Wireless for Communities [W4C] – Phase VI

Smart Village Programme

Enabling the last mile connectivity and digital inclusion

December 2015 - November 2016

DEF

Internet Society

1. PROJECT SUMMARY

Programme name	Wireless for Communities
Project phase	Phase VI
Project name	Smart Village Programme
Project duration	December 2015- November 2016
Objectives	a) Digital Smart Village Resource Centre in line with the demography of the village to understand the needs of the community and establish a Village Resource Centre with physical space, infrastructure and equipment. b) Digital Smart Village Wireless Network Development create a wireless community network utilizing unlicensed spectrum and provide basic infrastructure and Internet access within and surrounding the community. The wireless network will create an ecosystem by connecting schools, health centres and Anganwadi centres. c) Digital Smart Village Skills Development Programme focusing on skills development of village occupants to enhance their entrepreneurial skills; improve their living conditions. This will include wireless network training programme; digital literacy, integrating them with tourism or local handicraft skills and so on, depending on the local environment. d) Digital Smart Village Enterprise Development providing support for Digital Smart Village Center (SDVC) for providing information-based, digital and non-ICT support services for the core and tertiary activities to the village, etc.
Locations covered	− Location 1: Tham, Koderma, Jharkhand − Location 2: Narayanpet, Mahboobnagar, Telangana

Activities undertaken	**Activity 1: Digital Smart Village Resource Centre** ■ Conducted the baseline survey in each location to understand the status of connectivity, need of connectivity, and socio-economic indicators survey, infrastructure survey, project installation survey, mapping & analysis ■ Procured digital equipment for setting up the digital smart village resource centre in each location ■ Setting-up centre in each location equipped with all infrastructure such as furniture, table, etc. ■ Mobilized community members in each location to be part of the project **Activity 2: Digital Smart Village Wireless Network Development** ■ Broadband Internet of 4 Mbps from Bharat Sanchar Nigam Limited (BSNL) has been installed in Narayanpet centre ■ Broadband internet of 4 Mbps from Airtel has been installed in Tham centre ■ Network feasibility in each location has been conducted to understand the status of backhaul connectivity ■ Wi-Fi hotspot has been installed in each centre to provide the connectivity within the centre and also to generate the revenue **Activity 3: Digital Smart Village Skills Development Programme** ■ Four digital literacy batches are running in each cenre. Over 250 students are digitally literate so far from centres ■ The digital literacy program is providing soft skills such as office suite; paint; usage of internet; search engine, etc ■ English speaking vocational course is running in each centre **Activity 4: Digital Smart Village Enterprise Development** ■ Digital Services such as photocopy printing, scanning, passport photographs, online applications etc. have been started in each centre ■ Information Services (Govt. schemes, online applications etc.) have been started in each centre ■ Each centre is providing information based services and entitlements to community members ■ 5 SHG groups have been formed in each location to manage the centre activities

Outcome	**Outcome 1: Digital Smart Village Resource Centre** • Feasibility/analysis reports to understand connectivity/community needs • Two Digital Smart Village Resource Centres at proposed locations equipped with full ICT infrastructure **Outcome 2: Digital Smart Village Wireless Network Development** • Network feasibility report to understand the connectivity status of the location • Created network ecosystem in two locations that has connected SHG office; schools; Aanganwadi centres • 40 local youth have been identified and trained on wireless network technology. They received further training on how to manage, operate and troubleshoot these networks. **Outcome 3: Digital Smart Village Skills Development Programme** • Over 200 students are digitally literate • 100 community members including youth have received English speaking training • 35 community members have received training digital skills • 75 youth trained and skilled on digital entrepreneurship such as printing, photocopying **Outcome 4: Digital Smart Village Enterprise Development** • More than 100 community members have received entrepreneurial skills • 5 Self Help Groups (SHGs) have been formed in both locations. These SHGs have received training on accounting; new job opportunities; entrepreneurial skills; and organization management • More than 300 families have received digital information services
Challenges	1. Monopoly of middlemen in weaver community 2. Political and social cultural challenges that discourages people to participate in centre activities

2. SMART VILLAGE PROGRAMME

1.1 Background

Internet Society (ISOC), an international non-profit organization in partnership with Digital Empowerment Foundation (DEF) has planned to implement the Phase 6 of "Wireless for Communities" program (W4C) in 2015-17. It is a "Digital Smart Village Programme" for digital inclusion and last mile connectivity.

