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ASSESSMENT-CUM-EVALUATION OF MAHITI SHAKTI PROJECT IN PANCHMAHALS DISTRICT OF GUJARAT

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Capacity building of the government employees is crucial for effectiveness of a change of such high scale. Though some attempts have been made to help government employees prepare themselves to embrace the change, more efforts need to be put in.

The Mahiti Shakti Project has proposed revenue-based model of e-Governance in which MSK operators are expected to generate revenue through the sale of forms or other information. This calls for providing good support to MSK operators. Most of the functional MSKs have advantages such as location, multiple businesses as well as positive and user-friendly attitude of the MSK operators, good rapport with the government officers, etc.

There are a few MSKs that are classified as partially functional in this aspect. These MSKs could be activated through technical support, and training of MSK operators in the areas of advertising and marketing of MSK services, customer-orientation, etc.

Saving in travel time and money for visiting government offices, unavailability of forms or concerned officers at government offices, easy access to forms and other useful information, and helpful approach of the MSK operator in filling up application forms were some of the reasons given by the users for the use of MSKs for information. However, there is a large majority of the citizens who need to be made aware about the project and the services provided through the project.

Thus, Mahit Shakti Project has attempted to provide access to government information and services to citizens through MSKs spread into all the talukas of the Panchmahals district. It has tried to reach out to citizens through MSKs. However, there are a number of areas that call for improvement before the project is further scaled up.

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In India, several e-governance projects have been initiated by state as well as central governments for e-enabling government offices in metros to talukas as well as remote village level government offices. The projects of e-governance ranged from focusing on provision of single service or services of one department to provision of multiple services of a department as well as integrated model involving several departments and their services. For example, in Karnataka, which is about land records computerisation, whereas TWINS (Twin Cities Network Services) in Andhra Pradesh is more of an integrated model created for providing the citizens of twin cities of Hyderabad and Secunderabad, selected services and information of departments and agencies of State and Central Governments.[1]

Mahiti Shakti Project has been planned and implemented by the Government of Gujarat in the context of enabling policy environment for promoting e-governance. Over the years, the Gujarat government has initiated several e-governance activities in the form of electronic documentation and information exchange, information and service delivery to citizens, process automation, and computerisations on a small scale in various government departments, district offices, Comissionerates, etc. However, it was the new IT policy, introduced by the Government of Gujarat in 1999 that provided major impetus to e-governance initiatives in the state. Through collaborative efforts of the Gujarat Informatics Limited (GIL), National Informatics Centre (NIC) and Gujarat Geographic Information System (RESECO), the government has introduced several e-governance initiatives, such as Citizen Charter – the Vadodara Model, Land Record Computerisation, Gujarat Geographic Information System (GGIS) – RESECO, and Gujarat State Wide Area Network (GSWAN). In addition, computerisation of the processes of various government departments has also been undertaken in a phased manner. Mahiti Shakti Project, implemented in Panchmahals district since October 2000, could be seen as the next significant step to enhance transparency in government functioning and offices, while offering improved delivery of information and services to the citizens (See Figure 1 for project location).

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[1] Refer to the "Study report on Status of Computerisation in Andhra Pradesh, Karnataka and Maharashtra," prepared by delegation of the state government of Uttar Pradesh (http://upgov.up.nic.in/infotech/VISIT_REPORT.pdf).

1.1 Evaluation Objectives

The overall objective of the Mahiti Shakti Project is to offer the citizens, particularly rural citizens an improved access to government information and services. The project also envisaged to enhance transparency and accountability in government functioning, while improving service delivery. Evaluation objectives of the study are based on project goal and objectives.

Key research questions of the evaluation study are:

- To what extent has the Mahiti Shakti Project in Panchmahals district succeeded in promoting e-governance through Citizens Services Portal and Mahiti Shakti Kendras (MSKs)?

- To what extent the Mahiti Shakti Project has provided the citizens easy access to relevant information and services?

- What are the key strengths and weaknesses of the e-governance model of the Mahiti Shakti Project? To what extent is the project sustainable?

Specifically, evaluation focused on understanding the following:

- Effectiveness of the district administration in improving the dissemination of government information and delivering of services to the citizens,

- The process of Citizens Services Portal development and management, and the type of information and services provided by the Citizens Services Portal,

- Effectiveness of MSKs in providing citizens access to information and services, and

- Use of MSKs by the citizens.

2.0 METHODOLOGICAL APPROACH

Assessment-cum-Evaluation study of the Mahiti Shakti Project in the Panchmahals District is based on eclectic methodological approach that combined quantitative and qualitative methods of data collection, such as structured questionnaire, in-depth interviews, focus group discussions, and review of existing secondary sources of information. Data collection was undertaken at various levels, such as, the district, MSKs and the citizens (users and non-users). The study was conducted during February – May 2003. This section highlights strategy the strategy used for data collection.

2.1 Understanding Project Framework and the Institutional Context

First we attempted to understand project framework, we reviewed secondary sources of information, mostly project-related documents and materials, provided by the district administration. Furthermore, to understand how this pilot project of e-governance was conceptualised, designed, and planned, we interviewed key informants from stakeholder organisations and agencies, such as the Centre for E-governance (Indian Institute of Management, Ahmedabad), Adit Microsys, and available district officers from various government departments, who have been actively involved in project planning and/or implementation (see Appendix 1).

Furthermore, to understand the institutional and contextual factors that influenced and affected the project implementation, we collected information from government officers from various line departments involved in the project with the help of an interview guidelines on the following aspects:

- Role played by the department in content development, capacity building, promotion/canvassing of the project and as service provider to the citizens,
- Degree of computerisation in the department,
- Capacity building of the staff in terms of preparing the mindset, providing computer training (Basic, context specific and hardware related), and
- Problems and limitations experienced by them.

also analysed to understand the type of information and services provided to the citizens through the portal, and the extent to which such content contributes to enhancing transparency in governance. In addition, some of the statistics on the use of portal from Internet were also analysed on the basis of portal access log.

2.3 Selection of MSKs and Users

To provide rural citizens improved access to government information on schemes and services, about 77 MSKs have been set-up under the project. Of which, 52 MSKs are allocated to private operators and 25 to dairy cooperative societies. A quick review of the location of the MSKs revealed uneven distribution of MSKs across urban and rural areas and talukas. MSKs of private operators are concentrated in urban areas, particularly in Godhara and Lunawada talukas, while those of dairy cooperatives are found only in rural areas (Table 1). Although MSKs of private operators are distributed across 11 talukas of Panchmahals district, 60 per cent of MSKs are in Godhara and Lunawada talukas. No systematic information was available on the operational status of MSKs. However, discussion with the concerned district officer gave some clues about the existing status of MSKs. It revealed that most of the MSKs of dairy cooperatives were not functional due to lack of upgradation of infrastructure, however, 15 out of 25 were expected to be functional. We decided to select a smaller sample of MSKs to assess how MSKs were run by the dairy cooperatives.

MSKs. Data was collected through on-site visits to MSKs and in-depth interview with MSK operator with the help of structured schedule.

For the evaluation study, we proposed to interview users of MSKs. In the absence of data on users of MSKs and non-functioning of some of the MSKs, it was very difficult to trace the users at the time of our visits. However, we interviewed 16 users and held group discussions in two villages (Mehlol and Bedla) with the citizens regarding their awareness about the MSK and its services.

visited a village, a woman from the village narrated the difficulties she faced in getting her work done in government offices. It was due to the officer's intervention that the rural woman's work was done and she blessed the officer that she be a village level government officer to help the needy and the poor. It was the then collector's motivation and techno-savvy attitude that is at the roots of this project. As it becomes apparent from the discussions with the various government officers, it was due to her motivation and determination that the collectorate could bring together various line departments, a reputed academic institute and several state level agencies to successfully spearhead the pilot project in its initial phase.

