Case Studies on e-Governance in India

e-Housing System for Bhavana Nirman Dhanasahayam
Online disbursement of housing assistance to Scheduled Castes in Kerala

Abdul Muheet Chowdhary, OneWorld Foundation India
e-Housing System for Bhavana Nirman Dhanasahayam
Online disbursement of housing assistance to Scheduled Castes in Kerala

Abdul Muheet Chowdhary, OneWorld Foundation India
About the Initiative

This publication is a part of the Capacity Building initiative under the National e-Governance Plan (NeGP) by NeGD with an aim to draw out learnings from various projects implemented in various States/UTs and sharing this knowledge, in the form of case studies, with the decision makers and implementers to benefit them, by way of knowledge creation and skill building, from these experiences during planning and implementation of various projects under NeGP.

Conceptualised and overseen by the National e-Governance Division (NeGD) of Media lab Asia/DeitY these case studies are submitted by e-Governance Practitioners from Government and Industry/Research Institutions. The cases submitted by the authors are vetted by experts from outside and within the Government for learning and reference value, relevance to future project implementers, planners and to those involved in e-governance capacity Building programs before they are recommended for publication. National Institute for Smart Government (NISG), working on behalf of this NeGD provided program management support and interacted with the authors and subject matter experts in bringing out these published case studies. It is hoped that these case studies drawn from successful and failed e-Governance projects would help practitioners to understand the real-time issues involved, typical dilemmas faced by e-Governance project implementers, and possible solutions to resolve them.

Acknowledgment

NISG sincerely thanks all the authors for documenting and sharing their rich experiences in terms of challenges and lessons learned and allowing us to publish and use these case studies in various training programs of NeGD and NISG. NISG also thanks all the external and internal experts who helped review the submitted cases, providing critical observations and for helping in articulating and presenting the case studies, both for class room use as well as a reference article.

Copyright License

This case study submitted by author/s and accepted for publication under the project of National e-Governance Division (NeGD), Ministry of Communications and Information Technology, Government of India by NISG, the program management agency, is governed by the following license of the Creative Commons. For any specific permission/feedback the publisher may be contacted.

(cc) Creative Common License - Attribution-Share Alike 2.5 Generic
The user is therefore free to make derivative works, with credit to the original author. http://creativecommons.org/licenses/by-sa/2.5/in/

Disclaimer

This publication is a work product produced by external authors with information sourced from their own sources as provided under reference in respective articles and is based on experiences with Projects undertaken directly or as research initiatives closely working with the project owners or with their consent to publish the findings. The authors have provided a plagiarism declaration as per project guidelines and National Institute for Smart Governance (NISG) has put in best efforts to validate the authenticity and learning value of the article submitted. NISG has acted mainly as a content reviewer with support from identified expert resources. NISG is not responsible for any plagiarism violations or copyright infringements and respective authors are fully responsible for the same as per respective declarations provided by them. The case study should not be used as a definite source of data.

The case studies are meant for use as a background and quick reference on the topic(s) by e-Governance practitioners, and should not be treated as a guideline and/or instructions for undertaking the activities covered under any e-Governance project/s. It may also be used in a classroom for discussion by the participants undergoing e-Governance related training programs. The document by no means has any commercial intention and is solely developed for the purpose of knowledge sharing.
TABLE OF CONTENT

Project Context .................................................................................................................. 1
Project overview ................................................................................................................. 7
Objectives .............................................................................................................................. 8
Challenges in implementation .............................................................................................. 14
Key lessons .......................................................................................................................... 15
Research methodology ........................................................................................................ 17
Conclusion ............................................................................................................................. 17
References ............................................................................................................................ 18
Case fact sheet ...................................................................................................................... 19
Questionnaire ........................................................................................................................ 20
Annexure I: Claim Sanction Order ...................................................................................... 23
Annexure II: Final disbursement list ................................................................................... 24
Annexure III: District-wise disbursement details of Bhavana Nirmana Dhanasahayam scheme 2008-13 ......................................................................................................................... 25
Abstract

The e-Housing project was implemented in Kerala in 2011 to reform the fund disbursal mechanism used for the Bhavana Nirman Dhanasahayam scheme that provides Scheduled Caste beneficiaries funds for house construction. It is primarily a Government to Government (G2G) project implemented by the Centre for Development of Imaging Technology for the Scheduled Caste Development Department. It also has Government to Citizen (G2C) functionalities as it enables beneficiaries to track the status of their applications online. The project has completely digitised the erstwhile manual process, bringing about transparency and increasing process efficiency. Money is now transferred online to the accounts of beneficiaries, enabling fund tracking and ensuring that they are not misappropriated.

