SUPPORTING THE MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT SCHEME (MGNREGS) THROUGH ICT:

DOCUMENTATION OF BEST PRACTICES

Knowledge for Community Empowerment and Enhanced Livelihood Opportunities

A Case Study
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EXECUTIVE SUMMARY

Knowledge for Community Empowerment and Enhanced Livelihood Opportunities was created by OneWorld Foundation India (OWFI) and launched in partnership with the Ministry of Rural Development (MoRD) India, Government of Rajasthan and United Nations Development Programme (UNDP). On 2 October 2009, the innovation programme was piloted in two districts, three panchayats and across 20 villages in the state of Rajasthan. On 20 August 2010, owing to the programme’s success achieved in just nine months, the Ministry of Rural Development rolled out a national framework for NREGA ICT implementation based on the OneWorld model.

The OneWorld innovation aims to leverage ICT in support of the Mahatma Gandhi National Rural Employment Scheme (MGNREGS). Specifically, its mission is to strengthen accountability in public service delivery through enhanced transparency, enabling the poor to demand their rights based entitlement to employment as set out by the Scheme. Four major components contribute to making the innovation a complete end-to-end ICT-enabled eco-system:

1. Soochna Seva Kendra (Info Kiosk) housing text-to-voice enabled and touch screen computers with biometric access to job card information (number of days worked/remaining for work), job enrolment, and accrued wages for overall programme monitoring
2. Unified handheld device (UHD) with biometric and GPS verified attendance tracking system for formulation of worksite muster roll
3. Community radio for promoting awareness about Scheme and encouraging critical dialogue amongst its users; also used to facilitate widespread skill enhancement in areas of basic needs i.e. health and education
4. Digital knowledge repository for sustainable knowledge exchange between central stakeholders, development practitioners and policymakers

This study is largely based on field research conducted in the pilot district of Bhilwara, Rajasthan. Researchers focused on understanding programme awareness, utilization and effects, with the objective of determining its effectiveness in supporting access to gainful employment. This study emphasizes the role of technology, from the programme’s conceptual formulation to its introduction and uptake on the ground, and its effects on outcomes. The innovation is examined through a Soft Systems Methodology (SSM) lens to provide a framework for future upscaling.

Results of preliminary research include increased speed of attendance tracking, reduced opportunity for fraudulent work practices, and easy access to job card tracking. Interactions
with stakeholders revealed that these outcomes are directly related to increased economic empowerment; users expressed a never before felt confidence in self-sustaining livelihoods. These conclusions provide concrete support for the uptake of the OneWorld model at the national policy level.

BACKGROUND

MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT ACT (MGNREGA)

In 2005, the Government of India implemented the Mahatma Gandhi National Rural Employment Act (MGNREGA). The Act calls for the public provision of employment to any and all who are willing to conduct unskilled labour for a maximum of 100 days per household per year. It promises work within 15 days of request and payment of up to the minimum wage of 100 rupees per day. There are four major goals of the Scheme: first, to provide efficient and effective rural access to publically funded employment; second, to generate sustainable processes of local skill building that eliminate the need for future public employment schemes; third, to expand local resources in a sustainable manner; and fourth, to provide villagers with a stepping stone towards a better quality of life.

Today, NREGS is the largest social safety net programme in the world, with over 150 million beneficiaries and annual allocation in excess of USD 7 billion.

NATIONAL FRAMEWORK: BIOMETRICS ENABLED ICT FOR PEOPLE’S EMPOWERMENT UNDER MGNREGA

On 20 August 2010, the Ministry of Rural Development, Government of India, announced the National Policy Framework on Biometric enabled end-to-end ICT applications for improved programme implementation and delivery and enhanced public accountability of MGNREGA. The National Policy Framework is based on the OneWorld ICT innovation model created to e-enable the entire NREGA process at the village level. It calls for:

1. Biometric based identity authentication and worker registration
2. Demand for work through touch-screen and text-to-voice enabled computers in info kiosk and through handheld device at worksites
3. Dated acknowledgement of work demand registration with printout in info kiosk and at worksite through handheld device
4. Record of workers’ attendance in real time at the worksite on wireless/GSM-enabled handheld devices with biometric and GPS based validation
5. Digital capture of work measurement at the worksite
6. Automated payment to the worker through online pay order to the bank
KEY ORGANIZATIONAL PARTNERS

**ONEWORLD FOUNDATION INDIA (OWFI)**

One World Foundation India (OWFI) envisions a world where resources are shared in an equitable and sustainable manner, human rights are nurtured and protected, and democratic governance structures enable people to shape their own lives. For the past fifteen years, OneWorld has worked towards this vision through the use of Information and Communication Technologies for Development (ICT4D) including knowledge portals, community radio, mobile and other e-services. Central to its work is the production and publication of current pertinent development content on international and regional websites.