Another salient feature of the project is the involvement of the already established strong network of dairy cooperative societies in the district. Some of the reasons for involvement of DSCs in the project are:

- Already existing network,
- Availability of computers, and
- Reduced social or gender restriction as the milk producers (men and women, members from all the castes) regularly visit the DCS for pouring milk.

This also indicates that at conceptualisation phase, the project scanned the environment for existing strengths and opportunities.

3.2 Project Goals and Objectives

The project goals were set as enhancing **transparency** through periodic display of the progress/status of government schemes and plans, provide citizens **right to information** by enhancing their access to government information and services, and **demystifying the government office** by creating due support and access mechanisms for the citizens.

The specific objectives of the project were to ensure immediate access to government information, facilitate electronic/online information exchange, create online grievance redressal system, and provide other useful information collected/complied by NGOs.

- Photo gallery
- Entertainment like music, magazine, other useful internet sites

The pilot project was launched in Panchmahals district by the District Collectorate on October 4, 2001. Key features of the project as envisaged are: **direct citizen interface, uninterrupted project implementation, reduced paper work** for citizens as well as government officials and **services availability on 24 x 7 x 365 basis**.

The project was visualised to:

- Provide maximum reach with minimum cost: Make information easily accessible to the citizens from urban, rural and tribal areas of Panchmahals district by charging minimum fees.

- Have in-built sustainability: Create an e-governance trust under the chairmanship of the district collector with DSP, DDO, district registrar of cooperative societies, and district treasury officer as members with the project nodal officer as the member secretary. It was also envisaged that each MSK operator would pay an empanelment fee of Rs. 8000/- and will be provided services such as training for capacity building, CD containing the portal data, online and onsite help (chargeable) and manual and literature in local language on access and effective utilisation of the portal.

- Be a mechanism to empower the citizens: Panchmahals district is one of the backward districts of Gujarat with significant tribal population. The pilot project was designed to set up 80 MSKs across the district to cater to the needs of the 20.24 lakh citizens in six towns and 1212 villages.

3.4 Operationalisation

Operationalisation of any project is the backbone of its success. Figure 2 depicts the overall project framework and its operationalisation.

citizens as Mahiti Shakti Kendra owners. In the project framework, private Mahiti Shakti Kendra (MSK) owners are depicted as an important player (see Figure 2). The MSKs would access the information from the CSP or CD of the portal to provide various government information/services to the rural and urban citizens. Using the Internet, MSKs would also provide on-line application facilities to the citizens. The Internet Service Provider (ISP) would also play a crucial role in this information exchange. Through GSWAN, the District Collectorate and other government offices would also be connected to the portal to receive the on-line applications through the control room at the District Collectorate.

3.5 Role of the Government

The state government was to provide necessary permissions from various departments to:

- Enable downloading, printing and selling of forms at a cost not exceeding the prescribed cost;
- Placing in public domain various information and data useful for the citizens;
- Set up e-governance trust to monitor and review proper and sustainable implementation of the project, and collect empanelment fee from MSKs to cover operational cost for maintaining and updating the portal on a sustainable basis.
- Allow the online submission and subsequent processing of various forms and applications through MSKs.

3.6 E-Governance Trust

In order to ensure sustainability of the project, an E-Governance trust is set up under the chairmanship of the Collector Panchmahals. The empanelment fee collected from the MSKs has been put into a corpus of the trust. In return for the empanelment fee, the trust is to provide services such as training on use of the facilities under Mahiti Shakti Project, familiarisation with forms and other information, CSP data CD, online and on site help

4.0 THE INSTITUTIONAL CONTEXT

For effective implementation of an e-governance project, convergence of various institutional factors is necessary. Having looked at the framework of the project that was envisaged and has trickled down the hierarchy, we examine the institutional context of the project in this section. This section broadly discusses contextual factors such as contribution of each of the concerned government departments in terms of information collection for the CSP, capacity building programmes as well as promotion and publicity efforts. This section also examines the status of computerisation, capacity building of the government officials. Towards the end, we also discuss some of the problems which need to be addressed in order to ensure that the institutional context is complimentary to the project framework.

4.1 Role Played by Line Departments

As envisaged during the project conceptualisation, various government departments within the district were to contribute to the project implementation in a number of ways. This includes, collecting/providing information for the portal, facilitating the capacity building programmes and promoting/publicising the project. In this section we examine the role played by the line departments in project implementation.

4.1.1 Information Collection and Dissemination for the CSP

Based on the information collected through interviews with various government officials/their representatives, it was evident that each department/section was expected to compile the information update for CSP and make it available to the Collectorate employee in the land Records Computerisation (LRC) section, Godhra for overall compilation. From LRC, the information is furnished to Adit Microsys, Ahmedabad – the agency providing technical support for the project. The following diagram depicts the information flow in the project.

4.1.3 Promotion/Publicity for the Project

For any project of this nature to be effective, it is important that the customers (citizens, in this case) are made aware of the project and its services, benefits that they can avail etc. Based on the data collected from various departments/offices, one can conclude that collectorate and the District Information Office have played major role for promotion and publicity of the projects. The efforts include, preparation of print material such as posters and other shop display material, Radio Speech, Press Notes etc.

4.2 Status of Computerisation

Computerisation is the foundation of an e-governance project. While assessing the effectiveness of e-governance, it is essential to assess the status of computerisation in that unit of governance, be it Central, State or District government. In the context of Mahiti Shakti Project, we have studied computerisation at two levels. At the state level, it is the Gujarat State Wide Area Network (GSWAN), which provides connectivity within the district as well as with the state offices. At district level, it is office computerisation as well as the GSWAN connectivity.

In order to assess the status of computerisation in the Panchmahals, during our visits to various government offices we also inquired about computerisation. In this section we present our findings about the status of computerisation in terms of office computerisation and GSWAN connectivity.

Gujarat State Wide Area Network (GSWAN), a three-tier network built by Gujarat Government to provide reliable horizontal and vertical communication linkages between Secretariat Campus Area Network (SCAN) at Gandhinagar, district headquarters and taluka headquarters.[5] With a dedicated fibre optic line, it provides data, voice and video connectivity. Mahiti Shakti Project envisaged to use GSWAN infrastructure in the Panchmahals district for dissemination of information and centralising the administration of various

[5] For detailed information on GSWAN refer to: Government of Gujarat. "GUJARAT STATE WIDE AREA NETWORK (GSWAN): Gujarat State's E-Governance vehicle with a State-of-the-Art Converged Network" at http://www.gujaratindia.com/e-governance/gswan.pdf.

provided soon to all the concerned officers. Even then, it would be necessary to build capacity of the staff to handle operations related to the Mahiti Shakti project. It is equally important to change their mindset to use the computers.

