# ICT Facilitated Access to Information Innovations

A Compendium of Case Studies from South Asia



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The WBI Access to Information Program seeks to connect key ATI stakeholders to jointly identify, prioritize, and implement actions for effective ATI adoption and implementation. The program aims to improve in-country capacity for formulation, implementation, use, and enforcement of ATI legislation through regional knowledge exchange and networking and by fostering the capacity of multistakeholder coalitions to undertake effective ATI reforms.

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## LIST OF ABBREVIATIONS

32C: Third Sector/Hybrid to Citizen

A2I: Access to Information

A2PI: Access to Public Information ACD: Automatic Call Distribution AMIS: Adaptive Multimedia System

APCD: Asia Pacific Centre on Disabilities

APIO: Assistant Public Information Officer

APL: Above Poverty Line

BDO: Block Development Officer

BELTRON: Bihar State Electronics Development Corporation Limited

BEST: Bihar E-Governance Services and Technologies Ltd

BPL: Below Poverty Line

BSNL: Bharat Sanchar Nigam Limited
BSWAN: Bihar State Wide Area Network

CC: Citizen Charter
C2C: Citizen to Citizen

CSC: Community Service Centers

CSMPL/CSM: Cybertech Software and Multimedia Pvt. Ltd.

CSRF: Cross-site Request Forgery

CUG: Common User Group

DAISY: Digital Accessible Information System
DILRA: District Inspector Land Records Agency

DLC: Divisional Level Committee

DTB: Digital Talking Books

FARR: Frequently Asked RTI Requests

FDI: Foreign Direct Investment

FOSS: Free and Open Source Software

FRA: Forest Rights Act

FRC: Forest Rights Committee G2C: Government to Citizen

GAD: General Administration Department

GIS: GeoInformatics System GoB: Government of Bihar GoI: Government of India

GPS: Global Positioning System
GPX: GPS eXchange Format

HRD: Human Resource Department

ICDS: Intergrated Child Development Scheme
ICT: Information and Communication Technology

ICT4D: Information and Communication Technologies for Development

IAY: Indira Awas Yojana

IRCD: Information, Communication, Technology and Resource Centers on Disabilities

IVRS: Interactive Voice Response System

IWDMS: Integrated Workflow and Document Management System

MGNREGA: Mahatma Gandhi National Rural Employment Guarantee Act

MGNREGS: Mahatma Gandhi National Rural Employment Guarantee Scheme

MMS: Multimedia Messaging Service
MoRD: Ministry of Rural Development
NeGP: National E-Governance Plan
NGO: Non-governmental Organization

NIC: National Informatics Centre

NREGS: National Rural Employment Guarantee Scheme

NRSA: National Remote Sensing Agency OWFI: OneWorld Foundation India PHP: Preprocessor Hypertext Language

PIO: Public Information Officer

PMO: Prime Minister's Office

PSTC: Population Services Training Centre

RTE: Right to Education RTI: Right to Information

RTIA: Right to Information Act RTO: Regional Transport Office

SDLC: Sub Divisional Level Committee

SDO: Sub Divisional Office

SDU: Software Development Unit

SecLAN: Secretariat Local Area Network

SIM: Subscriber Identity Module SMS: Short Messaging System SQL: Structured Query Language

TRTI: Tribal Research and Training Institute

TTS: Text-to-Speech

UHD: Unified Handheld Device

UNDP: United Nations Development Program

USB: Universal Serial Bus WBI: World Bank Institute

YPSA: Young Power in Social Action

## **PREFACE**

Access to Information (A2I) – to seek, receive and exchange publically held information necessary for voicing opinions and making informed decisions – is fundamental to exercising citizens' rights. Underpinning the democratic ideal of transparency and accountability in governance with the objective of citizen empowerment to demand their rights-based entitlements, A2I is best defined through a multi-stakeholder model under which facilitators of access will be many including government, social institutions, and/or individual citizens.