The OneWorld network spans five continents and produces content in nine different languages. It is comprised of thirteen offices across the globe, with its headquarters in the United Kingdom. OWFI is a ‘knowledge provider’ aiming to ‘connect communities and empower people’. Its projects range from Bhoogyan, a portal (bhoogyan.net) aimed at dispensing knowledge on the mitigation of climate change; to Lifelines, a mobile query system designed to answer beneficiary-farmer and educator-questions by area experts; to Soochna Seva Kendra, a system of info-kiosks equipped with biometric- and audio-enabled computers used to support MGNREGA.

With widespread expertise in knowledge management through the use of ICT4D, OneWorld holds a strategic position in global civil society that is fit for influencing the trajectory of global development in an effort to reduce poverty across the globe.

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**MINISTRY OF RURAL DEVELOPMENT, GOI**

The Ministry of Rural Development works to alleviate poverty, generate employment, develop infrastructure and implement social security in all rural areas of the country. Objectives are achieved through formulation, development and implementation of programmes relating to various spheres of rural life and activities, from income generation to environmental replenishment. The Ministry implemented MGNREGA in 2005 and has since been working to support its functioning, namely through ICT and convergence efforts.

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**GOVERNMENT OF RAJASTHAN, INDIA**

In recent years, the Government of Rajasthan has made a concerted effort towards efficiency and effectiveness through e-governance. As a selected state of UNDP focus as well as of the Ministry of Rural Development for MGNREGS interventions, Rajasthan has seen much attention.

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on the Scheme since its introduction. The Ministry has been working to support these efforts through funding, oversight and monitoring.

UNDP India is a partner of the GoI in the implementation of MGNREGS. To enhance the government’s capacity for the implementation of the programme, UNDP set up a Technical Secretariat with experts in monitoring, training and communications. It has generated awareness about the Act among potential participants, informing them about their rights and the benefits of the programme. UNDP India has also helped to ensure transparency in payment of wages and efficiency in administration by supporting innovative technologies like smart cards, biometric devices and ATMs and by digitizing information.  

PILOT WORKING DESIGN

OneWorld Foundation India (OWFI) leveraged their existing m-development, community radio and portal management programmes to develop all components of the MGNREGS innovation.

SOOCHNA SEVA KENDRA (INFO KIOSK)

Each info kiosk is located in a local government office and houses a computer that through biometric access and with audio output, any MGNREGS worker can use its ten, user-friendly, touch screen icons to access the following:

1. Information about the Act
2. Worker entitlements under the Act
3. Information on unemployment allowance
4. List of prerequisites for work under the Scheme
5. Worksite information
6. Help and grievance platform
7. Job application platform
8. Job receipt
9. Payment slip receipt
10. Worker history (with all past job details)

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3 Undp.org.in

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Information on total days worked, days left to work under the Scheme, and wages earned are displayed to the user at the top of the welcome screen.

The first info kiosk was launched on October 2, 2009 in Suwana Panchayat Samiti office of Bhilwara District, Rajasthan. Upon the advice of local authorities to move the programme closer to its central stakeholders, an info kiosk was also launched in Kanda village, 12 kilometres from Suwana Panchayat Samiti (village government) office. One local operator for each info kiosk, a worksite and a managing coordinator, male and female, were chosen for all locations.

Pilot Layout of Info Kiosks

**Bhilwara** - 10 villages, spread across four gram panchayats (Kanda, Suwana, Haled and Rupaheli) of Suwana Block; Villages are located within 20 kilometres of the district headquarters in Bhilwara and 12 kilometres of the info kiosk at Suwana block office  

**Udaipur** - Ten villages in Girva block of Udaipur district; Villages are spread across two gram panchayats - Koraber and Paramda - and are located within 12 kilometres of the information kiosk in Koraber Gram Panchayat

COMMUNITY RADIO

On October 2-3, 2009, 20 community members from four villages of Kanda Panchayat attended a workshop on community radio. Based on readiness, aptitude, and interest, seven student volunteers were chosen to receive computer training for the purposes of future involvement with the programme. This was followed by a four day intensive training program on October 22-24, 2009 at the Suwana Panchayat Samiti office where 31 field volunteers, consisting of MGNREGS workers and youth, both women and men, were selected to participate. Training covered the identification of topics for writing sample scripts, and production of a radio programme including recording voice bytes of villagers and relevant local authorities. By the end of the training, volunteer teams produced small radio programmes on the topics of their choice. A similar process, including a four day training of 15 volunteers from Koraber and Paramda blocks of Girva Block in Udaipur, took place on November 20th.