The system has eased monitoring and evaluation of the housing scheme, reduced the processing time involved by a third and has saved beneficiaries the hassle of frequenting government offices to follow up on their applications.

Key words: e-governance, digitisation, fund disbursal, Scheduled Caste welfare, house construction, Bhavana Nirman Dhanasahayam, Kerala, Scheduled Caste Development Department

Note to Practitioners/Instructors

This document details the supply bottlenecks faced in the manual fund disbursal system used in the Bhavana Nirman Dhanasahayam scheme in Kerala and the manner in which the system was accordingly digitised to overcome these bottlenecks. It also highlights missed opportunities and alternative trajectories that could have been employed.

Notes to Practitioners

e-Housing is a classic case of digitisation without process re-engineering. A lengthy and cumbersome process involving repetitive activities and multiple points of manual authorisation has been digitised. Agencies which are seeking to replicate the initiative can explore ways in which the steps in the process flow can be reduced by integrating and optimising steps involving verification and authorisation. This would further reduce the time and effort required in service delivery.

IT infrastructure capable of handling the load involved during fund disbursal must be decided on the basis of the estimated number of beneficiaries and transactions involved. Accordingly the server configuration can be mapped to deal with peak load scenarios rather than taking an evolutionary approach and making continuous modifications.

e-Housing faces bottlenecks in last mile connectivity that can undercut all the back-end reforms. Apart from the IT component being unable to handle the disbursal load,
beneficiaries also have to frequently travel to the Sub Post Office to collect funds. A service delivery mechanism that provides funds smoothly to beneficiaries who are in rural areas is required to complete the efficacy of the supply chain. One model which could be adopted to achieve this goal is that of Business Correspondents. As the beneficiaries are scheduled castes, the possibility of discrimination in service delivery is higher. A grievance redressal system which proactively informs them of their entitlements can be a valuable addition to the project. A simple method would be to provide contact details of grievance redressal authorities at the time of generation of the application number by either adding it to the application number slip or providing the information online.

Notes to Instructors

The case highlights the use of IT in promoting transparency, accountability and efficiency in the vital area of fund disbursal. Instructors can use the case study for discussions on government process re-engineering to examine how the digitisation process could have been done differently. It can be used for discussions in public administration, supply chain management and financial management on how beneficiaries in remote areas with poor financial access can be most effectively reached out to. It can be used in discussions in e-Governance in highlighting the appropriate IT architecture for such an application and how its capacities in terms of fund disbursal and monitoring and evaluation can be further strengthened.

Instructors can raise the following questions for discussion:

1. Can the process flow be shortened? If yes, how?
2. What are the alternative service delivery models that can be used to provide fund disbursals to beneficiaries in a more effective way?
3. How can the monitoring capacities of the system be strengthened?
4. Which are the major sectors (such as education, healthcare) in which this project can be replicated?
Project Context

Condition of the Scheduled Castes in Kerala

In terms of human development, with the highest Human Development Index (HDI) of 0.790 in India, Kerala is much ahead of other Indian states. Across various developmental indicators, the distinction between rural and urban areas is also quite low. However, the Scheduled Castes\(^1\) (SCs) have lagged behind and their condition is much worse when compared with the average developmental figures of the rest of Kerala, as can be seen in Figure 1.

![Figure 1: Comparative development indicators for SCs](source)

**Source:** OneWorld Foundation India 2013

**Note:** The SC sex ratio is also lower at 1048, compared with the Kerala average of 1058.

Data sourced from


ii) State-wise Percentage and Number of Persons below Poverty Line for the year 2009-10, Data Portal India.

In keeping with this, the government of Kerala has taken a series of measures to improve the well-being of the SC population. A set of schemes was devised around three themes – educational, economic and social development. The Scheduled Castes Development Department (SCDD) states the following:

\(^1\) Also known as Dalits.
‘The SC/ST are mainly engaged in agricultural and allied activities. But majority of them were landless. Even for constructing a house they had to depend upon others for the house sites. They were agricultural labourers toiling morning to night for earning a livelihood and were attached to land. The undernourished food, filthy habits, wretched conditions of life and ignorance made their life miserable and somewhat similar to animals.’

**Bhavana Nirman Dhanasahayam**

The issue of landholdings was central to any discourse on the socio-economic situation of took on central importance in the policy discussion on SCs in the state, and in the mission statement of the SCDD it has been stated that the Department would aim to secure ‘land for landless, home for homeless’. One of the initiatives undertaken to achieve this goal is the **Bhavana Nirman Dhanasahayam** Scheme. Under this scheme, the Kerala government provides financial aid for house construction to SCs. The total amount is INR 1 lakh per beneficiary and the amount is disbursed in four instalments: (i) INR 15,000/15 percent (ii) INR 30,000/30 percent (iii) INR 40,000/40 percent (iv) INR 15,000/15 percent. The disbursement of aid is stage-wise in terms the construction of house, with beneficiaries having to file applications at each stage of construction.