The programme aims to adopt two villages and transform them into Smart Villages. The main focus would be to enhance the Panchayat or Municipal Council operations and improve entrepreneurship and livelihoods of the local community through the use of Internet and Information & Communication Technologies (ICTs). The main objective of the program is to impart new-age skills like using computers and Internet to the local community for their own needs like getting information on govt. entitlements, improving chances of getting good educational opportunities, running their local businesses in a better manner and more.

Objectives

a) **Digital Smart Village Resource Centre** in line with the demography of the village to understand the needs of the community and establish a Village Resource Centre with physical space, infrastructure and equipment.

b) **Digital Smart Village Wireless Network Development** create a wireless community network utilizing unlicensed spectrum and provide basic infrastructure and Internet access within and surrounding the community. The wireless network will create an ecosystem by connecting schools, health centres and Anganwadi centres.

c) **Digital Smart Village Skills Development Programme** focusing on skills development of village occupants to enhance their entrepreneurial skills; improve their living conditions. This included wireless network training programme; digital literacy, integrating them with tourism or local handicraft skills and so on, depending on the local environment.

d) **Digital Smart Village Enterprise Development** providing support for Digital Smart Village Center (SDVC) for providing information-based, digital and non-ICT support services for the core and tertiary activities to the village, etc.

2. METHODOLOGY

DEF Project team decided two villages on the basis of suggestion and feedback received by Panchayati Raj & Rural Development Dept., Govt. of Telangana, and Block Development Officer of Chandwara Block in Koderma District of Jharkhand State. On the basis of their recommendations, project team identified two locations - Narayanpet town in Mahbubnagar district of Telangana State and Tham village located in Chandwara Block in Koderma District of Jharkhand state.

One of the identified locations – Narayanpet's main occupation is weaving and handloom; while the second location – Tham's main occupation is agriculture and labour work. Initially, DEF project team conducted recce to understand demography of the location and where to set-up the centre. On the basis of recce and understanding of community, project team undertook the following activities as per the project guidelines.

3. ACTIVITIES UNDERTAKEN

Activity 1: Digital Smart Village Resource Centre

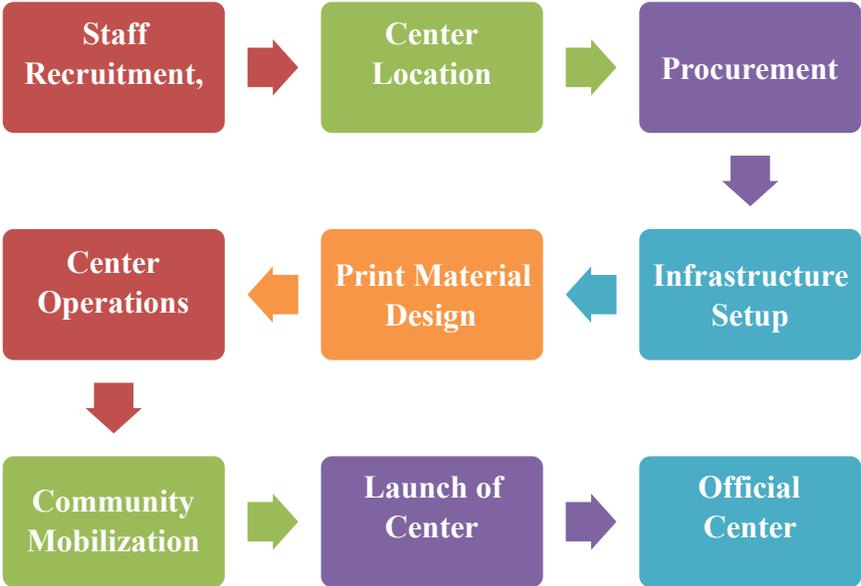**i.   Recce & baseline study**

Before planning and implementing the programme goals, it is necessary to study the location, understand the local issues, the challenges and requirements of local people and beneficiaries and perceive the ethos of the local administration. The study also enables to understand the status of connectivity, need of connectivity, and socio-economic indicators survey, infrastructure survey, project installation survey, mapping & analysis. DEF undertakes two surveys before it begins any project:

- Recce
- Baseline Survey

Narayanpet, Mahboobnagar, Telangana	The Narayanpet Recce was conducted on 8 Dec 2016. The purpose of the recce visit was to get an overview of the demography of Narayanpet town and weaver community and to understand the ground realities, issues, challenges and needs of the people. Visits were made to the Municipal Council office to get latest information about the town. The survey team visited two weaving centers in Narayanpet to interact with the weavers and get a broad understanding of their work and issues.
Tham, Koderma, Jharkhand	Tham baseline study was conducted from 20 December to 27 December 2016. The study identified that there are over 3000 households and most of them are OBC (Other Backward Class). Seven other villages are easily accessible to Tham. The main livelihood is based on agriculture and labor work. There are several SHGs (Self Help Groups) who are very active in terms of doing developmental work, being enterprising and so on. There is no specific cluster but SHGs are collectives and working on livelihood. Availability of electricity is good and 2G mobile service is available. Broadband connectivity is available at Chandwara, 8km from the village.
Annexure(s)	1. Narayanpet Baseline Report 2. Tham Baseline Report

ii. Setting up Digital Smart Village Resource Centre with digital infrastructure

Based on the insights from the recce and baseline survey, the following steps were undertaken to establish the Community Information Resource Center in both locations and to make it functional.