In 2004, OWFI created a community radio program called Ek Duniya Ek Awaaz. An average of 15,000 listeners across more than 12 states currently listens to each weekly aired episode. Apna Gaon Apni Baat (Our village Our message), the official radio programme run by Suwana Block members and managed by OWFI was launched on Ek Duniya Ek Awaaz’ platform, AIR FM Rainbow India, on October 21, 2009 at 4:30 pm. Since then, it has been broadcasted every third Wednesday of the month. Following live broadcasts, programmes are also narrow cast at info
kiosks and through listeners' clubs - where local radio producers personally visit surrounding communities to playback recordings. The intention is to spur question, concern and thought sharing by community residents.

**BIOMETRIC AND GPS ATTENDANCE**

Upon the request of the Ministry of Rural Development and Panchayat secretaries, and motivated by the piloting of info kiosks in Bhilwara and Udaipur districts, a tool to track worksite attendance was added to the programme.

A portable computer with biometric device to digitally generate the worksite muster roll was introduced to both pilot districts. A global positioning system (GPS) is used to verify the location of workers. Movement towards powering worksite services through an advanced prototype of the Unified Handheld Device (UHD), created by Intel for use in rural markets of Asia and Africa, is underway. The UHD is capable of facilitating onsite digital muster roll development, work receipt printing, GPS verification of worker location, photo capture of work progress, biometric worker identification, and smart card reading.

Muster rolls are currently stored in the online Knowledge Repository and displayed in the form of a calendar and Google map. Clicking on a calendar date triggers the worksite location to popup on the map. A single click on the map icon will display the number of workers in the particular worksite and a list of worker names with corresponding job IDs.

**MOBILE JOB CARD RETRIEVAL**

To overcome barriers that arise from constrained mobility, and upon the request of the Ministry of Rural Development and Panchayat secretaries, OWFI launched a SMS job card retrieval option in January 2010. Currently, in lieu of visiting the info kiosk, village workers have the option of sending a local cost SMS to receive job status information – number of days worked under MGNREGS and number of workdays left – on their mobiles. However, due to the present access to job card details through the Soochna Seva Kendra, and planned future access of the same through the UHD, mobile job card retrieval is expected to be an underutilized feature of the programme.

**DIGITAL KNOWLEDGE REPOSITORY**
Launched in May 2009, the Digital Knowledge Repository is managed by OWFI through the NREGA Knowledge Portal (http://nrega.net). Nrega.net is the central platform for knowledge transfer between MGNREGA policymakers and practitioners (private and third sector); it facilitates this exchange through four OWFI-managed portals: Convergence for Sustainable Development; Professional Institutional Network; Innovation through ICT; and NREGA Knowledge for Action.

Currently, government functionaries ranging from district collectors to block development officers visit the portal. By February 2010, the knowledge repository had seen 33,487 unique visitors, representing a fivefold growth over a 10 month period (May 2009 – February 2010). It has also seen a steady rise in visits, resulting in a total of 1,042,627 user hits. Furthermore, 28 percent of the total visits to the portal can be defined as ‘substantial use’ hits.

![Knowledge Depository: Unique Visitors](image)

**FIGURE A: UNIQUE VISITORS TO KNOWLEDGE REPOSITORY FROM MAY 2009 THRU FEBRUARY 2010**

![Knowledge Depository: Portal Hits](image)

**FIGURE B: MONTHLY USER HITS - KNOWLEDGE REPOSITORY FROM MAY 2009 THRU FEBRUARY 2010**

The Convergence for Sustainable Development (http://www.nrega.net/csd) portal is used as a platform to harness existing resources, programmes, and expertise to efficiently bring about a well-functioning Scheme. The programme highlighted in this study is an example of a convergence effort because it leverages existing innovation – community radio, portal management, and SMS information retrieval.

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4 Although a part of the Knowledge Depository, the Knowledge for Action portal is not included in these statistics as it was designed using a different server/content management system than ZOPE/PLONE as all three other portals were built on.

5 OWFI defines ‘substantial use’ as more than two minutes per site visit.
The Innovation through ICT (http://www.nrega.net/ict) portal showcases the Ministry of Rural Development's emphasis on ICT for the support of MGNREGS. Visitors to the portal can find case studies and best practice documentation of ongoing and new ICT initiatives.

The Professional Institutional Network (http://www.nrega.net/pin) is the central platform for MGNREGA research and development. Users can visit this portal to find up-to-date, government- and research institution-led calendar of events, individual research group meeting minutes, and lists of research group members.

The final portal, NREGA Knowledge for Action (http://knowledge.nrega.net), aims to ensure open access to published scholarly works and relevant news articles on MGNREGA. The content is batch-uploaded by an OWFI researcher and currently houses 430 items.