---


The pre-existing system for disbursement of financial aid

Figure 2: Manual process of housing application
Source: C-DIT presentation 2011

As is evident from Figure 2, the process for fund disbursal initially was complex and involved the following stages:

1. Beneficiaries would submit application forms to the Scheduled Caste Development Officer (SCDO) at a block panchayat, municipality or corporation.

2. The SCDO would verify the applications and forward them to the District Development Officer (DDO).

3. The DDO would then issue a sanction order.

4. The beneficiary would execute an ‘agreement’ contained in a legal document with the SCDD before receiving the first instalment of payment.

5. After completing each stage of work, the SCDO would conduct site inspections. On the basis of this, a stage certificate, containing details of the construction completed (such as basement, plinth level and roof level) would be sent to the DDO for disbursing the next instalment of payment.
6. The DDO would send the sanctioned bill to the treasury and the amount would be sent to the SCDO.

7. The SCDO would then allocate that amount beneficiary-wise via the bank.

8. The bank would then send a demand draft to the beneficiary who would encash it.

This process was cumbersome and inconvenient for the beneficiaries who had to make multiple visits to the block and district offices for transactions. Disbursements were delayed as allotments had to be secured from DDOs, bills had to be written in block offices and counter signed in district offices, amounts had to be drawn from treasuries and demand drafts taken from banks. Apart from the complexity of procedure and related delays, the process required beneficiaries to regularly follow up on progress and as a result sacrifice several days of work to get the funds.

To address these supply bottlenecks and with the objective of reducing delay and human effort, the SCDD and Centre for Development of Imaging Technology (C-DIT) designed and developed a computerised system – called e-Housing - for providing housing assistance to SCs.

e-Housing system completely digitises the previous manual process and disburses funds online. The system was launched in February 2011 all over Kerala and became operational by April the same year.

---


5 An organisation established by the Government of Kerala for research, training and development in imaging technology and development communication.
Project overview

Project Description

Figure 3: e-Housing portal home page
Source: e-Housing, 2013

The e-Housing project was implemented by the C-DIT. It digitises the lengthy and complex previous process, reducing the time required and making the data available online. Beneficiaries are provided an automatically generated application number at the time of application which enables them to track their status online. Money is transferred automatically to their post office savings accounts. As the entire process is digitised, the money flow can be tracked and ensured that the funds have gone to the intended beneficiaries.

The system is web-based and centrally deployed. Users require only internet access to use it. The system uses the state e-governance infrastructure and the server is housed at the State Data Centre (SDC).

Salient Features:

- Centrally deployed web-based system
- Fund disbursal takes place online
- Entire process transparent with application sanction and rejection accessible to all users
- Generates application number that allows beneficiaries to track application status
- Digitises application forms and orders, enables eligibility document uploads
- Enables DDO to create new posts for subordinates such as Junior Superintendent (JS), District Office Clerk (DOC) and SCDO
**Objectives**

The e-Housing project aims at digitising the process of fund disbursal to the beneficiaries of the Bhavana Nirman Dhanasahayam scheme so as to increase process efficiency and transparency.

**Stakeholders**

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled Caste Beneficiary</td>
<td>• S/he is the beneficiary of the project.</td>
</tr>
<tr>
<td>Scheduled Caste Development Officer (SCDO)</td>
<td>• The SCDO is the first tier for processing the application of the beneficiary and is also in charge of procuring hardware and arranging broadband connectivity in all SCD offices that lie under them.</td>
</tr>
<tr>
<td>District Office Clerk (DOC)</td>
<td>• S/he assists the DDO in verification.</td>
</tr>
<tr>
<td>Junior Superintendent (JS)</td>
<td>• S/he also assists the DDO in verification.</td>
</tr>
<tr>
<td>District Development Officer (DDO)</td>
<td>• S/he is the final authority that verifies applications, sanctions funds and ensures that they are allocated to beneficiary accounts on time.</td>
</tr>
<tr>
<td>Kerala State Treasury Department</td>
<td>• Consolidated information on all beneficiary installments/stage-wise disbursal along with corresponding post office details is provided by the Treasury. It is also the source of funds.</td>
</tr>
<tr>
<td>Post Offices</td>
<td>• Beneficiaries need to have post savings accounts as this is where the funds are deposited.</td>
</tr>
<tr>
<td>C-DIT</td>
<td>• It has designed, developed and deployed the e-Housing software. It also provided training and consultancy and created publicity material.</td>
</tr>
<tr>
<td>Akshaya Centres</td>
<td>• These provide the data entry services to the SCDO.</td>
</tr>
</tbody>
</table>

*Figure 4: Stakeholders involved in the e-Housing project*

*Source: OneWorld Foundation India 2013*
Process Flow

Figure 5: Process flow for e-housing project
http://indiagovernance.gov.in/files/gkc_oneworld_e_housing_project.pdf

The process flow for the e-Housing system is given in Figure 5. The entire process from step 2 onwards is digitised and takes place through the software. Step-wise elaborations on the process flow are given below and official document samples are contained in Annexure 1.