Examples from the developed and developing world alike clearly demonstrate that access to resources is a necessary but insufficient condition for improving citizens' quality of life. Mechanisms for greater public scrutiny and accountability with regard to public policy and service delivery are key to sustaining inclusive growth and reducing poverty. Information and communication technologies (ICT) facilitated public information can play a significant role in improving the management of public resources by contributing to a more effective, accountable and inclusive governance framework. The implicit belief here is that citizens' access to easy and non-intermediated information, combined with an enabling environment, empowers citizens to demand for and receive their entitlements.

Today, technologies are driving and reshaping the way people obtain and absorb information in their daily lives. Governments in many countries are exploring ways to take advantage of these emerging technologies to encourage openness in government and promote citizens' participation in decision making, ultimately for improving public service delivery and deepening overall democratic processes.

### **ACKNOWLEDGMENT**

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# **About This Report**

#### SCOPE

While a great deal of progress has been made towards the intended goal of the Right to Information (RTI) Act to bridge the communication gap between government authorities and citizens, there is still room for improvement in South Asia. Currently, the process required for filing a request can be cumbersome. As a result, citizens develop inappropriate expectations from the system and hence, underutilize the Act. In addition, the process remains less accessible by certain segments of the population; for example, travel is required to the concerned government department, which is not only time-consuming and costly for all, it also prevents the poor, physically challenged, and those who live in remote locations from exercising this right. Lastly, citizens have reported instances of harassment by officials while filing a RTI request; simultaneously, the same officials are at risk of citizen complaints elevating to personalized threats.

In order to address these issues and further promote transparency for the empowerment of all citizens, the Governments of India and Bangladesh have leveraged ICT towards the innovative creation of access to information. These micro level governance efforts have demonstrated the efficacy of enabling access to information through ICT. Hence, research was pursued to generate valuable new knowledge about such innovative technologies.

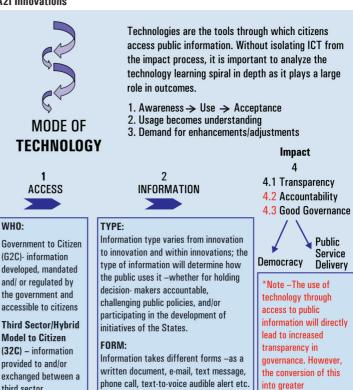
This report documents seven innovative ICT practices - five from India and two from Bangladesh - with the aim of advancing access to information for enhanced transparency and accountability in governance and the improvement of democratic practices and public service delivery.

## **IDENTIFICATION OF** GOOD PRACTICES

Good innovation practices were identified according to the following rationale, which also served as the benchmark criteria for analysis. Figure 1 illustrates the framework for identification and analysis.

It emphasizes the models of access, modes of technology, and type, form, and use of information as they contribute to enhancing transparency and strengthening accountability for good governance.

Figure 1: Framework for Identification and Analysis of ICT Facilitated **A2I Innovations** 



#### Citizen to Citizen

third sector

organisation (i.e. NGO,

social enterprise etc.)

or a combination of

actors in different

sectors (i.e. public-

private partnership-

PPP) with citizenry

generated information

citizen access and use

for the purpose of

(C2C) - citizen

The way and extent to which information is utilized will determine the impact of the innovation. Goals of usage may vary from process improvement to community empowerment to policy reform.

It can be accessed therefore through

various mechanisms, but the form will

determine how much information can be

delivered at any given time and in what

format the user will receive the

information.

accountability as it

enhances democratic

practices and improves

public service delivery

will depend on the use

of the information.

#### **ASSESSING 'ACCESS'**

Targeted innovation efforts have been selected to represent the entire span of access facilitators; in this manner, they will also be categorized and analyzed according to following:

Government to Citizen (G2C) - information developed, mandated and/or regulated by the government and accessible to citizens.

Third Sector/Hybrid Model to Citizen (32C) – information provided to and/or exchanged between a third sector organization (i.e. NGO, social enterprise etc.) or a combination of actors in different sectors (i.e. public-private partnership – PPP) with citizenry.

Citizen to Citizen (C2C) – citizen generated information for the purpose of citizen access and use.

#### **ASSESSING 'INNOVATION'**

Creating an appropriate design - Good innovations allow for organic evolution as they are absorbed and adapted by their users.