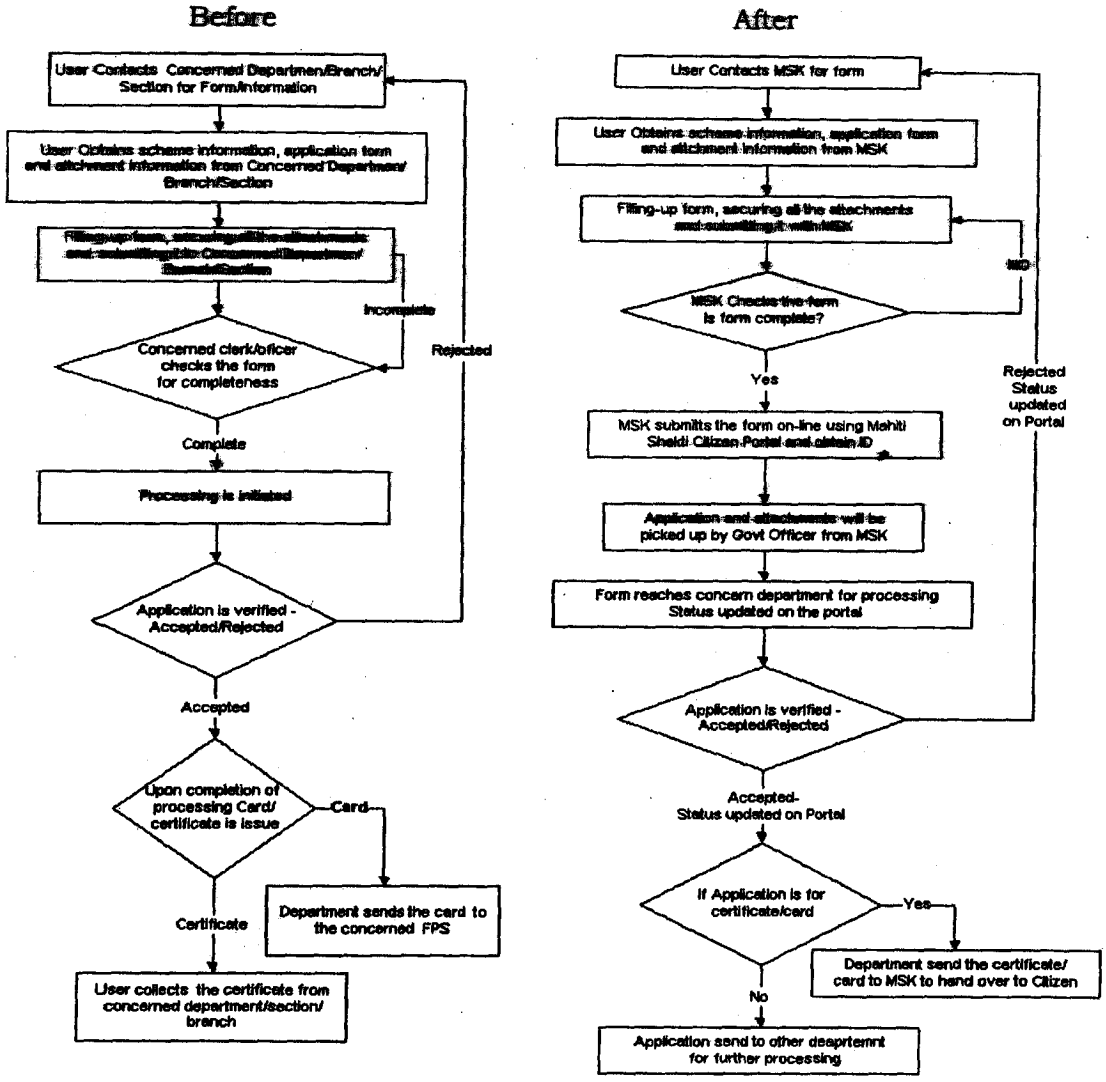
4.3 Capacity Building of the Government Employees

Any project of this nature is a major change not only for the government and citizens but also for the employees who have to make it successful. For effectively managing this change, capacity-building of the employees is a crucial factor. Capacity building for this particular project is in terms of preparing the mindset and providing computer training (basic, context specific and hardware related).

Based on the information provided by officers from various line departments and sections, it appears that training for preparing the employee mindset was made available only to the employees of the Collectorate. The training attended by these employees focused on topics ranging from understanding and managing one's own behaviour (perception, active listening, self management) to understanding one's interaction with others (interpersonal skills, transaction analysis, team building, conflict management) to understanding macro issues such as services marketing, quality management, office management. However, the training was imparted only to employees in cadres of clerks and deputy *mamlatdars* in the Collectorate and its sub-offices. None of the employees from the other cadres from the Collectorate or none of the employees from the other departments were provided any such training.

Basic training for computer operation was provided to most of the employees. The major focus of such training has been on familiarising participants with using the MS Office namely Word, Excel and Power Point. The module also familiarised them with using Internet and e-mail. Some of the employees have also been provided advance computer skills training. In the departments that we visited it was apparent that wherever there is a computer, there are some employees who are using it. But the use is limited to word processing and at times computation. It was also evident that no training was provided to employees to familiarise them with

Figure 3 Process of application movement before and after the Project Implementation



The information presented in the flow charts indicate that the process followed before and after the project implementation are not much different. The only difference in the post implementation phase is that instead of the concerned office it is the MSK operator who provides the application as well as relevant information. It also indicates that no real re-engineering of the process has taken place except for mechanical computerisation of various forms. So the project has succeeded in saving time and money spent by citizens traveling to the concerned department. But except that it does not facilitate reduction in actual processing time.

environment within the District Collectorate and the line departments for promoting e-governance.

for the portal CEG team also held discussions with the concerned resource persons from each district department. Initially, some of the district officials were resistant to share forms related to various schemes and put them on the portal as they were not interested in loosening their control over dissemination of relevant government information to the citizens. However, with the interventions of the District Collector, district officials agreed to make forms available on the Mahiti Shakti portal. Thus, the concerned district officials from these departments identified information from their departments for the portal. The CEG team also convened a meeting of some of the well-known NGOs, such as Uthan, Development Support Centre (DSC) and Sadguru Foundation operating in Panchmahal district, to identify more information for the portal. At the same time, the Collector of Panchmahals district conducted a Participatory Rural Appraisal (PRA) exercise in 13 villages, located in different talukas, with the help of local NGOs and government agencies in order to identify information needs of rural citizens, and prioritise the information services to be offered to the citizens through the portal.

The PRA exercise revealed that citizens need information related to their livelihoods, employment opportunities, best practices in agriculture and animal husbandry, drought management, etc. The collector also ensured that the concerned government departments provide the latest information about their services to citizens from time to time, and also facilitate the acceptance of forms, which would be submitted online.

Information identified for the portal was in the printed form and voluminous in nature. Immediate task for the CEG team was to convert voluminous information into electronic form. The Collector's office provided the data entry operator who entered the collected information into computer. Once content was ready in electronic form, CEG team arranged it into meaningful categories, and formatted web pages into attractive Hyper Text Markup Language (HTML). It took the CEG-IIMA team six months (May – October 2001) to identify, collect and format information useful to the citizens and put the content on the Mahiti Shakti Portal. All this consolidated efforts resulted in a first version of Mahiti Shakti portal, which rolled out in October 2001.

5.3 Content of Mahiti Shakti Portal

The project envisaged a portal providing a single window and single source to citizens for all relevant government information and services. To facilitate the Citizen-to-Government (C2G) transactions, the Mahiti Shakti portal has made available voluminous information on the portal. In comparison to initial version the information has increased multi-fold on the portal (Table 5.1).

5.3.1 Types of Information and Services

MSK operators or citizens can access the relevant information or forms by navigating through the pages on the portal or CD. Content of portal has grown substantially since the pilot phase (October 2001). A review of portal content in April 2003 shows that the portal has more than 1500 web pages in Gujarati, 100 downloadable forms, information on 99 schemes and 175 citizen charters, covering about 22 departments/section. It also has two online application forms and facilities for sending grievances. Mahiti Shakti Portal content could be broadly divided into two types of information: static information, which is not changed frequently, and dynamic information that requires regular upgradation and should be up-to-date.