In the first step, the beneficiary submits the following certificates along with a passport sized photograph:

1. Caste: States the caste category.
2. Income: Certifies the eligible income which is INR 300/month.
3. Profession: States the income source.
4. No Objection Certificate: Contains the permission given by the Revenue Department to construct a house.
In the **second** step, the SCDO verifies the documents and conducts site inspection and enquiry on the beneficiary. If satisfied, s/he uploads the scanned images of the documents, enters the data online, recommendations if any and saves the application. This generates a unique 9 digit number for the application. The code is ‘intelligent’ in that it is not randomly generated and follows a certain logic. For instance, in the code G010620112, 01 denotes the district (Trivandrum = 01), 06 is the gram panchayat, the year is denoted by 2011 and 2 is the beneficiary number. Based on this logic data is organised and unique application codes are generated. The application is then forwarded to the inbox of the DOC at the district office for the issuance of a sanction order.

In the **third** step, these applications are listed in the inbox of the DOC according to the SCDO office they are sent from. S/he verifies the application online, enters recommendations if any and generates a draft sanction order, which is the government’s commitment to allocate funds, and forwards it to the JS for further verification.

In the **fourth** step, the JS verifies the applications (which are listed office wise), the supporting documents and draft sanction order, and forwards it to the DDO for final approval of the sanction order.

In the **fifth** step, the DDO verifies the applications, enters recommendations if any and can finally either approve, reject or keep the application pending. If the application is approved, the sanction order is generated. Beneficiaries are required to have a savings account at the nearby post office in order to receive the funds and can avail of the SCDO’s assistance in opening it in case they do not have one already.

In the **sixth** step, the SCDO executes an agreement with the beneficiary. The document is generated online, signed by both and states the government’s commitment to provide funds to the beneficiary and the beneficiary’s agreement to use the fund for the intended purpose only. It records the post office in which the beneficiary has an account, the account number, taluk, village, ward number, name of guardian and relation with them.

Following this the SCDO generates the claim statement for the first instalment of fund disbursal. The claim statement contains beneficiary details and instalment progress (if it is not the first one) and is forwarded to the DOC along with the agreement executed. The
claim statement must be submitted at each stage of application for the funds and must contain details on the progress made.

In the **seventh** step the same procedure for application verification is followed. The DOC can view the claim statement, sanction order and agreement. S/he forwards it to the JS for further verification and remarks.

In the **eighth** step the JS can access the same documents and after satisfactorily verifying them forwards them to the DDO for final approval.

In the **ninth** and final step the DDO first generates a Government Order (GO) for the treasury (see Annexure 1). S/he then generates a disbursement list that contains all the beneficiaries categorised post office wise, withdraws money from the treasury by drawing a Demand Draft (DD) and passes the disbursement list along with the DD to the post offices. As the treasury still lacks an online system, this is the only manual process in the system.

The amount is credited online to the beneficiaries’ account through the post office savings bank after the SCDO inspects the site location and approves it. Post inspection, the SCDO enters details on the stage certificate online and updates the beneficiary’s account. An SMS is then sent to the beneficiary notifying him/her of the disbursement of the instalment in his/her account.
Beneficiaries can follow up on their application status online using the application number.

The SCDO also has the option of updating the accounts of the beneficiaries at any time through the ‘Past Data’ function on the portal.

e-Housing also allows the DDO to:

- Create users: JS, DOC, SCDO.
- Assign offices to SCDO and DOCs.
- Assign blocks to SCDO offices.

### Technology

<table>
<thead>
<tr>
<th>System</th>
<th>Web-based, accessible online with back end access through remote desktop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web development</td>
<td>.NET Framework 3.5</td>
</tr>
<tr>
<td>Data management</td>
<td>Microsoft SQL 2005</td>
</tr>
<tr>
<td>Technical expertise</td>
<td>C-DIT</td>
</tr>
<tr>
<td>Data Security</td>
<td>Server hosted at State Data Centre and is protected by its security architecture</td>
</tr>
</tbody>
</table>

### Awareness Generation

The C-DIT provided training on data entry and application processes for the staff in the district offices, SCD offices and directorates. It also created publicity material to popularise the initiative.

