of April 2007. Initially the Consultants interacted with the Deputy Collector Mr. Saiyad and Jan Sewa Kendra Service Provider Mr. Haren Shash. The Jan Sewa Kendra (Gandhinagar) is the front end of the e-district. The initiative of Jan Sewa Kendra is aimed for bringing efficient e-Governance at the District level, while introducing the transition from traditional governance towards paperless, place-independent governance services in planned manner. The initial implementation of the project was in the G2C arena and implemented at Gandhinagar, which is the Gujarat state capital, at the initiative of the District Collector. All Taluks in the district are linked to a common data pool, through the state wide area network (SWAN). The Jan Sewa Kendra’s at District and respective taluks offer over 95 types of services to citizens. Around 400 transactions/cases are processed per day from these Kendras.

The District Collector Smt. Sonal Mishra, launched this project to offer various types of Services to people in a transparent, efficient, quick, fair and economical manner, leveraging Information & Communication Technology (ICT) application.

This project was initiated with the concept of Public-Private-Partnership (PPP) in infrastructure and operations. The objective of the project was:

- To offer government-to-citizen (G2C) services of the issues covered under the Citizens’ Charter.
- To extend these services to cover other issues concerning health, education, agriculture, animal husbandry, etc.
- To bring governance to the door-steps of people in remote places by way of online services offered through distributed service outlets.
• To maintain a central data record updated and used by all the departments at the district level. This includes the Revenue department, Panchyati, Election Department the Department of Civil Supplies, the Police Department, Electricity companies, etc.
• To create and implement a workflow management system at the back end.
• To re-engineer work processes to increase speed and convenience helping citizens as well as officers.
• To minimize the use of papers with the help of online processing and transmission of the output to respective agencies.
• Faster, Efficient and Transparent services to the public.
• Error-free maintenance of records using the latest technologies for easy storage and retrieval.
• Involvement of all stakeholders including citizens, government officers, as well as the technology providers for continuous upgrade of the facilities, processes and quality of services

The first phase of the project was to render G2C services of over 95 services including all the services stated under the Citizens’ charter.

The second phase which is under process and is focused on (a) the expansion of the citizen-oriented activities to B2C and C2C areas as well as (b) the introduction of G2G facilities (incl. tracking of work in process) for efficient administration.

The third phase is to address citizen services in the areas of health, education, agriculture, etc. In this manner a comprehensive and single e-district solution is envisioned at Gandhinagar.

The proposal for creating and establishing the Jan Sewa Kendra was prepared in January 2006 on the guidelines of the General Administration Department of the Gujarat State. Further, the State Government approved the proposal and sanctioned Rupees Nine lacs. Citizens and Organizations contributed Rupees Twenty Six lacs additionally for this project. So the total project funding of Rupees Thirty five lacs, was organized initially to establish Jan Sewa Kendra at the district headquarters in September 2006.

The criterias for the selection of the suitable vendor for establishing the Jan Sewa Kendra were technology, creativity, manpower availability and experience. M/S Peach Computers was selected as the software and service vendor for Jan Sewa Kendra. M/S Peach Computers was required to develop the software, provide necessary hardware and operate & maintain the Kendra’s at
Gandhinagar, Dehgam, Kalol and Mansa through its employees for three years. The business model of the Software was on BOO basis.

All the Service Providers’ employees were trained for the usage of the software, the various government procedures, as well as the ‘karmyogi’ practices to interact with the citizens. The Jan Sewa Kendra, Gandhinagar commenced its operations on October 16, 2006. The Taluk nodes at Mansa, Dehgam and Kalol were also further made operational in February 2007.

The Jan Sewa Kendra, Gandhinagar has approximately 3500 ft² of office space with the following facilities:

- Offices for the Deputy Mamlatdar and Service Supervisor
- Server Room
- Notice boards
- Seating capacity for 35 persons
- Help station managed by Senior Citizens

2. Project Achievements

Jan Sewa Kendra conducts weekend camps at remote villages for on-spot acceptance and delivery of applications. This initiative is performed with the support of the local sarpanch and a notary. The issues covered under this drive are mostly concerning ration cards. These initiatives save money and time of the villagers. During March and April there is a heavy rush of students for the different types of certificates. During these months the Jan Sewa Kendra at Gandhinagar remains open 7 days a week.

SMS Intimation

The computer system automatically sends an SMS to the applicant on completion of the processing of his or her application

SMS Query

Applicants can know the status of their paperwork by sending an SMS to the Jan Sewa Kendra number. The system automatically responds with the status of the file. There is a need to increase customer awareness about this facility.

SMS and Auto-Email to Officers
The system sends daily SMS to concerned officers to inform them about the activities during the day and the pendencies in various issues. SMS query by the officers is also supported.

**Interactive Voice Response System (IVRS)**
Applicants can call the automated phone line enter the 12 digit number of their application, and check the status of their application. This has helped many applicants avoid cumbersome follow-up visits.

**Home Delivery**
The completed papers are home delivered by courier at a nominal fee of Rupees 5/- to Gandhinagar city residents. Home delivery is also used in cases requiring address verification.

**Bar-coded Applications, Acknowledgements & Certificates**
Barcode is used from the issue of the form till the case is completed. At every stage, registry of a case is made using bar code scanner. Barcode scanning eliminates operator errors, increases speed, and helps to track the papers in process and helps identify papers archived.

**Computerized Token System**
The software intelligently estimates the time for each counter, and automatically assigns the counter to the applicant having the least waiting time. No queues are formed in the process.

**Monitoring of paperwork by the Officers**
Officers have direct access to the database of the Jan Sewa Kendra and can review the status and count of pending applications within their department. They can view the applications that are overdue and act on those accordingly.