BHILWARA DISTRICT: A CASE STUDY

CONTEXT

Eighty percent of the people in the district of Bhilwara are farmers or agriculture labourers. A rain fed river Banas, runs through the district; however, it is a desert region so rainfall is low. During the agricultural off season, nearly eight months out of the year, most villagers are forced to migrate to the city of Bhilwara for work.

To date, MGNREGS has provided the district of Bhilwara will over four lakh of employment, totalling to 324 lakh person days of work. Of the total number of person days, 74 percent have been worked by women, 27 percent by scheduled castes and nearly 15 percent by scheduled tribes. Nearly 361 crore has been spent on implementing the current count of over 4,000 MGNREGA works that are currently in progress.6

Despite successes of the Scheme, much inefficiency still exists. Loopholes allow for the exploitation of vulnerable groups, leaving some workers with low or nil wages; the result is often poor women left in a stagnate state of hunger with only false hope of attaining real access to improving their economic situations.

The OneWorld innovation empowers villagers and reduces the risk of corrupt practices through digital knowledge empowerment whereby the worker can access information about number of days worked and amount earned to make informed demands of deserved wages. Attendance verification further mitigates corruption by preventing the falsifying of muster rolls. As a result, the OneWorld programme ensures the entitlement to employment at a livable wage and hence, the ability to self-sustain livelihoods.

6 http://nregalndc.nic.in/Netnrega/homedist.aspx?state_name=RAJASTHAN&state_code=27&District_code=2724&District_name=BHILWARA

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METHODOLOGY

The objective of this study is to document best practices to serve as a guide for future replication of the programme of interest. As such, research carried out and documented here will elucidate the programme processes and effects through varied perspectives and a contextualized analysis. An appropriate framework for research was chosen based on the objective of the study, programme and Scheme, and the nature of the programme as an ICT4D intervention.

SSM is an evaluation method that aims to dissect a social problem through a six stage analytical process. SSM focuses on the context of an intervention, the actors involved and the change desired. These elements are captured in the acronym CATWOE which are explained below:

**Customers** - Who are the central stakeholders and how does the issue affect them?

**Actors** - Who is involved in the situation, who will be involved in implementing solutions and what will impact their success?

**Transformation Process** - What is the transformation that lies at the heart of the system - transforming a societal need into a societal need met?

**World View** - What is the big picture and what are the wider impacts of the issue?

**Owner** - Who owns the process and what role will they play in the solution?

**Environmental Constraints** - What are the constraints and limitations that will impact the solution and its success?

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**World View**

The objective of the ICT programme and the Scheme it supports is fourfold:

1. *Provide villagers with a stepping stone towards a better quality of life, namely access to basic needs – food and shelter – through economic empowerment*

2. *Provide efficient and effective rural access to publically funded employment*

3. *Generate sustainable processes for local skill building to improve livelihoods and eliminate the need for future public employment schemes*

4. *Expand local resources in a sustainable manner for the betterment of the community*

Together, these objectives form the ‘bigger picture’ in which all elements of the programme should directly or indirectly work towards; hence, they should also be the markers by which effects are measured.

The provisioning of employment is made functional through ICT, therefore, the analysis of the ‘world view’ must also use a technology lens. As such, this study leverages the Technology Acceptance Model (TAM) to analyze how the ICT aspect of the programme has come to be accepted and used.
**Actors, Customers, and Owners**

With a clear idea of overall objectives and the lens through which the study should proceed, identification of key actors can also be determined. The key actors in this study are categorized into *organizational partners, local leaders* and *MGNREGS workers*. Of these, MGNREGS workers can be defined as the ‘customers’, or central stakeholders, and the organizational partners as ‘owners’.

**Transformation Process**

A deep understanding of the programme can only be derived from actors’ experiences; therefore, interviews and surveys were conducted to study these experiences. Interview and survey questions were developed with the goal of understanding the transformation process from unemployment to effective access of MGNREGS paid work, and a further goal of contextualizing this in the change from publically provided work to the above mentioned Scheme objectives. With this in mind, questions were formulated to capture actors’ perspectives through all stages of the intervention, from programme **Awareness** to **Utilization** to individual and general **Effects**. This requires a simultaneous understanding of technology diffusion and acceptance in terms of how and by whom the technology was introduced, and how it became accepted or rejected.

**Environmental Constraints**

To capture the hurdles that may have prevented or delayed progress, interviews include questions to organizational partners and local leaders of obstacles encountered, and to MGNREGS workers about concerns.