In each district of Kerala, two to three days of training is conducted by the C-DIT. The objective is to cover the entire state in a month. Training sessions are carried out reportedly without any resistance from government officials, although the trainers frequently encounter very low levels of IT literacy.

### Monitoring and Evaluation
Project monitoring is carried out by the SCDD itself through the DDO at the district level.

The SC directorate carries out monthly reviews.

Beneficiaries can check details of their application online through the application number generated and can check disbursement details through SMS.

In case of errors in the database, the SCDO can contact C-DIT.

Outcomes and Benefits Realised

Increased convenience for beneficiaries

- In 2011-12, 3500 houses were sanctioned under the Bhavana Nirman Dhanasahayam scheme out of which 416 were completed, while in 2012-13, 5000 houses have been sanctioned. A complete table on the district wise status of the scheme since its inception in 2008-09 is available in Annexure III.

- Money is transferred directly to the beneficiary’s accounts, reducing the scope for corruption and siphoning of funds.

- Beneficiary can now track the status of their application from any point where they can access the internet by logging on to the website, marking a considerable improvement over the previous system which required them to go to the SCDO’s office.

- They are updated about the amount being sent to their accounts through SMS. Since the funds are transferred directly to their accounts and the information can be tracked online, scope for misuse decreases.

Reduction in time taken for processes

The new online system allows the stakeholders to instantaneously transmit information, reducing the overall time taken to one-third of the time taken in the manual system. It has also removed the need for multiple treasury transactions.

Improved transparency and accountability

- All beneficiary details are recorded online and application status is tracked by all officials.

- As the data is digitised it can be accessed online anytime, anywhere.

- All official documents such as the agreement execution, claim sanction and disbursement list have been digitised and are easily accessible online.

---

<http://indiagovernance.gov.in/files/gkc_oneworld_e_housing_project.pdf>
**Enhanced analytic capacity for monitoring and evaluation**

Planners and decision-makers can use the report generation functionality of e-Housing. This enables them to keep track of project implementation progress. The reports are instantly generated and can be used for auditing purposes. As they provide insight into how the system is functioning, they can also be used for improving policies. This enables continuous operational improvement.

- Lastly, in the financial year 2012-13 INR 100 crore has been earmarked for the housing project for further enhancements.

**Challenges in implementation**

Initial challenges faced:

- e-Housing digitised the fund disbursal mechanism. This resulted in a change in the process which beneficiaries had to adopt. Also the change brought in an IT component as beneficiaries could now carry out new functions such as online tracking of applications. This learning curve was handled with the SCDO being the point of contact for beneficiaries. S/he walked them through the new process and helped them with any difficulties faced.

- Providing web-enabled offices at the block and district level with adequate electric connectivity was another challenge.

Current challenges faced:

- A current technical challenge faced is that of connection time-outs. During the month-end when a high volume of reports are generated the server frequently becomes inaccessible and times out.

- Branch Post Offices (BPOs) are unable to handle large amounts of cash. As the disbursement list is drawn for all the beneficiaries who have accounts in that post office, the amount transferred is generally large. As a result payments are generally made from Sub Post Offices (SPOs). In the India Post delivery model, SPOs operate at the village level and BPOs operate at the block/taluka/sub city level. This causes inconvenience to the beneficiaries as they have to travel to the SPO to collect their funds.
**Key lessons**

**Centralised information eases monitoring and evaluation.** The project has transformed the earlier manual process into a digitised one that enables various stakeholders to access the information at all times. Thus, from the demand and supply ends monitoring and evaluation has been improved as various government agencies can audit expenditure and beneficiaries can track their entitlements, all from the same source.

**Continuity in practice eases acceptance.** For the beneficiary the process has changed only in terms of collection of entitlement, where instead of collecting a demand draft the money is transferred directly to their bank accounts. For the officials as well the process has remained the same, thus, ensuring a smooth implementation of the project.

However the project’s strength is also its weakness. It is a standard example of digitisation without process re-engineering. Existing procedures have not been changed, merely digitised. Even official documents have been simply scanned and digitised. The impact of the project could have been larger if it was accompanied by re-engineering which would shorten and rationalise the existing procedure. The number of verifications, for instance, can be clubbed and consolidated so that only one round of verification is required. Further, it can be clarified as to what value addition the verification process gains at each level. If the value addition is marginal, some levels can be simply done away with.

The portal can also include a provision for recording public grievances. The SCs are a community which have faced historical deprivation and even today are the victims of caste discrimination and abuse. Their social position in terms of negotiating corruption is, therefore, even further weakened and an online centralised grievance redressal mechanism where they can track their complaints would be a valuable addition.