**Weekly Meeting headed by the Collector**
The Collector holds a weekly meeting of all the deputy collectors, Mamlatdars and Jan Sewa Kendra officers. The issues of overdue cases are reviewed and resolved on spot. Feedback from people is also discussed. The collectorate has supported the initiatives of local ITIs to offer special courses to prepare the work force for e-Governance.

The Jan Sewa Kendra project has brought in a new outlook among the people towards government institutions. Some examples of the impacts on the public as well as on government employees are stated below:

- Drastic change in the perception of the common man about a government office.
- Significant time-saving for the public for availing different services offered by the different participating departments. For example, the processing time for several one-day governance issues has been reduced to less than two hours.
- Significant saving in time by the government offices as they do not have to meet people directly and as they receive all the applications in a completed manner.
- Involvement of retired people and senior citizens to help illiterate and other needy people to complete their paperwork.
- Notable change in the attitude of government employees due to transparent systems including tracking the work in process.

3. Services Provided- key Functionalities

The *Jan Sewa Kendra* was established keeping in mind the Service Delivery for the Citizens at Gandhinagar and respective Taluks. Some of the key highlights of the services delivered are as:

**Tatkal Services**

Affidavits, Ration Card alterations, and Land Revenue collections are handled on “Tatkal” basis. Citizens do not need to make a second visit to collect the processed materials.

**One Day Governance Services**

Issues related to issuance of income certificates, for SC/ST and Backward class, certificates for residential proof as well as addition, deletion of names, in the ration card, etc. are handled as One day Governance services. The applicant submits the form along with necessary document from local Talati. If the applicant has given the cell phone number, an SMS is automatically sent to the applicant to intimate the applicant about the completion of the case.

**Non One Day Governance Services**

All other issues including those related to land usage, land revenue, new ration card, etc. are handled with in the stipulated time limit and are considered as Non One day services. along with the form at Jan Sewa Kendra *Jan Sewa Kendra* directs and follows up the work related to other departments like NOC from ONGC, R&B department, etc. So, the applicant does not have to visit different offices.

**Standardized Application forms**

All the Application forms are in Gujarati. Each form contains (a) Information about the officer, department responsible for processing the matter, (b) Time limit stipulated as per the citizens’
charter, (c) Information about the required enclosures, (d) Basic application text, (e) Checklist for self certification by the applicants. Blank forms are available at the Jan Sewa Kendra, some of the local photocopy centers, as well as are downloadable from the Internet. Officers and the vendor have simplified the forms to add to the convenience of citizens.

**Service Charges**

There is a Rupees Twenty service charge for every application. Applicants with BPL- below Poverty Line status, Right-to-Information cases and Land revenue payment cases do not have to pay any charges.

(a) Rupees 5/- towards the software purchase price
(b) Rupees 9/- towards the service costs
(c) Rupees 6/- to the collectorate

Once the total cost of the Software Rupees 6.80 lacs is recovered as per point (a) the collectorate will receives Rupees 11/- from every form. On average around 250 applications are processed, everyday at Jan Sewa Kendra, Gandhinagar. Taluk places process around 50 cases each and to add up to a total of around 400 cases everyday. Taluk places forward the district-level applications to Gandhinagar, while almost 80% cases are handled at the Taluk centre by the Mamlatdar.

**The Process**

**Form Issue**

Barcode stickers are applied to every form. This is done either at the time of issuing the form or just before the submission of the form. There is no need to log the name of the applicant at the time of the issue of the form or the barcode. This helps avoid queues and makes the process more convenient to the applicants. Registered citizens can obtain partly-filled forms by giving their fingerprint or registered government photo ID. Thirteen of the basic fields are automatically filled up in the application form.

**Submission of the form: Tokens**

Applicant visits the token issue counter, where an operator scans the barcode and the computer system allots a token at one of the counters, on basis of the type of the issue, Citizens wait till their token number is called at the assigned counter.

**Acceptance of the form, Registry**

Applicant visits the designated counter when the token number shows up on the display. The operator at the counter checks the enclosures and tick marks its receipt on the computer screen. The applicant does not need to re-submit enclosures previously submitted in any other
application. The operator performs qualitative check to ensure the complete fill-up of the form and ticks that on the PC. The operator takes a photograph of the applicant if required. In case all the required enclosures are checked, the software issues a bar-coded acknowledgement slip in two copies. One copy is given to the applicant and the second copy is attached to the application. The applicant copy shows up Jan Sewa Kendra’s help line number, latest delivery date and time. In case of affidavit, franking is also done at the same counter. At the same counter, the applicant can specify if he or she needs any certified copies, laminated certificates and/or home delivery of papers.

**Forwarding & Follow-up**
The back office operator at Jan Sewa Kendra’s scans the barcode on the application. The system shows up the concerned office and this way the received papers are sorted out. A list is generated for acknowledgement by the concerned branch. Every department can access the information on pending cases on-line, through SMS query, or by requested printouts. Reminders and alerts are sent to the officers by the system to ensure in time completion of the cases. The collector also monitors the pendencies.

**Follow ups and inquiry by the Applicants/Citizen**
Applicants get the status of their application in four ways.

1. By calling Jan Sewa Kendra’s IVRS line 079-23242501 (24 hours service)
2. By sending SMS query on 997-997-2068
3. On the Jan Sewa Kendra’s website: http://jansewakendragnr.gujarat.gov.in
4. visiting Jan Sewa Kendra

**Completion of cases and Delivery**
The system automatically sends an SMS when the case is scanned for completion. At the time of delivery, the bar coded acknowledgement is received and the papers are given to the applicant. If the applicant has shown the preference, at the time of submission and if the applicant has opted for home delivery, the papers are dispatched to the applicant’s residence by courier.