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**CONTEXT SELECTION**

The selection of district, block, and villages was based on potential level of programme impact. The ICT programme was piloted in 10 villages across four panchayats in the district of Bhilwara; thus, the overall exposure to the programme in this district is sufficient for the collection of meaningful data. Suwana block has ‘maximum impact’ potential because it has the highest number of villages exposed to the programme within Bhilwara. Suwana and Iras villages are chosen for their close proximity to Suwana Panchayat Samiti office. The assumption is that due to mobility constraints, distance to the info kiosk will result in a higher likelihood of worker programme engagement from which best practice data can be drawn. The MoRD has chosen 101 villages for the pursuit of extensive and new MGNREGS practices - Kanda village is included in this list. The high level of Scheme activity set out for this village suggests an ideal context for the ICT programme to thrive and in turn, an ideal context for analysis.
BOX 1: THE ROLE OF TECHNOLOGY

Technology as a development intervention

Conceptual Formulation

The objective at the outset of the project was to provide easily accessible and timely information to MGNREGS workers. At a broader level, the technology was designed to ensure an effective and efficient devolution of governmental responsibilities under the Scheme from the Centre/State to District and local levels.

The central technology was conceptualized as a 'knowledge provider' for a target market that is known to be illiterate and unfamiliar with new technologies. As such, the design was to be easy-to-use and absent of much text. Since the Scheme caters to villagers across India, the need for such technological services was vast. With the potential of offering services to such a large market, low cost technology became another prioritized objective.

Deployment

The technology was deployed in a small area as a 'pilot project' for a number of reasons. First, implementers understood the high likelihood of failure when translating from theoretical model to practical intervention. Secondly, the scale of technological experiments that would be manageable, in terms of implementing and monitoring, was small. Lastly, although there was potential for deploying the technology to a vast market, the existence of limited resources remained.

Due to the largely unfamiliar audience to such a technology, user training was the first task on the implementation list. Training was given to local programme operators, student volunteers, and the MGNREGS workers. During trainings, workers also completed registrations into the computer system.

As the programme progressed, initial registration and training proved to be very important in the awareness and utilization of the technology. The workers who were absent during registration are still unaware of the programme, and local block/village level officials who lack technical training are not able to assist in the way that they desire.

Reengineering for Localization

The technical and political support and encouragement of District/Block level officials proved to be vital during all stages of the diffusion process, starting with deployment and especially during the preliminary reengineering phase. The head of the district - the collector, all Scheme specific district level officials, and pertinent block officials including the block development officer, provided a range of expertise in technology usage at the local level. Most importantly, this expertise came with a strong political will and belief in the programme which resulted in the active engagement of officials with NGO implementers. The partnership allowed for the enhancing and refining of the programme; in this case, a crucial element of the programme – the biometric attendance system - was added during this process.

It is important to note that as expected in a development intervention, due to its ability to affect local governance structures, universal support by local officials was not achieved; however, the interest and engagement by MGNREGS workers, and support from the head of the district proved to be enough to move the intervention forward.

The Absence of Technology

To determine the value added of technology in a development intervention, it is necessary to look at what it would have looked like without the technology. Two most commonly identified benefits that are unique to technology, as used in e-governance, are timeliness and an easily navigable and sustainable central database. Two benefits that receive less attention are the skill building and sense of empowerment developed and felt by the users as they engage with the technology. For all of these reasons, this programme achieved the necessary support and engagement from organizational partners and users that it would not have otherwise, in the absence of technology.
DATA COLLECTION

Field research was conducted over a seven month period with a total of seven visits to the district of Bhilwara. During this period, primary data was gathered through observation at MGNREGS information kiosks and worksites. Of the seven visits to the field, two were made for the specific purpose of documentation and lasted a total of eight days. During this time, semi-structured, 30 minute interviews were carried out by OneWorld associates with 12 randomly selected MGNREGS workers and 1 mate7. Four district, block, village level officials were interviewed in the same manner. Local officials were selected based on availability and level of involvement in the programme.

To generate a static village profile, 30 villagers were surveyed at random. Surveys included a basic needs assessment including a summary of assets, food, shelter, and health and education levels. Additionally, surveys were designed to capture villager awareness and utilization of/exposure to all programme components including the info kiosk, community radio, SMS job card retrieval and digitized attendance system.

Secondary data was collected over a 10 month period prior to, during, and following visits to the field. Data was obtained through open access resources found on nrega.nic.in, nrega.net, and knowledge.nrega.net. Further resources obtained were through gram panchayat functionaries and local NGO representatives.

WORKER PROFILE

The static profile that follows is based on survey responses from 30 randomly chosen workers. 10 villagers were surveyed in each of three villages – Suwana, Iras and Kanda. The data collected on worker demographics, Scheme participation, and ICT programme involvement suggests that users are typically poor - with little to eat, minimal housing and education.