The CSP provides a single window to all relevant government information and services. To facilitate Citizens-to -Government transactions, the CSP has made the following information and services available (Table 5.2 and 5.3):

5.3.1.1 Government Departments

On the Mahiti Shakti Citizen Service Portal (CSP) detailed information about 22 Government departments and sections, working in Panchmahals District are provided (Table 5.2) It provides useful information about government departments/sections such as their introduction, functioning, area in which they operate, list of officers etc. Such information is mostly static and not changed frequently.

application to the MSK operators and citizens: accepted, in-progress, and rejected. No other details (dates, reasons for rejection, etc.) are conveyed by the concerned department on these applications. Once these applications reached the District Collectorate at Godhra, then it is handled manually as per the earlier procedures.

5.3.1.6 Useful Information to the People

Under the section on 'Useful Information to the Citizens", the CSP also has made available general information, specifically district-specific information, under 15 categories. It contains information on Panchmahals district, such as languages and religions, geographical and physical features, fairs and festivals, tribal culture, trade and commerce, etc., maps with locations of various essential services, important telephone numbers of various departments/facilities, railway timetable, medical information (list of doctors and medical facilities), important websites, legal advice and aids, photo gallery, pin code information, information about the computer, list of journalists, list of clubs, and list of BPL families, second schools, and list of Panchyats/sarpanchs.

Such information could be useful to the citizens if it is relevant. However, most of the information included under this section are dynamic in nature and require continuous upgradation.

5.3.1.7 Performance of Government Departments

Information on performance of a few government departments was available only on the portal only during the pilot phase. This section displayed some information, pertaining to the performance of some of the departments at the state and district levels. It provided statistics on some of the schemes, financial and physical targets for DRDA and civil supply department. However this section was not available on the portal in April 2003. As such information enhances transparency of the system, there is a need to put this section back on the portal, and provide such information for more schemes and departments.

In summary, a quick review of the content of the portal reveals that the portal contains voluminous information on the government departments,

forms. Use of other websites was limited. These websites attracted viewers either due to their content or design.

Table 3: Patterns of Use of Citizens Services Portal

Description	Number
Hits	
Entire Site	2,97,686
Average Per Day	528
Page Views	
Page Views	1,55,437
Average per Day	282
Visitor Session	
Visitor Session	21,426
Average Per Day	38

The access log also shed light on which documents and files were accessed the most by the users. A cursory look at the data shows that 55.52 per cent of the views were related to various websites, of which 46.43 per cent views were on pages related to layout/design of the content, i.e. pages such as index, headers, footers, middle, etc., and 9.09 per cent views were on the various websites (Table 5.3). Among most frequently used websites, maximum hits were on the websites related to government departments and forms. Use of other websites was limited. These websites attracted viewers either due to their content or design.

Which were most downloaded files from the portal? Table 5.7 shows that uses of the portal are most interested in getting information on development work planned by the District Planning Unit, and on some the forms for the ration card, old age pension scheme, and Prime Minister scheme for the unemployed citizens.

Table 6: Status of the content on Citizen Service Portal

No	Name of the Department / Sections / Scheme	Information			
		Schemes	Forms	Attachments of Forms	Citizen Charter
1	**Collector Office**				
	1. Flood Control /Disaster Relief Section	1	0	1	1
	2. Public Relation Section	0	0	0	0
	3. Extra Chitnis Section	13	6	13	13
	4. Small Saving Section	1	0	1	1
	5. Land Record Section	15	0	15	15
	6. Mid-day Meal Section	1	0	1	0
	7. Others	0	11	0	0
	Total	**23**	**17**	**23**	**23**
2	**Sub-Divisional Office**	**2**	**3**	**2**	**2**
3	**Gram Panchyat**	**0**	**0**	**0**	**0**
4	**Taluka Panchyat**	**0**	**0**	**0**	**0**
5	**Zilla Panchyat**				
	1. Agriculture Section	17	0	2	5
	2. Public Health Section	7	0	7	7
	3. Animal Husbandry Section	8	0	5	5
	Total	**32**	**0**	**14**	**17**
6	**District Rural Development Agency (DRDA)**				
	1. S.G.S.Y.	1	4	0	2
	2. J.G.S.Y.	1	0	0	1
	3. Gokul Gram Yojana	1	0	0	1
	4. Panchyati Raj	1	0	0	0
	5. Employment Assurance Scheme	1	0	0	1
	6. Rajiv Gandhi Drinking Water Mission	1	0	0	0
	7. I.A.Y. (New Houses)	1	3	1	1
	8. I.A.Y. (Upgrdation)	1	0	1	1
	9. Loan / Subsidy for Rural House	1	0	0	0
	10. National Social Security Aids Programme	1	0	0	0
	11. National Rural Sanitary programme	1	0	0	0
	12. Scarcity Relief Programme	1	0	0	0
	13. Desert Development Programme	1	0	0	0
	14. Land Prevention and Development Programme	1	0	0	0
	15. Land Reforms Programme	1	0	0	0
	16. Rural Technology Development Committee	1	0	0	0
	17. Watershed Development Scheme	1	0	0	1
	18. Others	1	1	0	3
	Total	**17**	**8**	**2**	**11**
7	**District Planning Cell**	**0**	**0**	**0**	**0**
8	**Road Transport Office**	**0**	**13**	**13**	**0**
9	**Police Section**	**0**	**0**	**0**	**0**
10	**Social Forestry**	**0**	**3**	**21**	**21**
11	**Tribal Area Sub-Scheme**	**0**	**2**	**2**	**0**

Table 7: Content of Useful Information on the Citizens Services Portal

No	Title of the Content	Information available under the category of "Useful Information to the Citizens"
1	Useful Information about Panchmahal District	1. Location Area, 2. History 3. Population 4. Languages and Religion 5. Geographical and Physical features 6. Towns, Villages and Amenities 7. Fairs and Festivals 8. Industries 9. Important Industries, 1996 10. Trade, Commerce and Export 11. Education 12. University And Colleges, 1996
2	Maps of Panchmahal District and Godhra, Halol, Jambughoda, Kalol, Lunawada, Shehra talukas	1. Primary Schools 2. Secondary School 3. Higher Secondary School 4. Primary Health Centre 5. Community Health Centre 6. Labour Rooms 7. Business Opportunities 8. Police Station 9. Nutrition Programme 10. Rural Electrification 11. Irrigation Facility 12. Drinking Water Facility 13. Primary Animal Health Centre 14. Anima Dispensary 15. Veterinary Doctor 16. Cooperative Bank 17. Land Development Bank 18. Rural Development Bank
3	Important Telephone Numbers for Various Departments/ Facilities available in the Panchmahal District	1. Collector Office 2. Sub-Division Offices 3. Mamlatdar Offices 4. Zilla Panchyat 5. Police Department 6. Municipalities 7. Rest House / Circuit House 8. Gujarat Electricity Board 9. Telephone Department 10. State Transport Section 11. Water Supply Department 12. Cinema, Travel, Gas Agencies 13. Range Forest Conservator's Office 14. Important Services 15. Government Hospitals
4	Railway Time Table	Link has been provided to various Railway Web Sites to get time table and other passenger information. The linked URLs are: 1. http://www.westernrailwayindia.com 2. http://www.indianrail.gov.in 3. http://www.wrheritage.com Most of the links are not working