**Back-end Processes**
Back end processes are implemented at the Gandhinagar Collectorate to expedite the work once the applications are received. All the accepted applications are forwarded by the Jan Sewa Kendra to the concerned departments. For this the bar code on the application is scanned by the Jan Sewa Kendra operator. The software senses that the particular application is for a specific issue and for specific region. As per the process chain configured for that issue while creating the forms (user definable & not hard coded), the computer shows up specific
department and specific officer responsible to receive these papers. When the operator presses “forward” button, a list is generated that contains all the applications which are to be forwarded to the particular department. Papers are further taken physically by the Jan Sewa Kendra person to the officer along with the printed list. The officer acknowledges the receipt of papers in one of the two ways: (1) By using the “smart tracker” - an electronic device with the bar code scanner, that keeps track of the identity of the officer time of inward, time of outward and scanned application / file number (2) By signing one copy of the list and returning the same to the Jan Sewa Kendra operator for manual entry. There is one monitoring PC in every department. The monitoring PC has software running and is connected to the Jan Sewa Kendra server through GSWAN. The status about an application gets updated in the Jan Sewa Kendra on basis of inward or outward scanning by the smart trackers or by manual entry about the registry. Workflow within one department is also tracked on basis of pre-defined chain. As per that the smart trackers record in and out events. Once the paper is out warded from the last ‘link’ of the chain, the papers are considered as returned to the Jan Sewa Kendra for delivery. If a request has to get clearances from different departments the applicant does not have to visit these offices to get these clearances. Also, the collectorate departments do not need to send the formal requests to these outside departments. The Jan Sewa Kendra Back Office handles this work. Copies of the application are sent to these departments directly from the Jan Sewa Kendra. Subsequently, the Jan Sewa Kendra sends automatic SMS, email reminders and formal reminders are sent to the concerned departments directly. Electronic Trackers are developed by the vendor, M/S Peach Computers, and are used to monitor the flow of papers from table to table and to generate alerts in case of delays. These trackers have been implemented on pilot basis at a Taluk headquarter.

Citizen ID

Applicants at the Jan Sewa Kendra are requested to give one of the four government issued photo IDs: (1) Election card, (2) PAN Card, (3) Driving License, (4) Passport. An applicant may even give more than one ID, or add to the registered IDs at a later time. The ID type and number generate a unique customer ID number for the person. In case a person cannot produce one of the above IDs, the software assigns a unique number in sequence. Once the customer ID is issued, the applicant is requested to fill out personal details in the form for the citizen ID. Thirteen types of personal particulars are mandatory. These include Name, Residence, Religion, Gender, etc.

Pre-filled forms for registered customers

Applicants can state their citizen ID at the time of form issue. In that case, one page of the form is automatically printed with pre-filled out information. The applicant does not have to
re-submit the same information. In case the customer mentions the ID at the time of submission of the form, the operator retrieves the information from the database. The operator does not need to re-type the information about the applicant.

4. Implementation Strategy

M/s Peach Computers has imparted training to every operator working at Jan Sewa Kendra. The training covered the computer application, government processes as well as value systems necessary for public services. A series of Trainings and workshops were arranged by the district collector during the implementation phase of the project. This ensured that after implementation the systems can be handled by the government officers themselves in their respective departments. Regular trainings are required to keep the officials as well as operators updated with the technology changes and make full use of the system.

The present model is easily replicable in other districts. Officers’ interface is through the GSWAN and the service providers’ interface is through the Internet. The technology provider has expressed readiness to provide open source products to allow users the ability to customize the product. Various process related to the delivery of services are well documented and can be replicated easily.

The business model counts on income generation from B2C and C2C initiatives such as employment handling, travel bookings, bill collections, one number for all services - call centers, buy-sell services, surveys, data sharing, etc. Some financial support is achieved through value added services like home deliveries through courier, sponsorships for stationery with advertisement of the sponsor, renting of hoardings at the Kendra for publicity, etc. The district is ready to launch distributed franchise service provider outlets which reduces the load on the government to create office space and infrastructure. The strategy here is to count minimum on the collections from the basic G2C services. This way the Gandhinagar model is replicable in terms of technology, work processes, human resource requirements as well as financial sustainability.

5. Technology and Data Digitization

There are 18 nodes at Jan Sewa Kendra Gandhinagar and are connected through LAN. Those Nodes are connected to a server at Jan Sewa Kendra. There is another server which serves as a back-up. One of the two servers functions in the mirrored mode and provides redundancy this
server is also at *Jan Sewa Kendra*. The server are connected to GSWAN. The server is also connected to internet through GSWAN. 5 Monitoring nodes has been provided to department heads for monitoring the activities. 3 Taluk centers as well as monitoring nodes are also connected to the *Jan Sewa Kendra* Server through GSWAN. Data is backed up at the servers, in a portable storage medium as well as the data storage space in the servers. Citizens can access the status of their pending matters, download the forms and information through the website (http://jansewakendragnr.gujarat.gov.in

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<td>8.</td>
<td>Monitoring Nodes in Taluk</td>
<td>4</td>
</tr>
</tbody>
</table>
Connectivity
Software

The “Jan Setu” software for the Gandhinagar Collectorate was developed by M/s Peach Computers, Gandhinagar. The software supports handling of all the issues, offers flexibility to add new issues, supports the Jan Sewa Kendra website and allows online status monitoring, online issue of forms, feedback, etc. The software manages one single database for the entire district and maintains 24-hour connectivity with Taluks. The features of auto-SMS, auto-email, SMS query, IVRS, barcode support, Biometric fingerprint identification, token-based priority management, etc. are built in to the software. Inward and Outward Registry and barcode ID for every case is also an important feature offered by the software.

Microsoft is the main technology platform from Networking to the User Interface. The system is developed on a Windows networking platform, with database in SQL Server. The software was developed in ASP.NET and VB.NET.