Qualitative data regarding worker opinions of the four components of the ICT programme – info kiosk, attendance, SMS job card retrieval, and community radio, was gathered through semi-structured interviews with 12 MGNREGS workers in the same villages (four from each) and are summarized below. These results are particularly significant as they convey the user’s perspective.

The analysis begins with a user-centric snapshot of overall progress towards Scheme goals, specifically the nurturing of skill building, expansion of communal resources, and the overall movement towards a better quality of life. To analyse progress towards the ICT programme

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7 The mate is the leader of the worksite. Mates are chosen based on performance in trainings (anyone with an education level of equal to 8th standard or above can attend training sessions).
goal of providing efficient and effective access to information, the awareness, utilization, and effects of the programme are examined as seen through the themes of transparency and technology.

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<td><strong>Asset Summary</strong></td>
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<td><strong>Income</strong></td>
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<td>The average annual household income as calculated by those who knew their earnings is 30,429 rupees per year. Data was not collected from 57 percent of those interviewed due to uncertainty about income figures.</td>
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<td><strong>Food, Shelter and Occupation</strong></td>
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<td>The average number of meals eaten in a day is two and a half. The typical meal is comprised of roti and sabzi – wheat flour bread and cooked vegetable(s).</td>
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One hundred percent of the interviewees have a house to live in and 80 percent own the property. 47 percent of the houses are pakka, 20 percent semi-pakka and 57 percent kutcha.

Five of the worker’s spouses worked or work as drivers (mostly auto), five work in small shops, four as casual labourers, three work in factories, three are skilled labourers (welding, carpentry, masonry), one rears animals, one works in the local panchayat office and no information was gathered about three of the spouse's occupation.

Health and Education

Very few health conditions either with the worker or family members were revealed during interviews. The few mentioned were thyroid disease, joint and back pains, fatigue and gastric disease.

Of the 30 workers interviewed, 77 percent have no education, 13 percent have at least some primary education, and 10 percent have at least some elementary education. Spouses of workers have a slightly higher degree of education: 47 percent have no education, 20 percent have some level of primary education, 20 percent have some elementary education, 10 percent with some secondary education and 3 percent with postgraduate experience.

Additional Assets

40 percent of workers interviewed own at least one scooter for transportation. 63 percent own some amount of farm land. The average of those who know how much land they own is 2.7 bighas per household.12

Some workers own farm animals. Most commonly owned are cows, but interviewees also mentioned a horse and buffalos.

SOOCHNA SEVA KENDRA (INFO KIOSK)

During visits to Bhilwara district for this study, female workers shared their experiences with the info kiosk in Suwana Panchayat Samiti office. The women told researchers that they had been to the kiosk a handful of times to see how many workdays remained and how much money

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12 One bigha of land is equivalent to 1.67 acres.
they were owed. They expressed a need for the technology and a desire to learn how to use it to their benefit.

Interviews and surveys suggest that the info kiosk has the highest level of awareness of all four innovation components. All except one of the 12 interviewees knew of the kiosk’s existence and 10 had registered at the kiosk, indicating at least a single use of the system. 4 out of the 12 have engaged with the kiosk enough to be able to explain how it functions. The mate, NREGA worksite leader, is very familiar with the kiosk, its purpose, and how it operates. His estimate of current level of utilization by Suwana village workers is 25 percent, but awareness of 100 percent.

Three important findings from interviews/surveys that suggest a continued need for the info kiosk:

1. Workers have a general understanding of how many muster rolls they have completed, but very little idea of the exact number of days worked

2. Two out of 12 interviewees, who have each worked a minimum of 65 days, have not received any payments thus far. The info kiosk would allow them to not only know exactly how much money they are owed, it would allow for their demanding of it through filing a grievance.

3. The worksite in Iras village lacks amenities that are vital to the health and happiness of workers, including a tent for protection from the sun, a dhurri for a resting place away from the hot ground, and nearby water facilities. As a result, the villagers have a clear reason to use the grievance redressal option in the info kiosk.

BIOMETRIC & GPS ATTENDANCE

The digitized muster roll component of the programme received specific mention during initial documentation. Suwana villagers praised its ability to dramatically speed up the workday, contrasting it with previous attendance processes in which roll call resulted in hour long queues.

Of the workers interviewed from Suwana village, all understood the biometric and GPS functionality of the system. The mate of Suwana village expressed a need for this digitization and a willingness to receive training for processing the muster roll himself. He clearly stated that this digitization is an important step towards ending corruption.
SMS JOB CARD RETRIEVAL

Not many workers are aware of this component because it very new. However, nearly all workers interviewed indicated either ownership of a mobile but not knowing how to send an SMS, someone in the household owning a mobile but not the worker, or some variation of the two, including a possibility of ownership but only for the use of incoming calls because other applications are not understood. Even the few workers who said there was no mobile in their house, responded positively to friends owning mobiles.