The choice of the postal network for banking services is understandable as it has unmatched reach in rural areas in the nation. However, as has been experienced, BPOs are not able to cope with the large amounts of money transferred to them. Beneficiaries, therefore, face the severe inconvenience of travelling to the SPO to collect their funds.

An alternative method which could be used is the Business Correspondent (BC) model. Rather than relying solely on the postal bank network, e-Housing can be integrated with the National Payment Gateway and use an inter-banking framework where fund disbursement is done to whichever bank the beneficiary has an account in. Then using the BC model, banks can expand their reach to rural areas. Beneficiaries can withdraw funds from nearby grocery/kirana stores using the micro-ATM technology of the Aadhaar-enabled DBT mechanism.
As can be seen in Figure 10, the BC model which uses micro-ATM technology is significantly cheaper than transactions carried out at bank branches (referred to as bank tellers) and ATMs. It will also reduce the burden at BPOs and the model can continue. As payments will be processed through the National Payments Gateway, the current problems of crashing servers and the like can also be avoided owing to the much more robust infrastructure available there. Service delivery can, therefore, become more citizen-centric and cost-effective for the provider.

To address the challenge of server time-outs, two solutions can be adopted.

1. **Adjust server configuration to volume of traffic in peak hours**: In this approach, the ‘peak traffic’ is measured. This gives an approximation of the maximum load the server would have handle. Based on that, the server is accordingly configured.

2. **Server instances in the cloud**: Instances of a server can be created on the cloud. This makes the server into a dynamical system that automatically fluctuates the number of instances called into service. So during peak hours load can be more dynamically handled.

As server time-outs is an issue frequently faced by various public as well as portals, these solutions can be mainstreamed into the IT implementation strategy. Peak load can be calculated based on the number of clients, number of transactions and peak transactions time-periods. Based on this data IT requirements can be identified right at the project planning stage and the system can be robustly configured to avoid time-out problems.

**Figure 10: Comparative transaction cost per medium of delivery**

*Source: OneWorld Foundation India, 2013*

**Research methodology**

e-Housing Project has transformed a lengthy, error-prone, non-transparent manual process which was inconvenient for beneficiaries into a quicker and transparent system that is much easier for the beneficiary. It, therefore, deserves to be incorporated into the country’s repertoire of governance knowledge.

In order to document the innovation, the OneWorld research team utilised both primary and secondary sources. The secondary sources comprised of e-Housing user manual available on the portal, previous case studies carried out on the system and press pieces on the scheme itself as well as the e-housing technical upgrade. After identifying gaps in the available literature, the team conducted interviews with Mr. S Devarajan, Additional Director of the Scheduled Caste Development Department and with a programmer from the C-DIT. Data was obtained from the interviewees on the impact, implementation strategy adopted and challenges faced.

**Conclusion**

The e-Housing project has brought about transparency in the fund disbursal of the Bhavana Nirman Dhanasahayam scheme. It has also shortened the time taken in the process. The system could be easily accepted because of the low learning curve required on both the demand and the supply sides, with the implementing agencies using the same process and the beneficiaries no longer having to use demand drafts but having the entire amount transferred in their accounts. The online system has quickened the process.

However, the project is a simple digitisation exercise that could have benefited from the more holistic approach of process re-engineering. Such an exercise would have enabled a shortening and rationalising of the process.
List of Abbreviations

BPO       Branch Post Office
C-DIT     Centre for Development of Imaging Technology
DBT       Direct Benefit Transfer
DD        Demand Draft
DDO       District Development Officer
GO        Government Order
G2C       Government to Citizen
G2G       Government to Government
SCDD      Scheduled Caste Development Department
SCDO      Scheduled Caste Development Officer
SDC       State Data Centre
SPO       Sub Post Office

References


Devarajan, S. Additional director, Scheduled Caste Development Department. Personal interview. 6th March 2013.

Das, Lixon. Programmer, C-DIT. Personal interview. 5th March 2013.

Case fact sheet

Table 4: Demographic profile of Kerala and its comparison with national level data


<table>
<thead>
<tr>
<th>Parameter</th>
<th>Kerala</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>3,33,87,677</td>
<td>1,210,193,422</td>
</tr>
<tr>
<td>Rural</td>
<td>17,455,506</td>
<td>623,724,248</td>
</tr>
<tr>
<td>Urban</td>
<td>15,932,171</td>
<td>586,469,174</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>1071</td>
<td>940</td>
</tr>
<tr>
<td>Density of population per sq km</td>
<td>859</td>
<td>382</td>
</tr>
<tr>
<td>Literacy rate</td>
<td>93.91%</td>
<td>74.04%</td>
</tr>
<tr>
<td>Male</td>
<td>96.02%</td>
<td>82.14%</td>
</tr>
<tr>
<td>Female</td>
<td>91.98%</td>
<td>65.46%</td>
</tr>
<tr>
<td>Population living below poverty line</td>
<td>12%</td>
<td>26.10%</td>
</tr>
<tr>
<td>Scheduled Caste population</td>
<td>3.12 million</td>
<td>166.64 million</td>
</tr>
<tr>
<td>Scheduled Tribe population</td>
<td>0.36 million</td>
<td>84.33 million</td>
</tr>
</tbody>
</table>