- Upgrade of Technology and Services
  The technology and service provider, M/s Peach Computers, demonstrated the upgrade version of the software-hardware which was under trial. The upgrade version offers the following additional features:
  - Distributed service provider outlets (Franchises) at remote locations, connected by the Internet to the central server
  - Online Submission of applications permitting applications by self
  - Re-use of Image or paper copies of documents through central archives
  - Direct e-Transmission of Certificates to agencies at the request of the applicants
  - Parallel Processing of a case by different officers
  - Expanded activities to track the service delivery aspects for health, education, agriculture, etc. related issues
  - Flexible and user-definable G2C, B2C and C2C issues
  - Use of biometrics for attendance of officers and field workers

Data and Digitization

Departments such as land records, election, relief schemes, Ration Cards had their own data records. The Jan Sewa Kendra plans to digitize and integrate this data. They propose to integrate this data in version 2 of their application by keeping scanned copies in the server. Presently they are not maintaining any physical or digital copies. The database they are creating has got no legal sanctity; it is a database for internal use for returning applicants.
6. Challenges and Mitigation Strategies

The Jan Sewa Kendra required an estimated investment of Rupees Thirty-five lacs, which far exceeded the state government grant of Rupees Five lacs. The Collector marketed the concepts of people-centric administration to local industries, organizations, as well as the General Administration Department of the state government. Therefore, this project was an actual outcome of public-private partnership, while the services and software were planned considering the BOO model. The applications forms were very lengthy and tedious. The project team simplified several forms. For example, they split the issue of alterations to the ration card into five specific issues. This simplified and shortened the application form for the applicant. This also made it easy for the officer to process the form.

In case of Land not available, land digging and road making in an ONGC pipe line area issues, the procedure was modified. As per that, Jan Sewa Kendra sends the copies of the enclosures to the departments like Revenue, Town planner, ONGC etc. This allowed parallel processing of the cases and expedited the processing time. It also relived an applicant from visiting office to office. It even eliminated the possible delay on part of the collectorate officer to submit the papers to outside departments. In several cases, the time limits were reduced. The Jan Sewa Kendra was accepted as the front-end extension of the Collectorate. The concept was to implement a team effort between the Collectorate and the Service Provider to give seamless services to citizens. With e-reports in place, officers were motivated to perform and complete cases ahead of time. Each department gets notification of cases due within 48 hours, and senior officers are alerted of the same by SMS and email. The Collector personally also keeps track of the pendencies and considers each delay as a serious fault. Time lines has been given to departments for the completion of the different issues (SLA).

7. Current Status of the Project

- Over 25000 cases have been handled by the Jan Sewa Kendra in the last five months at Gandhinagar, the three Taluk headquarters, as well as through camps in the villages
- Tracking of paperwork, automated generation of reports and availability of information to be processed in digital form is in process.
- Several value-added services in B2C and G2C arena are being implemented
- New and upgraded software, to facilitate distributed and paperless governance, is being tested. This software will allow distributed kiosks and set up franchises for delivery of services.
Study Report on Assessment of the Model e-districts

- Standard work processes and responsibilities are mandated by the administration to ensure sustainability

8. Critical Success factors

The District Collector had issued orders to the officers of the Collectorate to ensure that all the citizen-centric work is handled through the Jan Sewa Kendra only. The Service Provider, M/S Peach Computers, has continuously evolved and upgraded the software to ensure the best performance. Officers monitor the issues at their own departments and focus on eliminating over dues. Such combined teamwork has yielded success to the initiative.

Implementation of ICT for e-Governance

Use of SMS for automatic alerts and on demand information, IVRS for 24x7 status information, Barcode and Smart Electronic Trackers for tracking, registry and error-free data entry, Website for status track and form information, Fingerprint Biometrics for recognition have offered convenience, speed and transparency to citizens.

Citizen ID

The concept of Customer ID (Citizen ID) has helped minimize the paperwork as well as data entry work in case of entering the application information. Citizens re-use previously-submitted documents in new applications to the Jan Sewa Kendra.

Taluk-level Connectivity

The Taluk-level centers use the same software and connect to the central database through GSWAN. This has facilitated centralized monitoring, and has helped create a central data record for the entire district.

9. Key Learnings

a. Project has front-end automation where service requests are accepted
b. The government creates many Data bases related to citizens like Voters’ list, Ration Card Database, Land records, BPL Survey etc. The use of these different databases is to be regulated and standardized for delivering citizen services electronically.

c. Extensive focus on employee skill up gradation and employee involvement in the whole process of reengineering and automation
d. In one day e-governance citizen has to get all the supporting documents signed by the concerned authorities and submit in the center. For one day e-governance one Mamlatdar sits in the Jan-Sewa Kendra to clear the requests of the citizens.

e. If there is any application which has to get approvals from the departments like O.N.G.C., Panchayat, R&B, etc is forwarded to respective departments by Jan Sewa Kendra Operator. The applicant does not have to visit these offices to get these clearances. Also, the Collectorate departments also do not need to send the formal requests to these outside departments. The Jan Sewa Kendra Back Office handles this work.

f. District E society has been formed which is the administrative body headed by the Collector.

g. Rupees twenty are charged per form. There are no charges for Right to Information (RTI)

h. Any citizen which does not have any identity proof is physically verified by the concerned officials.

i. If an application has to get approval from multiple departments, citizen has to submit his application in the Jan Sewa Kendra and back office Jan Sewa Kendra forwards to respective departments

j. All the application forms are in local language and have been simplified for the convince of citizens.

k. Services to the citizen in a Taluk are provided by Taluk Jan Sewa Kendra.

l. There is no interaction of Government officials with citizens, which saves the time of officials and citizens both.

m. Unique citizen ID is created for the applicant.

n. Jan Sewa Kendra Collects the money for the services and deposits in respective departments.