In terms of understanding good practices then, interview responses addressing this component suggest an effective way to promote usage – target workers and all village mobile owners for training, pairing workers without a household mobile with mobile-owning friends.

COMMUNITY RADIO

Through initial visits with Suwana and Kanda villagers, it became apparent that issues of farm work and water have been the most popular topics for radio sessions. According to programme leaders/radio coordinators, the biggest challenge is encouraging villagers to share their thoughts. One organizer explained how she tackled this obstacle by playing back a recording of villagers partaking in the radio programme to convince a nearby group of villagers to speak out.

Of the 12 workers interviewed, half were aware of the community radio programme. Of these six, four participated in the radio programme in some capacity – spoke on MGNREGS issues and/or sang songs. These results suggest a gradual penetration of awareness but a high level of engagement that follows.
**BOX 2: PERSPECTIVES OF LOCAL LEADERS**

To gather varied perspectives of local leaders, interviewees were chosen from both government and civil society. A list of interviewees and results from interviews are below:

1. **Collector, Bhilwara district - Manju Rajpal**
2. **Subdistrict Magistrate (SDM) of MGNREGS for Bhilwara District- Dinesh Sharma**
3. **Suwana Block Development Officer (BDO) - Mr. Shivraj Sharma**
4. **Kanda Gram Panchayat Secretary - Muna Mohammad**
5. **Four local OneWorld kiosk and worksite operators**
   - OneWorld Local Programme Head – Ashish Asava
   - OneWorld Worksite Coordinator/Community Radio Organizer - Ashish Oza
   - Suwana Panchayat Kiosk Operator/Community Radio Organizer – Ranjeeta Dadheech
   - Kanda Gram Panchayat Kiosk Operator/Community Radio Organizer – Aruna Sharma

**Benefits:**

1. Allows *everyone* to realize their entitlement to employment as set out by the Scheme
2. Eliminates the previous dependency system (in which wage-seekers were dependent on the gram panchayat officials, which for fraud-related reasons was causing problems for workers) by enabling wage-seekers to pursue employment directly through the technology, free from human control
3. Workers’ skills are built through use of technologies
4. Creates transparency – a necessary precondition for good governance
5. Enhances job motivation and satisfaction for local officials
6. Creates ease with which Scheme information is obtained through concept of a single place for information, in contrast to earlier design that required workers to ask a long chain of people for necessary information
7. Empowers women (Before the programme, village men were introduced to new technologies through travel to nearby cities. Now, instead of approaching men for information, which women avoided due to their shy nature, they are seeking out information because they can do it through a neutral actor - a machine. From this new access to information, women are learning about electronic media and the greater world around them which has subsequently led to a rise in their confidence levels)
8. Biometric attendance system mitigates opportunities for corrupt practices; ‘the beauty of it is that no one except the person at the worksite can develop the list of workers’
9. Positively increases attention paid to villagers and their involvement in MGNREGS by government officials
10. Community radio programme promotes awareness about NREGA
11. Creates pride in radio participants from the act of sharing and hearing one’s own voice and listening to feedback from others
12. Increases community participation; radio mobilizes those who had never before shared their voices

**Challenges:**

1. Poor connectivity
2. Need for integrated systems (Collector, Manju Rajpal conquered this by suggesting the Panchayati Samiti level as the housing platform for development)

**Keys to Success:**

1. Ensured that all administrators are actively involved in the programme (this was crucial because it is the single avenue through which the programme became accepted into village society and into the Bhilwara governance system)
2. Implemented technology with an understanding of the local context and in turn, villagers became familiar with its benefits and operations
3. Included workers (central stakeholders) in every step of the process (This approach allowed wage-seekers to become the most visible actors organically, rather than a generation of user engagement through dictate by owners)
4. Programme awareness has led to a high level of local interest in which has been quickly followed by a desire to learn how to use the programme
5. Simple tools were used therefore learning was feasible
6. Local view of the technology has been progress, thus villagers have derived positive and almost prideful feelings towards the innovation
BOX 2 (CONT.): PERSPECTIVES OF LOCAL LEADERS

Recommendations:
1. Scale up from the 4,000 families to a minimum of all families living within the Block level
2. Internal programme refinements – all gaps in the cycle must be filled; offer a complete cycle of services – from obtaining job card information, to registering demands for work and having options for the demand, to incorporating the demand into the coming muster rolls, and ultimately, to timely measuring of the muster roll and delivery of payments
3. Ensure a cohesive approach by the government and implementing NGO is pursued
4. Keep technology simplified and localized to remain in touch with the local context
5. Provide SMS training to users (80 percent user potential of the SMS job card retrieval system because of the vast ownership of mobile phones in his village; however, current level of users is much lower)
6. Provide user and personnel training (one person in each household and a number of civil servants should receive SMS and computer training); Increase number of skilled technical officers (there is only one junior technical officer in 10 panchayats/17 worksites)

SUMMARY OF ANALYSIS & CONCLUSIONS

The results of this study show a high level of programme awareness. Those who are utilizing the programme are keen to do so and moreover express a genuine understanding of its potential benefits and direct connection to their economic empowerment.