No	Title of the Content	Information available under the category of "Useful Information to the Citizens"
5	Medical Information List of doctors and medical facilities/services available in Panchmahal District	1. Specialisation wise list of private doctors 2. Blood donors list 3. General Medical Services available in Hospital 4. List of doctors attached with Government 5. List of Medical officer working in Government Hospitals 6. List of Specialist Doctors attached with Govt. Hospitals
6	Important Web Site List of Important Web Site 1. www.gujaratindia.com 2. www.talimrojgar.org 3. www.nic.in 4. www.gseb.com 5. www.indianrail.gov.in 6. www.bsnl.co.in 7. www.eci.gov.in 8. passport.nic.in 9. www.agmarknet.nic.in 10. www.navneet.com	Other list of Important Web Sites available following categories with number of links in each category: 1. Gujarat Government – 12 2. Central Government – 48 3. Web Site related to Gujarat State – 55 4. News – 16 5. Useful for Agriculture – 0 6. Journals – 9 7. Education – 16 8. Sports – 10 9. Entertainment– 10 10. Religious– 3 11. Travel– 8 12. For Children– 7 13. For NGO– 7 14. Political Parties– 14 15. Governmental Organisation – 36 16. Government of India – 37 17. UN and Related Agencies – 6 18. Other Website – 11 Total – 315 Links
7	Legal Advice and Aid Information on Free legal aids and services provided by Gujarat State Legal Service Authority.	1. Application form, 2. Frequently asked questions, 3. Contact information, 4. Legal services authority sub-act, 5. Public declaration, 6. Information about agencies working for social justice.

Table 8: Information and Options Available for Online Application at the CSP

Sl. No	Options Available under the Section on "Online Application"
1	Application form for Old Age Pension Scheme
2	Application form for New Ration Card /Make Change in Existing Ration Card
3	Form for application to RTO
4	Form for getting water tanker in scarcity
5	Form for getting Caste Certificate
6	Complaint Handling 1. Form for the complain related to well 2. Form for the complain related to hand-pump 3. Form for the complain related to pipe-line 4. Form for the complain related to water supply

6. THE STATUS OF MAHITI SHAKTI KENDRAS

Mahiti Shakti Kendras (MSKs) are a critical link between citizens who seek government information and services, and the government who provides them either through Citizens Services Portal or the CD of this portal. There are two types of MSKs, those, which are allocated to private operators, and those which are run in dairy cooperatives. The project claims to have 52 MSKs of private operators, 25 MSKs in dairy cooperatives. For the study we selected 23 MSKs of private operators and 6 MSKs from dairy cooperatives. What is the status of MSKs in each category? How effectively are they run? To what extent are they sustainable? These are some of the questions addressed in this section, which gives an overview of MSKs located in different settings on the basis of interviews with MSK owners/operators, and on-site observations of MSKs.

6.1 MSKs of Private Operators

The major thrust of the Mahiti Shakti Project has been to promote e-governance through MSKs, operated by the private entrepreneurs. The project envisaged to facilitate citizens' access to government information and services through the MSKs. This section shed light on the status of computerisation in these MSKs and the extent to which they had succeeded in reaching the rural masses.

6.1.1 Computerisation of MSKs

MSKs require adequate infrastructure and equipment to provide relevant government information and services to citizens. Similarly, technical support and maintenance, Internet connectivity and computer training are equally important so that MSKs could provide uninterrupted services. This section examines the status of computerisation in MSKs run by the private operators.

6.1.1.1 Infrastructure and Equipments

What kind of technical infrastructure and equipments are available at the MSKs? A cursory review of the availability of technical infrastructure at the

fluctuations and spikes from damaging computer systems and if power supply fails then it continues to supply power from its battery without interruption for the time duration specified in its specification. Thus, UPS could be very useful to the MSKs affected by power crisis. However, given the high price of UPS (Rs. 3000- Rs. 5000), these may not be affordable for all the MSKs.

6.1.1.2 Computer System and Peripherals

The computer system with adequate configuration and peripherals is necessary for the MSKs to access government information from the portal or CD and print it. Details on the computer system were available for all 23 MSKs except one MSK in Lunawada where the computer system was not available at the MSK at the time of our visit. An analysis of the computer system available for the selected MSKs of private operators shows that 21 out of 23 MSKs were equipped with the computer systems with adequate configurations. The computer systems installed at these MSKs ranged from Celetron to Pentium IV based CPU. The main memory of these computer systems ranged from 32 to 256 MB, while hard disk space varied from 4.3 to 43 GB. Most of the computers also had a CD drive and a colour monitor. Majority of the MSKs had the assembled computer systems, supplied by small vendors from Godhra, Lunawada and Halol. Performance of the MSK could be adversely affected, if the assembled computer has low quality components.

Table 12: Details on the Printers Available at MSKs

Printer Brand	No of MSKs
HP	14
EPSON	4
OTHER	2
Printer Type	**No of MSKs**
Laser Jet	4
Ink Jet	8
Dot Matrix	6
Ink Jet & Dot Matrix	2

In addition to the computer system and printer, a few computers were connected with the speakers and microphones. Some of them also had other equipments, such as optical scanner, video editing cards, CD-writer, and advanced packages, like video editing software, astrology software, financial accounting software, and so on. Fifteen MSKs also had modems, which were used for accessing the Internet. The MSK operators used them to generate extra income.

6.1.1.3 Technical and Maintenance Support

Services offered by the MSKs depend on the efficient functioning of the equipments, which require good technical and maintenance support. However, only 9 MSKs had received comprehensive maintenance support, in the form of one-year warranty from the vendors, who were mostly small suppliers or assemblers of computers. Once the warranty period expired, some of them opted for self-maintenance of the computer. On the other hand, 14 MSKs did not have any assured maintenance support or arrangements from the local vendors. They used local technicians, if available, from the nearby towns. Non-availability of sustained technical and maintenance support, particularly in rural areas, adversely affected the functioning of MSKs.

Downloading of Gujarati fonts from the CSP or CD into the MSK computer was necessary to read the content from the portal/CD. However, it was also observed that some of the MSK operators found it difficult to install Gujarati

ratio of Internet connectivity was low in MSKs, which were partially functional or non-functional (Table 13). Ability to provide more recent information from Mahiti Shakti Portal and submit on-line applications appear to have some bearing on effective functioning of the MSKs. However, 11 out of 15 MSKs operators.

Table 13: The Operational Status of MSKs and Internet Connectivity

Sr. No.	MSK Status	Internet Connectivity				Total
		Available			Not Available	
		BSNL Godhra	Satyam Vadodara	Total		
1	Functional	8	0	8	1	9
2	Partially Functional	2	1	3	3	6
3	Not Functional	3	1	4	4	8
	Total	13	2	15	8	23

complained about poor performance of Internet connectivity in the MSKs. They reported that while accessing the Mahiti Shakti Portal or other websites on the Internet, their Internet connection is frequently terminated in the middle of a session. This problem made it difficult to use Internet in an effective and sustained way for the Mahiti Shakti project. Poor Internet connectivity could be due to high noise on the telephone line or inferior quality of the modem used
by MSKs. District office had not made any efforts to address this problem.

6.1.1.5 Computer Training

MSK operators are required to use the computer to access government information and services either from the Mahiti Shakti Portal or from the CD. Hence, they should have minimum working knowledge and skills to operate the computer system in order to download and print information requested by citizens. Preceding discussion shows that by and large MSKs were equipped with necessary hardware and equipments. However, had the

adequate technical and maintenance support were key constraints, particularly for MSKs in rural areas, to effectively run the MSKs.