o. For tracking of an application a special Barcode is attached to the application.
## Appendix I: Services Covered at Jan Sewa Kendra Ghandhinagar

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Issue</th>
<th>Description</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Demarcation and Assignment of Village Land</td>
<td>75</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Demand of Land by Government Department\Office</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Demand of Government Land for Nonagricultural purposes for Registered Institutes / CO-op Society / Trust</td>
<td>120</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Demand of Government Land for Agriculture purposes for Co-op Society</td>
<td>90</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Demand of Land for Social Forestry</td>
<td>65</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Demand of Land for Fishery purposes</td>
<td>90</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Demand of Land by the Individual from Government for Agriculture purposes</td>
<td>120</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Demand of Land by the Individual from Government for N.A. purposes</td>
<td>120</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>Demand of Land by the Individual from Government for N.A. purposes (For Handicapped applicants only)</td>
<td>120</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Demand of Land by the Individual from Government for N.A. purposes (For Government employees only)</td>
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</tr>
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<td>11</td>
<td>Demand of Land by the Individual from Government for N.A. purposes (For ex-Army personnel only)</td>
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<td>12</td>
<td>12</td>
<td>Property for Sale\Rent\Lease of Survey No\Road for Panchayat</td>
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<tr>
<td>13</td>
<td>13</td>
<td>Allotment of Land for Cremation</td>
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<tr>
<td>14</td>
<td>14</td>
<td>Procurement of Land on lease / Rent for Salt Business</td>
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<tr>
<td>15</td>
<td>15</td>
<td>Boundary identification for Village Land\Village Boundaries</td>
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<tr>
<td>16</td>
<td>16</td>
<td>Permission for cutting of trees under Panchayat administration</td>
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<td>17</td>
<td>Permission for cutting of green trees in Private Agriculture Land</td>
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<td>18</td>
<td>Permission for Land to be used for Non Agriculture Purpose As per Land Revenue clause No. 65</td>
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<td>19</td>
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<td>Removal of Restrictions on Agriculture Land as per Ganotdhara</td>
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<td>Removal of New Condition Restrictions on Agriculture Land</td>
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<td>Permission against Ganotdhara clause no 63</td>
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<td>22</td>
<td>Permission against Ganotdhara clause no 63 AA</td>
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<td>Permission for Transfer of Land as per Ganotdhara clause 43</td>
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<td>24</td>
<td>24</td>
<td>Permission for removal of restriction on Non Agriculture Land As per Ganotdhara clause No. 43</td>
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<td>25</td>
<td>Permission for Block distribution under unification scheme</td>
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<td>26</td>
<td>Permission for registered Industrial Land as per clause 65-Kh</td>
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<td>27</td>
<td>Unification of Agriculture Land</td>
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<td>28</td>
<td>Certificate for Farm-account holder</td>
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<td>Certificate for Small Agriculturists</td>
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<td>Stamp Vendor License</td>
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<td>Stamp Vendor License Renewal</td>
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<td>32</td>
<td>Financial Relief in case of Death in Natural Calamity</td>
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<td>33</td>
<td>Agency for Small Savings\NSC\KVP\Monthly Income</td>
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<td>Agency for Ladies in regional Savings Scheme</td>
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<td>Solvency Certificate</td>
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<td>Income Certificate</td>
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<td>O.B.C\Non-Creami-layer Certificate</td>
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<td>Certificate for Minority on basis of Religion and Language</td>
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<td>Certificate for Socially &amp; Educationally Backward Class</td>
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<td>Certificate for O.B.C &amp; E.B.C.</td>
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<td>Certificate for Residential Proof ( Only for Employment Exchange)</td>
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<td>Domicile Certificate</td>
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<td>Application for getting copies of the documents</td>
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<td>Financial relief and Pension for help- less old and handicapped</td>
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<td>45</td>
<td>Relief under National Family benefit Scheme</td>
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<td>Relief under Solarium-Fund in case of Hit &amp; Run Cases</td>
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<td>47</td>
<td>Certificate of Succession</td>
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<td>48</td>
<td>Certificate for Widow status &amp; Income</td>
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<td>License renewal for self protection</td>
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<td>License for Booking of Public entertainment Prog.\Public Performance</td>
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<td>No Objection Certificate for Storage of Petroleum Products</td>
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<td>52</td>
<td>License for Gun for Self protection</td>
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<td>53</td>
<td>Duplicate License for Gun for Self protection</td>
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<td>54</td>
<td>License for production of explosives</td>
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<td>License for Sale of explosives and fire crackers (Permanent)</td>
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<td>License for Sale of explosives and fire crackers (Temporary)</td>
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<td>Renewal of License for Sale of explosives</td>
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<td>58</td>
<td>Storage License as per Petroleum act 1934</td>
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<td>License for Storage of Poisonous items</td>
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<td>Registration Certificate for Restaurant</td>
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<td>Renewal of Registration Certificate for Restaurant</td>
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<td>License for Video</td>
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<td>License for dish antenna</td>
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<td>Application for New Ration card</td>
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<td>Application for Separate Ration Card</td>
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<td>Duplicate Ration Card</td>
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<td>67</td>
<td>Correction in Ration card - General</td>
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<td>Correction in Ration Card Addition of Name(s)</td>
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<td>Correction in Ration Card Deletion of Name(s)</td>
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<td>Correction in Ration Card Change of Address</td>
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<td>Correction in Ration Card Cancellation of present location</td>
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<tr>
<td>72</td>
<td>Issue of Card to an agency or institution</td>
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<td>73</td>
<td>License for Small\Large scale manufacturing of Petroleum product</td>
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<tr>
<td>74</td>
<td>License for Small\Large scale manufacturing of Petroleum product Change of location</td>
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<tr>
<td>75</td>
<td>License for Small\Large scale manufacturing of Petroleum product Change of partnership</td>
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<td>76</td>
<td>Approval for Government Fair Price Shop</td>
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<tr>
<td>77</td>
<td>Permit for Kerosene for Institution / Agency</td>
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<td>78</td>
<td>Solvent Permit</td>
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<td>79</td>
<td>Registration for free-sale of Kerosene</td>
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<td>80</td>
<td>Permission for extension of date of construction on plots</td>
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<tr>
<td>81</td>
<td>No Objection Certificate for Loan from Bank, LIC, other financial institutions for plots offered at subsidized rates</td>
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<td>82</td>
<td>Regularization of the delay in construction on plots offered at subsidized rates</td>
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<td>83</td>
<td>Right-to-Information</td>
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<td>No.</td>
<td>Description</td>
<td>Fee</td>
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<tr>
<td>-----</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----</td>
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<tr>
<td>84</td>
<td>Collection of Land Revenue, Educational Cess, etc. payments to Government</td>
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<td>85</td>
<td>Affidavits</td>
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<td>86</td>
<td>Plot Transfer Gandhinagar City</td>
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<tr>
<td>87</td>
<td>Change in name in plot ownership through Succession</td>
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<tr>
<td>88</td>
<td>Help for adversely affected people of Gandhinagar Capital Area</td>
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<tr>
<td>89</td>
<td>Financial relief to the Widow</td>
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</tr>
<tr>
<td>90</td>
<td>License for weapon for Self Protection Taken over</td>
<td>75</td>
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<tr>
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<td>License for permission to carry the Weapon for self protection During the journey</td>
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<td>92</td>
<td>License to Purchase or Increase the number of Weapons for self protection</td>
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<td>NOC for Purchase of weapon for Self protection</td>
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<td>Cancellation of License for Weapon for self protection</td>
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<td>License for change of Name of Retainer</td>
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</tr>
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<td>96</td>
<td>License for Sale of Weapons for self protection</td>
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<td>97</td>
<td>Renewal of License of Weapon issued for Farm protection</td>
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</tbody>
</table>
Annexure V: Assessment of the Palakkad District