Staff Recruitment, → Center Location → Procurement → Infrastructure Setup → Print Material Design → Center Operations → Community Mobilization → Launch of Center → Official Center

a) Staff recruitment & orientation

Before beginning any work to develop our centers, it was necessary to hire a Center Coordinator who could independently handle all work in absence of the senior team. The Center coordinator after

getting hired handled all renovation work, printing material, local procurement, discussions with officials. A Trainer cum Digital Services Provider in both locations was hired later after all center-related preparatory work was completed and it was time to start the center activities. Both the newly hired persons were given orientation about the organization's work domains and work culture.

Narayanpet, Mahboobnagar, Telangana	Center Location Finalization & Renovation During the baseline survey, the Weaver Society Office in Gandhinagar was identified to setup our center. A permission letter was sent to the RDO and the Weaver Society official members. A discussion was held with them to inform them about our work and clarify their doubts. They informally signed on the letter to agree to give us the place for the next three years to continue our center activities with full support from them. An attendant already working in the Weaver Society office for daily tasks like cleaning the center & bathroom, refilling drinking water & bathroom water and other miscellaneous tasks. Renovation The weaver society office was not in the best shape and the following work was done over a period of 1 month to make the building sustainable and professional-looking.
Tham, Koderma, Jharkhand	Center Location Finalization & Renovation During the baseline survey, Mahila Mandal office was identified to set-up our centre. We have also signed three years contract to continue our center activities with full support from them. Renovation The Mahila Mandal office was not in the good condition and the following work was done over a period of 1 and half month to make the building sustainable and professional-looking. i. Cutting wall for a separate gate in Center. ii. Complete electrical wiring, earthling and fitting of lights. iii. Cleaning of excessive rubble, shrubs & garbage from around the building iv. Cleaning & washing of center flooring and walls.

b. Procurement

The following things were procured locally alongside the renovation work in both locations:

1. Center Furniture (Tables, Chairs, Stool, Cupboard etc.)

2. Digital Equipment (Laptops, Printer-Scanner-Copier, Photo Printer, Projector, Inverter)

3. Wireless Equipment (Antenna, Management Router, etc. needed in future for Wireless Internet Setup)

4. Stationery (Registers, Printing papers, Photo papers, notepads, pens etc.)

5. Miscellaneous Material for center (cleaning material, drinking water jar, etc.)

c. Community Mobilisation

Narayanpet, Mahboobnagar, Telangana	Extensive community mobilization was done for 2 weeks before starting the center operations in 1st week of April 2016. Volunteers were appointed for the same, if needed. Especially the weaver community was targeted and the team encouraged the weavers to send their children for the Digital Literacy training program. Mobilization was also done in schools and colleges for the training as well as to inform about digital services available in the center.
Tham, Koderma, Jharkhand	Extensive community mobilization was done for 1 week before of center opening. The center came into operation in 1st week of May 2016. The Mahila Mandal community and village people was targeted and the team encouraged the weavers to send their children for the Digital Literacy training program. Mobilization was also done in schools for the training as well as to inform about digital services available in the center.

Activity 2: Digital Smart Village Wireless Network Development

Narayanpet, Mahboobnagar, Telangana	• Network feasibility study was conducted to understand the status of connectivity in Narayanpet • Broadband Internet of 4 Mbps from Bharat Sanchar Nigam Limited (BSNL) was installed in the center. • 20 youth have been identified to receive further training on wireless networking, setting up the wireless and manage and operate the network locally • The TOT was conducted on the first week of July 2016. • The internet connectivity has been provided to 5 Mee Seva Centres; and Integrated Child Development Services office (ICDO), which is a head office of 56 Aanganwadi centers in Narayanpet mandal. • The internet connectivity has also been extended to two local schools
Tham, Koderma, Jharkhand	• Network feasibility study was conducted to understand the status of connectivity in Narayanpet • Broadband Internet of 4 Mbps from Airtel was installed in the center. • 23 youth have been identified to receive further training on wireless networking, setting up the wireless and manage and operate the network locally • The TOT was conducted on the first week of August 2016. • The internet connectivity has been provided to panchayat office and Aanganwadi Kendra and two local schools