6.1.2 Profile of MSK Operators

Successful implementation of Mahiti Shakti project is based on the know-how and skills of MSK operators. Hence, it is important to understand their profile. This section examines demographic profile of MSK owners/operators, their motivation for starting the MSK and efforts made by the District Collectorate to build their capabilities for effectively managing the MSKs.

6.1.2.1 Demographic Profile

Who runs the MSKs? MSKs were run by educated young men, most of whom were in their 20s and had received secondary/higher secondary education (See Table 14). Only five out of 23 operators were graduates and one held a diploma in engineering and another one had passed ITI. Except one MSK operator who depended on agriculture as the main source of livelihoods, all the MSK operators were engaged in non-farm occupations. Running STD-PCO was the main economic activity of 11 out of 23 MSK operators; eight out of these 11 were from urban areas. While small business or shop was the main source of income for 6 MSK operators and 5 MSK operators were involved in service occupation.

it from multiple sources, such as government officers and MSK operators or the District Collectorate and print advertisements.

Most of the operators (12 out of 23) decided to operate the MSK in their existing business set-up to supplement their income. For four MSK operators (two from rural areas and one from urban area), extending services to the people was the main reason for starting the MSK. The remaining seven operators viewed MSKs as a means to supplement their income, while providing services to the people.

6.1.2.3 Capacity-Building

Except one MSK operator, all the operators had participated in orientation training on MSK, organised by the District Collectorate. They had also participated in some of the meetings of MSK operators at Godhra. However, there was considerable variation in the number of meetings attended by them. Nearly 50 per cent of the operators did not need more training for effectively running the MSKs. However, 11 out of 23 participants felt the need for MSK-related training. Suggested areas of training were marketing of the MSK services, management of MSKs, communication skills. Training related to the Mahiti Shakti website was recommended by the operators. The operators would also like to have adequate know-how about various schemes in which grants are available.

Thus, educated and young men, who were engaged in operating small business, ran MSKs. Key motivation for them to take up the MSK was to supplement their income. A few MSKs were operated by dynamic, enthusiastic and enterprising individuals with customer-oriented attitude. Most of the MSK operators had acquired some basic knowledge and skills to operate the computer for MSK-related work. However, they need some training in management of MSKs to make MSKs viable and profitable.

6.1.3 The Operational Situation

In Mahiti Shakti Project, MSKs are important links between citizens and the government. It is through the MSKs that citizens get access to government

6.1.3.3 *Factors Influencing Functioning of the MSKs*

Unlike the Gyandoot project, the Mahiti Shakti Project has proposed revenue-based model of e-Governance in which MSK operators are expected to generate revenue through the sale of forms or other information. MSKs of private operators could be divided into three categories in terms of their operational situation at the time of our visit: Functional MSKs are those MSKs which are selling forms with some regularity, partially functioning MSKs are those which are able to occasionally sell forms, or have ceased to function due to some problems, and non-functioning MSKs are those which have either no forms sold or have not yet started MSK operations at all. Out of 23 MSKs of private operators, only nine MSKs were functional, six were partially functioning, and eight were non-functional.

Except one MSK at Bhagat na muvada, the remaining eight functional MSKs were located at Godhra and taluka headquarters at Kalol, Shehra, Santarampur, Goghamba and Lunawada (Table 15). Six out of nine functional MSKs were established in August 2001, during the pilot phase when district administration was actively involved in project implementation and extended good support to

Several factors facilitated the functioning of the MSKs. Access to citizens is key for the success of the MSK. Location of the MSK also appears to be a determining factor in getting sizeable number of customers for the MSK forms and services. Seven functional MSKs had locational advantage. Similarly, MSKs located in the coopeative bank and the MLA office also had easy access to citizens. MSK owners with entrepreneurial skills primarily ran functional MSKs. They were highly motivated to run MSK as an enterprise. User-friendly attitude of the MSK operators also contributed to bringing citizens to the MSK. Some of them also made efforts to learn about various forms and procedures in order to help the citizens. With locational advantage and some efforts in advertising helped some of the MSK operators to attract citizens to the MSK. Good rapport with the government officers also helped the MSK operators to follow up applications submitted from their MSKs.

Six MSKs were barely functioning at the time of our visit. These MSKs were run along with other small business and three of them also had Internet connection. However, the MSK operators were unable to sell forms in adequate quantity. Two MSKs, one at Godhra and the other at Jambughoda, had more or less stopped selling the forms due to lack of customers. While the remaining four MSKs at Kakanpur, Parvadi, Halol and Lunawada were barely able to sell forms. Except two MSKs with locational disadvantage, all the MSKs were located in or near the market place frequented by the citizens. However, they were unable to do enough business through MSKs.

Lack of customers, locational disadvantage and font problems were some of the problems faced by these MSKs. Unlike the functional MSKs, the operators of these MSKs were not enterprising. They lacked initiative to take measures to attract the citizens. Some of the MSK operators were not giving adequate attention to running the MSK as they were engaged in other business activities. Thus, lack of interest among the MSK operators/owners also adversely affected the functioning of these MSKs. The partially functional MSKs could be activated through technical support, and training of MSK operators in the areas of advertising and marketing of MSK services, customer-orientation, etc. MSKs with locational disadvantage could be moved to the place, visited by the citizens.

envisioned traffic of about 50 persons a day, which translated into an income of about Rs. 500 per day.[6]

MSK operators were expected to sell the first page of a form at Rs. 10 and the remaining pages at Rs. 5 per page. However, there was no uniformity in pricing of forms by MSK operators. In two MSKs, one located in a multi-purpose cooperative bank and in the MLA office, forms were available to citizens free of cost. Some MSK operators sold forms at a lower price. Instead of printing each form from the CD or the website for every citizen, they made xeroxed copies of the printed form, and then sold them at a lower price. Each form sold by the MSK operator, whether a computer print-out or a xeroxed copy operator was marked with a rubber stamp.

No systematic records were maintained by all the MSKs on number of forms sold every month, hence, it is difficult to assess income from MSKs and the extent to which MSKs were viable. However, a review of operational situation of MSKs suggests that except a few functional MSKs that had succeeded in selling forms, most of the MSKs could sell forms in limited quantity. For example, among eight non-functional MSKs, four MSKs could not sell a single form, and one MSK sold only three forms. While the remaining three MSKs sold 100-150 forms and then stopped functioning. These MSKs could be made viable with adequate support.

On the other hand, monthly average of forms sold varied from 25-100 forms for the partially functioning MSKs. However, most of them were not functioning effectively due to lack of customers. These MSKs could also be made viable with some support for environment building. However, it would be difficult to sustain MSKs, particularly from rural areas, if the computer system is not used for other work.

There was considerable variations in terms of forms sold by functional MSKs. MSK located in the multi-purpose bank at Bhagat na Muvada and in

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6 Shah, Neeta. "Mahiti Shakti: E-Governace Initiative for Citizens' Empowerment and Rural Development in Panchmahals District of Gujarat, India," in the Proceedings of National Seminar on Innovations in Information Systems for Rural Development, organised by G.H. Patel Post-graduate Department of Science and Technology, Sardar Patel University and Computer Society of India, Vallabh Vidyanagar Chapter and Division on February 14-15, 2003 at Vallabh Vidyanagar.

district, there is an extensive network of more than 600 Dairy Cooperative Societies (DCS) in the villages under the Panchmahals District Milk Union known as Panchmahals Dairy. DCS is easily accessible to a large number of dairy farmers who visit them everyday to pour milk. Mc of the DCS are equipped with a computer and a printer to operate the Automatic Milk Collection (AMC) system. Some of them also have a battery backup to operate the computer systems in case of failure of power supply, and a telephone. Given the potential of DCS in operating the MSK, it was decided to locate MSKs in DCS under the Panchmahals Union to reach out to rural citizens.