1. Project Background

Palakkad is one of the fourteen revenue districts of Kerala. It is situated almost in the centre of State and has no coastal line. The district opens the State to the rest of the country through the Palakkad gap. It is often called as the “Gateway of Kerala”. With the total area of 4480 sq.kms the district accounts for about 11.5 per cent of the total land area of Kerala, with the share of population is 8.22 per cent. The district is one of the main granaries of Kerala and its economy is primarily agricultural. Agriculture engages more than 65 per cent of the workers and 88.9 per cent of the district’s population is rural in nature.

Palakkad is part of the erstwhile Malabar district of Madras Presidency. The present Palakkad district, as an administrative unit, was formed on the first of January 1957, comprising of Palakkad, Perinthalmanna, Ponnani, Ottappalam, Alathur and Chittur. At present the Palakkad district consists of two revenue divisions, five taluks and 163 villages. The district is divided into 13 community Development Blocks for the effective implementation of various development activities. There are five taluks, 163 villages, four Municipal towns and ninety Panchayats in the district.

According to the 2001 census the population of the district is 2617072. The density of the population is 584 per Sq. km. Decadal growth rate for the period 1991-2001 is 9.86 per cent in comparison with the State figures of + 9.42 per cent. The sex ratio of the district is 1068 females for 1000 males. The District has achieved 84.31 per cent literacy in 2001 calculated on the basis of population above the age of 7 years.

Service Delivery Project in Revenue Sector by Modernizing Government Program (MGP) of Asian Development Bank (ADB) identified the scope for improvements in Service delivery by Computerization, Infrastructure improvement including Buildings and Furniture, Communication facilities etc. The work for the total computerization of the Palakkad Collectorate, under the Modernizing Government Programme, began in May 2003 after the Government accorded sanction for the project. The project was inaugurated on 26th October 2004 by the then Chief Minister of Kerala.

Titled ‘DC*Suite’ the project envisages an integrated set of application covering all areas of Collectorate work. The programme is aimed at making the services more accessible to the citizens. With the total computerization of the district administration, people are now able to track the
status of a file or an application in the Collectorate through Internet. Government had decided to execute the program and NIC was entrusted do the development of DC*Suite. The fund for DC* Suite were provided by Asian Development Bank in the tune of Rs. 2.15 crores.

2. Project Achievements

There are 64 different department having offices at the district headquarters. There are about 400 subjects handled by the Collector Office in the district. There are 15 sections in the office with each seat in the Collector office, handling about 10 subjects.

DC*Suite is an integrated suite of applications for the Collectorate. DC*Suite is based on an integrated solution architecture covering all functional areas and activities in the Collectorate. Twenty-one functional areas identified including Workflow based File Management System, Public Grievances Monitoring System, and Revenue Recovery Management etc. In addition, there are add-on optional modules for Knowledge Management, District Portals etc. Generally priority is given for areas where common people interact with the Collectorate or Government.

The major achievements of the DC* Suite can be described as under:

- Development of a pilot system for processing of files electronically and movement of electronic files.
- Restructuring of activities at Collector office
- Reorganization of seats and subjects handled by employees
- Issuance of Government Orders form Government of Kerala to institutionalize the process reengineering done.
- Establishment of a training centre at the district level.
- Use of open source technologies for development of software.