Activity 3: Digital Smart Village Skills Development Programme

Narayanpet, Mahboobnagar, Telangana	• Over 100 weavers have received digital literacy training • 60 local youth have receiving English-speaking training • 20 local youth women have received training on digital skills • More than 35 youth have been training digital entrepreneurship • These training programmes are conducted with support from panchayat office and ICDO officials
Tham, Koderma, Jharkhand	• 120 community members have received digital literacy training. Out of 89 community members; 31 are women to receive the training • Local team has provided English-speaking training to 40 youth. • 15 local youth women have received training on digital skills such as photoshop; how to use internet and search on it, etc. • 40 local youth have received training on digital entrepreneurship • Local SHG members participated in most of these training activities

Activity 3: Digital Smart Village Enterprise Development

Narayanpet, Mahboobnagar, Telangana	• 3 Self Help Groups have been created. Most of SHG members belong to weavers' family. • They have received training on how to manage their accounts; social media outreach of their products; expense sheet; etc • About 150 households have received information based services
Tham, Koderma, Jharkhand	• In Tham, there are more than 5 SHGs running, thus, it has been decided to provide the trainings to them. Two training programs have been organized on accounting; law and justice; how to make strong organization; how to manage their expense and budget effectively and digitally. The training also imparted awareness about government schemes related to health, education and employment. Mostly, community members want to know about old pension schemes; widow schemes, schemes available for differently abled and senior citizens. • More than 180 households have received digital information services including government to citizen or citizen to government services

3. CHALLENGES

Narayanpet, Mahboobnagar, Telangana	• Local level politics: Political disturbances are going on in the state of Telangana due to new district formations after states Andhra Pradesh and Telangana have separated. People are fighting to get Narayanpet converted to a district. "Bandhs" have happened frequently in Sep-Oct 2016 and the town has been shut down. • Centre needs to stay shut in such situations and new student count drops. This may continue long into the future and situation is unpredictable. Such situations are out of control of the organization and no solution can be found except cooperating with local Govt. in peace maintenance. • Competition from other service centres: There are at least 5-6 Mee Sewa Kendras (Digital Services Centres) setup by Govt. and many private centres in Narayanpet on the main street in the town. Many times people are unwilling to come to the centre to get services.
Tham, Koderma, Jharkhand	• Electricity and power shortage are major challenges. • Finding out relevant human resource and continuous mobilization required so that women can participate in centre activities. •

3. FUTURE ACTIVIES

- Setting up of Panchayat portal with grievance redressal mechanism that will be integrated with local handicraft or tourism and promotion services.

- Providing entrepreneurship training to SHG members

- Linking SHG members with e-Governance; health; education; scholarship; services

- Extending the Internet connectivity to households, SHGs, health centres; schools, Anganwadi centres, etc.

Figure 1: Trainer Mamta conducting classes for the 1st batch

Figure 2: Students from the 2nd batch learning about computers

Figure 3: Female students practicing Paint application
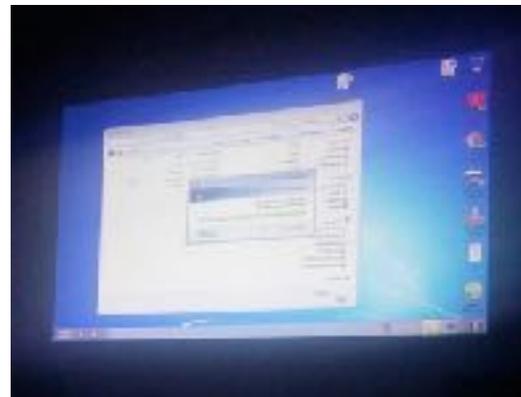

Figure 4: Use of projector during class

Figure 5: Conducting digital literacy training for the 1st batch

Figure 6: Students from the 3rd batch learning about computers

Figure 7: Female students practicing Paint application

Figure 8: Use of projector during class

Figure 7: Talking to local people about our center

Figure 8: Visiting door to door to distribute pamphlets and get applications

Figure 7: Local student come center for learning computer

Figure 8: Rahul conducting class for the 1st batch

Figure 9: Student joining center 1st batch

Figure 10: Female student working on MS office

Figure 11: Student participating paint application

Figure 12: Talking to weavers about our center

Figure 13: Visiting door to door to distribute pamphlets and get applications