In the study, six MSKs set up in dairy cooperatives at Adadara, Dural gam, Mota Dharola, Ratanpur, Vanta Vachoda, and Gokulpura were selected. What was the status of MSKs run by the selected DCS? This section sheds light on key operational issues related to these MSKs on the basis of our interviews with the computer operators from the selected DCS and discussion with available dairy staff, particularly dairy secretary.

6.2.1 Motivation for Joining the Project

The dairy cooperatives came to know about the Mahiti Shakti project either through Panchmahals Dairy Union or through the meeting organised by the Collectorate. DCS were interested in starting the MSK so that dairy members and the other villagers could easily get access to forms on various government schemes as well as other government information. As some of them were far away from the taluka headquarters and the district headquarters, it was envisaged that MSK would be very useful to people. The following response highlights why some of the DCS decided to start the MSK:

> "The objective of the project is very good. We can successfully run the MSK here. Santarampur and Godhra are very far away from here. Transportation facilities are also poor. So, it is very difficult for the villagers to frequently travel to the government offices for forms. If various government forms are available at the MSK in DCS then people will easily get access to information. The neighbouring villages have a large population of the scheduled tribes and Baxi Panch, so they would find such facility very useful.

Table 16: Profile of Computer Operators of the Selected DCS

Location of DCS (Village)	Sex	Age	Education	Caste	Main Occupation	Land Ownership
Adadara	M	30	10th Pass	Rajput	Agriculture	4 Vigha
Derol	F	26	B. Com.	Patel	Service (Teacher)	12 Vigha
Gokulpura	M	42	S.S.C	Patel	Agriculture, Dairying	5 Vigha
Vanta Vachoda	F	35	10th Pass	Pateliya	Service (DCS)	Landless
Ratanpur	M	37	S.S.C.	Patel	Agriculture Dairying	12 acres
Mota Dharola	M	42	10th Pass	Patel	Agriculture	No response

supplemented their income through dairying. The female operator worked as a school teacher in the village besides working at the DCS. While the landless computer operator depended on his job at the DCS for livelihoods. Except one computer operator with landholding of 12 acres, the remaining four came from the families of marginal farmers and belonged to lower income group.

Only one out of six computer operators, the female school teacher, from DCS had received formal computer training. She participated in a three-year certificate course in software, offered by the APTEC Computer Institute at Vadodara. The remaining computer operators acquired basic knowledge about computer operators either through the computer vendor or through the staff of Panchmahals Dairy Union.

In summary, DCS had managed to find a local person, who could operate the computer system. With relevant computer training and orientation, the same operator was expected to run the MSK in the DCS.

6.2.3 Efforts for Capacity Building

To what extent efforts were made in the Mahiti Shakti Project to build the capacity of DCS staff to manage and operate the MSK? Initially, the District Collector organised a few orientation meetings to involve cooperative dairies in the Mahiti Shakti Project. Only three of the six DCS operators or the

and tried to find out whether MSKs are functional in dairy cooperatives. Although DCS that we visited had paid empanelment of Rs. 8000/-, they have not yet received any support from the District Collectorate to effectively run MSKs. On the other hand, the dairy union has also not come forward to support MSKs in village dairy cooperatives and provide technical support to upgrade their computers or provide maintainace services. Only in the dairy at Gokulpura, the district staff had installed the content of the CD into the hard disk and provided demonstration. There too, the MSK was not functional due to font problems. Thus, MSks in DSC are like "abandoned" centres, neither nurtured by the District Collectorate nor Panchmahals Dairy.

In general, Panchmahals dairy was supposed to be providing technical support for maintaining the computer system at the DCS. On behalf of DCS, the dairy has contracted computer vendor for maintenance support. However, some of the DCS that we visited were not getting proper maintenance support from the maintaining agency even though the amount was deducted directly by Panchmahals dairy after making payment to the computer Vendor.

Before involving dairy cooperatives in running MSKs, no feasibility study was undertaken to assess the available computer hardware at the dairy, and the nature of technical support required for running the MSKs in rural and remote areas. Such a study would be valuable even at this stage to rectify the situation.

In summary, DCS are keen to run MSKs in order to make government information and services available to their members, provided that they receive adequate guidance, and technical support for upgradation and maintenance of their equipments.

In Mahiti Shakti Project, MSK is a backbone of the project. It is through the MSks of private operators and dairy cooperative societies, the project envisaged to provide citizens access to useful information and services. During the pilot phase, MSKs of enterprising private operators appeared to be a promising strategy. However, in the implementation phase only a few

7. USERS OF MSKs

Mahiti Shakti project envisages empowering the citizens by offering them an improved access to information on government schemes and services. For the evaluation study, a user is defined as a person who has used MSK for getting access to government information and services during last 12-15 months. In reality, it was very difficult for us to find actual users of the selected MSKs as most of the MSKs in the study were not functional. Except at a few MSKs, the MSK operators did not adequately maintain systematic record of users. So, it was not easy to identify the MSK users. As citizens use the MSK as and when they need specific government information and services, it was very difficult to trace them at the time of the study.

Nonetheless, we could interview 16 MSK users, three women and 13 men. Specifically, we attempted to interact with MSK users and citizens from rural areas in order to understand the extent to which they use MSK services. Except one user from Godhra city and two from Shehra town, the rest of the users were from the villages of Mehlol and Parawadi (Godhra taluka), Chansar and Pattan, (Lunawada taluka), and Bedia and Saga na Muvada (Kalol). In addition to interviews with the users, we also conducted two focus groups discussions, one at Mehlol village in Godhra taluka and the other at Bedia village in Kalol taluka, in order to understand awareness of rural citizens about the MSKs.

Based on structured interviews with the users, focus group discussions with the citizens, and discussion with the MSK operators, this section focuses on the MSK users and the what kind of information they accessed.

7.1 Profile of MSK Users

The users whom we interviewed were primarily from the intended target group of the Mahiti Shakti Project. Of the 16 users, 14 were from BPL families, with less than annual income of Rs. 15.000/-. The remaining two users were from the families above the poverty line, however, they too belonged to the lower income group. Among the users, four were landless, while the remaining 12 were marginal farmers; eight of them with

In general, the users had very limited understanding about the MSK and its services. They perceived the MSK as a shop where forms on various government schemes were available. None of the users interviewed were knowledgeable about the other types of information that were available on Mahiti Shakti Portal or CD. They also did not know about any other government services that could be accessed through MSK. Thus, limited awareness about MSK and its services was a major constraint in the effective utilisation of MSKs by the citizens from rural areas.

7.3 Types of Information and Services Accessed

None of the 16 users interviewed for the study faced any problem in getting access to the MSK. In general, the users found it convenient to approach the MSK for obtaining forms. Saving in travel time and money for visiting government offices, unavailability of forms or concerned officers at government offices, easy access to forms and other useful information, and helpful approach of the MSK operator in filling up application forms were some of the reasons given by the users for the use of MSKs for information. The frequency of MSK visits among the users depended on the need for specific information.