Results vary across programme components – villagers are most familiar with the info kiosk, but only a few know about the SMS job card retrieval. These results are not unexpected because the kiosk was introduced to users as the main component of the programme.

Results also vary across villages. It is important to note that villages exposed to the innovation differ in level of underdevelopment, which can be measured in a number of ways; here, three measures are used: number of people per household, illiterates, and number of educated persons. Analysing these measures in relation to programme usage illustrates that even the most underdeveloped areas are utilizing the innovation.

FIGURE C: SELECT SURVEY DATA ACROSS VILLAGES

Lastly, results vary within villages from worker to worker, particularly in feelings towards the use of technology. The role of technology is majorly viewed positively - as a sign of progress, as a commitment to fair practices, and as a learning mechanism. Some elderly and extremely poor remain indifferent to role of new technologies; they are aware but remain isolated from them, lacking a desire to bridge the gap or a belief in being able to.
LESSONS LEARNED – KEYS TO SUCCESS & UPSCALING

Programme Design

The success of any development intervention depends on the design of the programme to sufficiently anticipate needs of all potential actors involved. In this case, the needs of central stakeholders, local leaders and organizational partners were taken into account when the innovation was being conceptualized. Programme innovators and designers began with a deep understanding of the goals of the Mahatma Gandhi National Rural Employment Scheme, and the decentralized context in which it operates. With this knowledge, designers were additionally aware of the differences that may exist between local civil servant goals and those of central ministers. Central stakeholders were kept at the forefront of all engaged minds – innovators looked at beneficiary limitations, needs and interests.

As a result of a holistic analysis of key actors’ needs, goals, interests and capabilities, an appropriate design for the intervention was developed. Specifically, technologies proposed for use were easy-to-use, low-cost and illiterate friendly. Additionally, information to be accessed through the new technologies was kept simple and straightforward – only the most pertinent job/wage information was included in the delivery mechanism. Finally, designers came up with an innovation that boasted some novelty in the targeted context; this was particularly important in terms of securing the interest of all actors involved.

While having achieved a great deal, OneWorld innovators recognise that sustainable success only comes with constant refinement. As such, research findings have triggered an extended design plan that will be implemented in the upcoming period. Below is the Eco-System Framework that is envisioned to ‘fill the gaps’ of the service cycle. Note that nearly all components have already been piloted except two payment-related elements which are currently in the development phase.
Implementation

An important part of implementation was generating local civil servant engagement. This combined with the generation of worker interest, has been the single most significant factor in the success of the programme. Without strategic and economic support from district, block and village level civil servants, the intervention would have crumbled under its isolation from deeply engrained local level governance structures. Moreover, a programme can never be forced upon central stakeholders, so without the workers’ interest in the programme, no amount of guidance or assistance from civil servants and/or implementers would have led to success.

The second crucial part of the implementation process was the training of central stakeholders, local civil servants, and local NGO representatives on all functions of the programme. This case study provides concrete evidence of a proper understanding of use, leading to an increased engagement with the technology. The expectation is that higher engagement will lead to a greater degree of positive effects on central stakeholders.

Bhilwara district administration is keen on having OneWorld expand the innovation up to the district level; therefore, OneWorld is open to the possibility of this extension in the future.
Diffusion and Adaption

The importance of civil servant support is not only necessary at the start of an intervention, but throughout the entire process. As the programme progresses, it is crucial for the officials who are familiar with the context, to provide expert advice for its refinement.

The ability of the implementer to remain open to new ideas and flexible for adjustment is a precursor to success. In this case, implementers added two components to the programme upon the advice from local officials given only after pilots were underway. One of the components was the attendance system which has been lauded as the component with the highest potential for creating grassroots change.

Monitoring & Evaluation

An intervention will only succeed through continual monitoring and evaluation that reveal how the programme can be strengthened. This document will contribute to this process for OneWorld's ICT programme. As this innovation goes forth, its success will depend on a continual and consistent commitment towards these documentation practices.

Knowledge for Community Empowerment and Enhanced Livelihood Opportunities was created by OneWorld Foundation India's Innovation and Delivery Team.

Research and documentation was completed by Knowledge and Research Coordinator, OWFI, Nicole Anand.

For further information, please contact Mr. Naimur Rahman, Director-OWFI.