I. Sector/field to which the project belongs: Scheduled Caste Welfare

II. Stakeholders and beneficiaries:

i. Stakeholders –
   a. Scheduled Caste Development Department, Government of Kerala
   b. Kerala State Treasury Department, Government of Kerala
   c. Post offices
   d. Akshaya Centres
   e. C-DIT
ii. **Beneficiaries**

   a. Scheduled Caste Welfare Department, Government of Kerala
   b. Scheduled Caste beneficiaries

III. **Calendar of major events:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch of e-Housing</td>
<td>February 2011</td>
</tr>
<tr>
<td>Operationalisation of the project</td>
<td>April 2011</td>
</tr>
</tbody>
</table>

**Questionnaire**

Mr. Devarajan, Additional Director, Scheduled Caste Development Department

**Background**

1. Was there a pilot phase of the project?
   i. If yes, please provide details - purpose, duration, location, finances involved, sources of funding, results, lessons learned, follow-up interventions.

2. What is the geographical outreach of the project?

**Project Design**

3. According to our research, Kerala Scheduled Castes Development Department, C-DIT and specified sections of Scheduled Caste population in Kerala are the primary stakeholders in the project. Are there any other stakeholders involved? If yes, what are their roles and responsibilities?

4. Is there a provision for assisting illiterate applicants who are unable to fill up the application form themselves?

5. After receiving the application and documents from the applicant, what is the procedure adopted for field-level verification of beneficiary by the SCDO?

6. Once the DDO approves the application and sanction order, the case is forwarded to the SCDO to open a Savings Bank Account in a nearby post office. Thereafter, beneficiary and SCDO sign an *automated* e-housing system agreement. How is this done?
7. Are funds transferred online to the accounts of beneficiaries?

**Monitoring and Evaluation**

8. Is there a grievance redressal mechanism in the project? If yes, how does it function?
9. Is there a mechanism to monitor and ensure that payment has been made to the beneficiary?
10. What other steps are taken for monitoring and evaluation?

**Funding**

11. What are the major sources of funding for the project?
12. What was the total cost involved in setting up e-housing?
13. What were/are the primary heads of expenditure under the project? Please provide a breakdown of approximate costs incurred.

**Benefits Realised**

14. What are the primary benefits realized through the project?
15. What has been the impact of the project in terms of the following parameters?
   a. Annual total amount disbursed starting from 2009 till now
   b. Annual number of houses constructed from 2009 till now
   c. Annual number of complaints 2009 till now
   d. Time taken in the process before and after the system was implemented

**Challenges**

16. What were the challenges faced during the initial phases of the project and how were these overcome? What have been the primary challenges faced during project implementation and strategies adopted to overcome them?
17. How are the beneficiaries coping with the new system? What steps are being taken to address any difficulties faced by them?

**Future Additions**

18. Are any enhancements to the project in the planning phase?
19. Has there been any contact from other states to learn from and replicate the e-housing project?
Mr. Lixon Das, C-DIT

**Project Design**

1. The e-housing portal provides for tracking the status of application online. Is it possible for the applicant to check the application status through any other media, like SMS?

**Awareness Generation and Capacity Building**

2. How were beneficiaries made aware of the project and procedures involved? What were the methods adopted, their impact and challenges faced?

3. Since the project involves digitization of information and interaction with technology at various levels, how was the capacity of government officials built to manage the new modes of operating? Please provide details of the training and capacity building exercises organised - resource persons, exact content, methodology, duration, following up mechanisms.

   i. Were any challenges – in terms of capacity and willingness - faced in tech-enabling government officials? If yes, how were these overcome?

4. Were any infrastructural, human resources and hardware enhancements required in government offices in order to effectively implement the project? If yes, please provide details – level and scale of enhancements, costs involved.

**Monitoring and Evaluation**

5. Is there a grievance redressal mechanism in the project? If yes, how does it function?

6. Is there a mechanism to monitor and ensure that payment has been made to the beneficiary?

7. What other steps are taken for monitoring and evaluation?

**Technology**

8. Who maintains and hosts the site?

9. What were the resources (such as time and personnel) utilized for development of the system?

10. The e-housing project involves human intervention to operate technology-based applications at various levels. In this context, how is it ensured that data is not tampered with?
11. Is the data backed up? If yes, how often?