What kind of information and services are availed by the MSK users? Mahiti Shakti Portal and CD provide information to citizens on various areas, however, in general, the users have accessed information mostly about the forms. Only one user visited the MSK for getting information on various government schemes. The demand for government information among users also appears to be low, as most of them did not frequently visited the MSK for information. Users have bought forms for ration cards and forms for various economic assistance schemes, such as NOAPS, Widow Pension Scheme, Indira Awas Yojana, Sardar Awas Yojan, Ambedkar Awas Yojana, *Dikari Rudi Sachi Mudi*, and *Manav Garima*. Other types of information on MSK CD or website was not accessed by the users interviewed. Only four out of 16 users had accessed forms (ration card and NOAPS) for which online applications could be submitted. However, neither the applications were sent online nor the response to their applications was received online.

8.0 CONCLUDING REMARKS

The e-governance projects have considerable potential to offer improved and cost-effective access of government information and services to citizens. Though the potential of e-governance is widely recognised, harnessing it in practice is difficult. The Mahiti Shakti Project is an innovative project that attempts to promote e-governance by providing the citizens access to government information and services through MSKs. Assessment-cum-evaluation of the Mahiti Shakti Project, however, suggests that the pilot project was celebrated prematurely. Performance of the project in the implementation phase since February 2002 was adversely affected due to disturbances in external environment. Furthermore, given lack of vital infrastructure, leadership, re-engineering of processes and back-end operations and institutionalised system for project management and implementation at the district level, the potential on the project in promoting e-governance is not yet realised.

On the basis of the evaluation study, the following observations and recommendations are made:

1. Enabling Environment for E-governance

The Mahihit Shakti Project has been situated in the context of **enabling policy environment and political will to harness the use of information and communication technologies for promoting e-governance.** In the initial stage, the project has received considerable support of e-champions at the state and district levels. Specifically, the former district collector with good understanding of ICTs and their applications played an important role in conceptualising the e-governance model of the project and in implementing it during the pilot phase. The project champion also contributed to mobilising resources (human and finances) for the project and involving government officers from different departments in the project. However, project implementation suffered considerably after the departure of the project champion. **Long-term sustainability can be ensured only if the agenda of e-governance is not just championed by one individual administrator but it is owned by government officials working at**

various levels. Continuous involvement of the local champions of e-governance should be leveraged for sustainability of the project.

2. Building Strategic Capacity for E-governance

Dynamic leadership is essential for any project of e-governance. However, efforts should be made to create institutional mechanisms at the state and district levels for planning, implementation and coordination of project activities. At the state-level, E-governance Division can be created within the Department of Science and Technology as a focal point for e-governance efforts. The Division will be responsible for setting overall e-governance policies, standards and guidelines, developing infrastructure and applications, and providing technical inputs to individual e-governance projects in the state.

For sustainability of the project, the E-governance Trust under the leadership of the district collector, is envisaged to review and direct overall implementation of the project. However, the Trust has not actively monitored MSKs or provided them adequate inputs. For long-term sustainability of the project, a **Mahiti Shakti Cell can be created** within the District Collectorate for overall project planning, implementation, coordination and monitoring, It can also take responsibility for periodic review and upgradation of the portal/CD and provide technical inputs and training to MSKs. It can monitor functioning of MSKs and take necessary action. The Cell can have full-time professional staff with divergent background from the state, NGOs and the private sector. It can also avail services of experts on consultancy basis as and when needed.

3. Building Public-Private Partnership

The Mahiti Shakti Project involved participation of various stakeholders, such as CEG-IIMA, NIC, GIL, RESICO, NGOs, and government officials from various departments/agencies. They made a significant contribution to conceptualisation and operationalisation of the project. Such partnership could have been sustained beyond the pilot project to monitor project implementation and take corrective measures.

processes for effective project implementation. In fact, lack of inter-departmental coordination appears to be a major constraint for content upgradation and overall project implementation. Therefore, institutionalisation of processes/systems is necessary to ensure inter-departmental coordination.

6. Building Infrastructure/Technology

In terms of infrastructure and technology, the Gyandoot project is based on intranet whereas Mahiti Shakti Project was initially conceptualised, as an Internet based project **Citizen Services Portal is available for 24 hours over the internet with excellent downloading speed. In practice, however, due** to lack of vital infrastructure in government offices and in the district, the Internet based model has been more of a CD-based model. In the context of low penetration of Internet, provision of CSP data on the CD is a useful and practical strategy to reach the unreached. However, **internet-based model of e-governance has considerable potential** in terms of increased reach, ease for future expansion, better compatibility with universal technical standards, etc., when compared with intranet-based model. **However, it requires regular power supply and reliable Internet connectivity, particularly in the rural areas.** The government could explore various options for connectivity, such as COREDECT, Spread Spectrum and VSAT, particularly for MSKs in rural areas.

GSWAN infrastructure (video, voice and data) at various levels of district administration can be a useful resource in the future for improvement of citizen access to information through Mahiti Shakti Project. However, at present back-office use of information technology in various departments is limited due to lack of adequate computerisation or lack of skills to operate the computers. Intra- and inter-departmental connectivity is also inadequate, so time taken for processing of online applications from MSKs could not be effectively reduced. **Computerisation of various departments at the district and taluka levels is necessary** for promoting e-governance. It will be a mammoth task to computerise the entire district administration, however, it can be done in a phased manner by linking various work stations and departments. **Priority should be given to computerisation of back-**

villages. Once the portal was developed no efforts were made to examine the felt needs of citizens. In general, information or applications that have direct impact on the livelihoods of the people are most useful to socio-economically disadvantaged sections of the agrarian society. It is also advisable that the project follows an incremental approach to develop content that responds to the most pressing information needs of citizens and use software that is most appropriate for the local context.

8. Capacity-Building

In a large-scale, e-governance project, a major change is not only for the government but also for all the employees as well as MSK operators, who are expected to provide e-services to the citizens. Some efforts have been made in the project to build their capacity, particularly during the pilot phase. However, subsequently only sporadic efforts have been made for building the capacity of the MSK operators. The efforts made towards capacity building of the employees also call for much more than what is done. Capacity-building efforts need to focus on the following:

1. Training in change management and project management for the officers in all the government departments at the district level;

2. Training in change management and human resources skills for all the employees in all the government departments, (including new recruits and employees transferred in or promoted), at district, *prant*/block as well as taluka levels;

3. Basic computer training on how to use MS-office and Internet, e-mail and some basic training on de-bugging and computer hardware, for all the employees at all levels of offices in the district and all the MSK operators;

4. Department/office specific software related training for all the government employees from the departments/offices involved in the project;

awareness among citizens about the MSK and its services so that more citizens could start using their services. However, during the implementation stage limited and sporadic efforts were made for environment-building. Efforts should be made for general publicity of the project as well as for generating demand among citizens for MSK services. A communication strategy that combines the effective use of mass media (newspapers, radio, television, cinema, etc.) with traditional media (street plays, fairs, folk media, etc.) should be geared towards reaching citizens in rural areas. Like Gyandoot project, village councils and leaders can be involved for achieving high level of awareness about e-governance among rural citizens.

The Mahiti Shakti Project in the Panchamahals district is an innovative project that has used the entrepreneurship-based model of e-governance to provide the citizens access to government information and services through MSKs across the district. It has facilitated government to citizens transactions by making available a large amount of information on government departments, schemes, forms, citizens charters and useful public information through a portal/CD. The project has also attempted to bring transparency to the government functioning by providing information on the citizens charters of district-level offices and grievances redressal forums. However, potential of the project in promoting e-governance and in empowering citizens is not yet realised due to inherent limitations of top-down and technocratic approach to project planning and implementation. In the future, the project needs to take an incremental approach, starting with re-engineering of processes and back-end operations, followed by availability of vital infrastructure at various level and capacity building, and then establishing MSKs. For the long-term sustainability of the project, local ownership and participation is paramount.