3. Services Provided- key Functionalitie

DC* Suit is essentially a workflow based electronic file flow management system. DC* Suit works on the basic principle that in government all decisions are taken through file movements. Any document or request reaching any office is either appended to an existing file or is created as a new file. The file is processed at various levels where inputs are added in terms of data, information, similar previous orders, government laws, rules and regulations etc. DC* Suit has also been attempted to be developed in the same way. File movement system is the backbone of the DC* Suit.
Major areas covered in DC*Suite are as under:

- Workflow based File Management
- License Information
- Natural Calamity Management
- Public Grievances
- Revenue Recovery Management
- Pay roll & Personnel Management
- Land Management
- Inventory Management
- Financial Management
- Certificates
- Pension Schemes
- Court Case Management
- Housing
- Assets Management
- Natural Resource Management
- Elections and Electoral Analysis
- Law and Order
- National Security
- Development works
- Public Information Portals and District Portals

In addition there will be add-on optional modules for Knowledge Management, District portals etc. Public Access, Transparent Administration and Service Delivery are the key features of the project and these services will be made using District Portals as web services.

Basic Services:

- 24*7*365 availability with disaster recovery at Collector’s Camp office
- Acknowledgements of letters, e-mails, fax.
- Help Desk
- Intranet for employees
- News, Notice Board
- E-mail, Messaging
- Chat, Forum, Gallery
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- Reference, Health Corner
- Government Order (GO) Search

System Feature:

The ‘Tapal’ received in Collector office reaches the concerned seat / employee. The employee has the option to scan the document and create a new file or append the same to an existing file. Inputs to DC* Suite can be scanned document, photographs, email and even voice message. All these become a document in the workflow. The document then travels in the defined workflow as per hierarchy and procedures. Information is appended at every level and facility is provided for writing notes. The electronic file reaches the deciding authority and travels back. The action is taken as per the decision.

There are about 11 - 12 modules available in DC* Suite which are build around the Workflow for carrying out different tasks. A total of 20 modules have been planned.

The services are delivered to citizen through
- District Administration Counters
- IVRS
- SMS
Front-End

DC * Suit also provided services to citizens through a website with the URL http://www.dcsuiteservices.nic.in. This website is informative in nature. Information about various services provided from Collector office are listed in the website. The website provides information under following heads on the services:

- Service Name
- Clerk Responsible
- Officer Responsible
- Section Head
- Eligibility
- Other Information - Summary of service delivery
- Office Procedure
- Complaint & Solution
- No. of Forms

The services available in website are as under:

- Search
  - Tapal Received
  - File Status
  - Government Orders
  - Beneficiary Search
  - Revenue Department Employee Search
- Collectorate Services
  - Certificates
  - License
  - Appeals
  - Revenue Recovery
  - Surplus Land
- Other Services
  - Drought Relief
  - Natural Calamity - Flood Relief Works - Improvement
  - Pumping Information
  - Release of documents under LIGH / MIH
Security Features:

All employees using the DC* Suite have been assigned username and passwords for accessing the system. Security is planned to be enhanced with Biometric technology. Incorporation of Digital Signature is also planned in the DC* Suite.

All the documents generated from DC* Suite also carry a security feature. Every document generated from DC*suite software carries a code. This code is generated by the system. This code is printed in the bottom of the page and used for detecting any kind of forgery for a document.

4. Implementation Strategy

As first step towards design of the new system a re-structuring of Collectorate activities were done by a team of officers under the guidance of the District Collector. As a result of this study six management divisions were formed depending on the major activities in Collectorate - grouping together the related major subject heads, which were:

a) Personal Management  
b) Civil Management  
c) Land Management  
d) Revenue Recovery Management  
e) Election Management  
f) Finance Management

Re-organization of the Seats and Subjects were carried out and an Office Order has issued to enforce same in tune with Computerisation.
To keep the initial momentum generated by introduction of a new system every employee of Collectorate is provided with a PC/Thin so that they can actually work with electronic files. Every section was provided with a printer and scanner as a part of the network. Thin clients were provided with OS images to suite Unicode Malayalam (local language) support and Mapped to Rack Server through Samba. The responsibility of development software was entrusted to NIC with a view that it becomes a continuous process and the support is available all the time.

Suggestions on changes required in DOM to incorporate and facilitate electronic file flow based process were submitted to Government. Government of Kerala passed the required orders to effect the changes for the smooth running of the DC*Suite.

Systematic Training programmes were designed and conducted for an effective and sustained motivation for using the system. The methodology followed for sustained efforts was to identify few Master Trainers and trained extensively in DC*Suite. All staff of Collectorate were trained in DC*Suite. The batch size was kept limited to 18 participants in one batch so that comprehensive training can be provided. All Officers were given also trained. Continuous Training programmes are conducted both for new users and Refresher programme. As a result all staff members are well trained in Open Office2.0 with Malayalam fonts. Also Self Tutors are prepared for the Major Modules of the Application.

Disaster Recovery Centre is established with replication in geographically different location so that the in case of any disaster there is minimal break in services.

5. **Technology and Data Digitization**

The software is developed using Web Portal technologies along with a proven RDBMS. Open Software Technologies is utilized wherever appropriate. The applications, which are of public interest, will be given access through INTERNET, IVRS and Touch Screens based Kiosks using standard software and web interfaces. DC*Suite is developed in Linux-Appache-MySQL-PHP (LAMP).

The work structure has been modified scientifically and systematically for the benefit of citizens. Information are made available through multi-channel service delivery access points like touch screen kiosks, inter-active voice response system, SMS, departmental service counters, e-mail, Internet kiosks, and Agencies like FRIENDS, are service delivery points.
E- Services layer is the front-end layer of DC* Suit which interacts with citizens and offer services to the citizen. There are several methods proposed for the same in the DC* Suit. The services offered over touch screen kiosks, interactive voice response system, Internet and counters.

Intranet layer is the middle layer which offers lot of collaboration services and tools. E-mail, messaging, chat, videoconferencing, bulletin boards are few of them.

Back Office layer is the functional area comprising of all 21 functional modules with which the government staff will work and carry out the backend operations.