Challenges

12. What are the technical challenges currently faced?

Annexure I: Claim Sanction Order

[Image of Annexure I: Claim Sanction Order]
Annexure II: Final disbursement list

<table>
<thead>
<tr>
<th>Name</th>
<th>Amount (INR)</th>
<th>Bank (DD No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Doe</td>
<td>30000</td>
<td></td>
</tr>
</tbody>
</table>

*Note: The above details are subject to change.*
## Annexure III: District-wise disbursement details of Bhavana Nirmana Dhanasahayam scheme 2008-13

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trivandrum</td>
<td>1760</td>
<td>1544</td>
<td>1428</td>
<td>1372</td>
<td>819</td>
<td>344</td>
<td>330</td>
<td>51</td>
<td>595</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Kollam</td>
<td>1579</td>
<td>1278</td>
<td>1109</td>
<td>731</td>
<td>600</td>
<td>174</td>
<td>231</td>
<td>25</td>
<td>515</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Pathanamthitta</td>
<td>828</td>
<td>720</td>
<td>670</td>
<td>380</td>
<td>400</td>
<td>175</td>
<td>190</td>
<td>12</td>
<td>260</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Alappuzha</td>
<td>915</td>
<td>645</td>
<td>575</td>
<td>317</td>
<td>283</td>
<td>52</td>
<td>160</td>
<td>46</td>
<td>250</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Kottayam</td>
<td>810</td>
<td>739</td>
<td>670</td>
<td>520</td>
<td>450</td>
<td>171</td>
<td>170</td>
<td>30</td>
<td>240</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Idukki</td>
<td>1033</td>
<td>843</td>
<td>799</td>
<td>526</td>
<td>490</td>
<td>93</td>
<td>200</td>
<td>69</td>
<td>265</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Ernakulam</td>
<td>1256</td>
<td>940</td>
<td>1200</td>
<td>777</td>
<td>650</td>
<td>149</td>
<td>220</td>
<td>39</td>
<td>495</td>
<td>34</td>
</tr>
<tr>
<td>8</td>
<td>Trissur</td>
<td>1186</td>
<td>873</td>
<td>1023</td>
<td>905</td>
<td>410</td>
<td>103</td>
<td>400</td>
<td>48</td>
<td>555</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Palakkad</td>
<td>2100</td>
<td>1197</td>
<td>2175</td>
<td>1453</td>
<td>800</td>
<td>210</td>
<td>514</td>
<td>13</td>
<td>690</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Malappuram</td>
<td>976</td>
<td>751</td>
<td>1191</td>
<td>710</td>
<td>550</td>
<td>170</td>
<td>350</td>
<td>7</td>
<td>450</td>
<td>12</td>
</tr>
<tr>
<td>11</td>
<td>Kollam</td>
<td>845</td>
<td>595</td>
<td>857</td>
<td>436</td>
<td>484</td>
<td>94</td>
<td>300</td>
<td>12</td>
<td>320</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Wayanad</td>
<td>886</td>
<td>156</td>
<td>280</td>
<td>202</td>
<td>175</td>
<td>57</td>
<td>100</td>
<td>30</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Kasargod</td>
<td>465</td>
<td>345</td>
<td>270</td>
<td>121</td>
<td>350</td>
<td>65</td>
<td>160</td>
<td>11</td>
<td>160</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Kasargod</td>
<td>562</td>
<td>497</td>
<td>349</td>
<td>343</td>
<td>500</td>
<td>293</td>
<td>176</td>
<td>33</td>
<td>145</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14501</strong></td>
<td><strong>11770</strong></td>
<td><strong>12753</strong></td>
<td><strong>8451</strong></td>
<td><strong>7021</strong></td>
<td><strong>2100</strong></td>
<td><strong>3500</strong></td>
<td><strong>416</strong></td>
<td><strong>5000</strong></td>
<td><strong>86</strong></td>
</tr>
</tbody>
</table>

Source: SC development Department
Hyderabad
YSR Bhavan, Financial District, Nanakramguda,
Hyderabad - 500032
Telangana, India.
Ph: 040-66545352, Fax: 040-66545300

Delhi
Mahanagar Door Sanchar Sadan, 9, CGO Complex,
Residential Complex,
1st floor New Delhi-110003
Ph: +91-11-24321445, Fax: +91-11-24321444
Website: www.nisg.org

National e-Governance Division
Department of Electronics and Information Technology (DeitY)
Ministry of Communications & Information Technology
(Government of India)
Electronics Niketan, 6, CGO Complex,
Lodhi Road, New Delhi- 110 003
India
Ph. +91-11-30481624
Website: www.negp.gov.in