**Infrastructure:**
A data centre has been established in the Collector office. The Disaster Recovery (DR) centre is created in Collector camp office with a lease line of 2 Mbps between the Collectorate and Camp office. Only database backup is taken in DR centre. The infrastructure created for the project includes:

- District Data Centre
- Academic Centre - continuous training centre with thin clients
- Discussion Room
- Videoconferencing facility
- Touch Screen Kiosks
• Disaster Recovery Centre

Data Digitization:
The DC*Suite is developed in such a way that it does not require any transactional data for using the system. DC*Suite creates transaction based status for Tapals and records the notes, minutes etc. of the employees on the Tapal. Only the master data is required data to be entered which is like employee details, current role / function managed by the employee. With regard to ‘Tapal’ the system has the option / facility to scan the documents and attach it with electronic files. While there is an option to scan and attach the document alongwith the electronic file, this option is not exercised with all the files. New files, which have less than 4-5 pages only are being digitized, rest all files are moved physically and only their status is updated in the DC*Suite.

It was observed that there are no plans to digitize the old paper-based files as of now as it would require lot of storage space resulting in investment in hardware. It was decided that the files can be converted to electronic form as and when required. Further, apart from the hardware cost, DC*Suite application stores scanned images in the database in binary format, which result in increased database size with each scanned image. There is no document management system or plan in the DC*Suite software.

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6. Challenges and Mitigation Strategies

Setting-up infrastructure was one of the earliest obstacles faced during project implementation. IT infrastructure available in any district is quite minimal. For a project like DC*Suite it was necessary that infrastructure in terms of hardware, software and manpower is created. Also the physical infrastructure including building etc is also required. Making the required funds for establishing the infrastructure was another challenge.

Moving from paper to electronic files was a major functional and change management challenge. Employees were not ready to work with electronic files due to issues like lack of confidence on the
system, unavailability of signatures etc. To resolve this problem both Government of Kerala and local district administration came out with required government orders.

Every employee coming under Collectors office, Taluk were trained on how to use the new systems through a series of trainings by the district collector during the implementation phase of the project. This ensured that after implementation the systems can be handled by the government office employees themselves in their respective departments.

7. Current Status of the Project

Presently only two offices are connected with the DC* Suite. It proposed that representative offices of all 64 departments located in district would be covered under DC* Suite. The DC* Suit services are proposed to be made available to all Taluks and to villages also. Connectivity can also be extended to Counters with the help of State Wide Area Network proposed be established in near future.

One taluk office has also been connected to DC* Suite where Revenue Recovery software is being used. This is done on a pilot basis. This office is situated within the Collector office premise.

Government of Kerala has decided to replicate the DC * Suite in other districts of the state. Presently the system is being replicated in Kannur district.

8. Critical Success factors

In order to make establish a system which became DC* Suit today, at the very outset re-structuring of activities carried out in Collectorate was undertaken. This was done by a team of officers under the guidance of District Collector.

Provision of systematic training programs has also contributed to the acceptability of the system. Master trainers were identified and were given detailed training. All officers were also trained in operations of the system. The initial training was supported by refresher programs. Self learning programs were designed and provided to employees.

In order to deliver service to citizens it is of absolute necessity that initiative should start from where the service would be delivered. Along with creating multiple delivery channels like rural kiosks, IVRS, internet and service counter etc it also of importance that systems should be established for processing of these services / transactions and making available the required tools and information to concerned employees.
There are no short cuts for making such a project successful. These kind of projects do have their own development life span where lot of issues related to variety of subject like functionality, technology, change management are required to be dealt with. Hence there can be few quick wins but for creating a sustainable and workable model it is required that sufficient time and energy is spent on proper resolution of problems areas.

In a typical file flow system the documents move from one table to another and employees at every level add some value to the file by way of adding information to it. Any automated or electronic system should be able to record the value added by each employee and also help employees in doing so.

Few other factors could be summarized as below:

- People found the system effective in terms of the amount of time saved to process certain requests for services at the departments.
- The government offices using the automated system have saved significant amounts of time and effort for maintaining their internal records.
- The new system and a highly motivated task force at the time of implementation had changed the outlook and attitude of the government offices to a certain extent.

9. Key Learnings

The DC*Suite project is currently reached a point where it was a success in terms of the services provided by the departments using the automated software till date, but might become a classic case of a failed DC*Suite project due to the lack of funds and trained personnel to maintain the systems.

The reasons for possible failure of the project in the near future:

- Lack of funds for maintaining the hardware spread across in the district. In some cases hardware maintenance issues have taken almost a month to resolve.
- Lack of trained technical personnel in each department / office using the system is another reason for the delay. Currently all the offices using the systems in the entire district are dependent on the NIC team present in the Collectorate for any issues concerned with the software.
DC*Suite has been developed in such as way that the model has the capability to be replicated in other district in other states. The technology used for DC*Suite is not proprietary in nature hence there is no licensing required for other districts; hence the initial coat for software is very minimal. The software is developed to support bi-lingual. To enable bi-lingual feature Unicode standard is used. This will enable developers to incorporate any other language. Efforts are also being undertaken to standardize various forms being used in Government offices, which can then be replicated in DC* Suit also.

DC*Suite is capable to support any kind of citizen service delivery channel like CSC, internet, IVRS etc. Hence any district already having these channels can use it and those not having it can very well start these channels.

DC*Suite system has been developed on the basis of District Information Manual and hence it has the capability to be extended to not only to other district of the state of Kerala but even in other states also. DC* Suit has already been three other districts in Kerala state. These districts are Ernakulum, Kannur and Kasseragode.

National Informatics Cente (NIC) is looking into the aspect of developing DC*Suite as a product, which is suitable for implementation in any district across the country. It is also looking at creation of a content management system to be built around the workflow system for managing the huge amount content generated by Government at every level.