#### Ensuring contextual relevance -

Technologies may be incongruent or at some level simply unfamiliar to the local environment, thus it is important to continually assess the context in relation to the tool being used.

Continual and constant monitoring and evaluation – As changes in the local environment occur over time, simultaneous change will occur within the innovation. Monitoring the value and/or impact of approach over time is crucial to success.

Innovative/Unique – The approach taken to execute a program is what sets it apart from others. The concept may be simple, but the model should be designed in such a way that it is new or unlike existing initiatives.

Appropriate technology – Technologies are abundant, varied and exist at multiple levels of usage. Information in the digital age is infinite. As such, the use of technology to access information requires the careful choice of technology in order to generate meaningful outcomes.

**Sustainable** – Action over time is a necessary prerequisite to advancing the goal of developmental progress.

**Replicable** – Change-agents exist at the policy level and at the grassroots; initiatives may begin on the ground, but upscaling is required for a higher and deeper level of impact.

**Impactful** – Key stakeholders should benefit in some observable way from efforts of information exchange through the use of technology.

#### ASSESSING 'INFORMATION'

It is important to note that the framework for analysis illustrated in Figure 1 assumes the availability of information or minimally, the ongoing generation of it by key stakeholders. In effect, the transformational process from usage of information to impact felt will also critically and firstly depend on the existence of information.

**Type** – Information type varies from innovation to innovation and within innovations; the type of information will determine how the public uses it - whether for holding decision-makers accountable, challenging public policies that affect them, and/or participating in the development of State initiatives.

Form – Information takes different forms - as a written document, e-mail, text message, phone call, text-to-voice audible alert, etc. It can be accessed therefore through various mechanisms, but the form will determine how much information can be delivered at any given time and what format the user will receive the information. Hence, the form will affect the way in which the information is taken up and utilized.

Use/Level - The intended use of information should be well understood by all key stakeholders. Usage may vary from process improvement to community empowerment to policy reform - at any level, the usage should be clearly defined.

# ICT FACILITATED ACCESS TO INFORMATION INNOVATIONS

**Table 1: ICT Facilitated Access to Information Innovations** 

Name of Practice	Location	Brief Description	Model of Facilitation	Information Type	Technology Used
Jaankari	Bihar, India	Empowers citizens to request information from government officials through the provision of telephone and web facilities.	G2C	RTI - government	Telephone /web
ICT Ecosystem for MGNREGS	Bhilwara, Rajasthan, India	Info kiosk plus electronic worksite attendance to enable the poor to demand their rights-based entitlement enshrined under the National Employment Guarantee Act.	32C	Employment	PC, GPS, biometric, mobile
Daisy for All	Bangladesh	Audible books for the 'print-disabled' - visually impaired and illiterate.	32C	All	MP3, DVD, etc.
Citizens' Voices (Nagorik Kontho)	Bangladesh	Web portal designed to close the gap between service providers and citizens through online report submission and response.	C2C	All	web, mobile
SMS Based Monitoring	Bihar, India	Mobile technology to monitor the daily progress of development schemes at the grassroots level. The gathered information is accessible on the web for public scrutiny.	G2C	All	Mobile, PC/web
Geo- informatics for Forest Rights	Maharashtra, India	Digital land measurement and satellite imagery for verification to help forest dwellers and cultivators claim individual land rights, under the Forest Rights Act, 2006.	G2C	Land rights	GPS, GIS
I Paid A Bribe	India	Web portal to track bribes paid across the country according to user-submitted content.	C2C	Corruption	PC/web

#### **JAANKARI**

The Jaankari initiative in Bihar, India empowers citizens, including those from the most remote and underdeveloped parts of the state, to request information from government officials under the Right to Information Act through telephone and online process facilitation.

Key benefits of Jaankari include: one, reduction in time and cost spent on transportation and logistics by creating over-the-phone and webbased processes; two, allowance of illiterate and physically challenged persons to file RTI requests; elimination of the possibility of encountering hostile and unresponsive public officials with technology-assisted bypassing of human interactions.

# ICT ECOSYSTEM FOR MGNREGS

The end-to-end ICT ecosystem in Bhilwara district of Rajasthan, India enables the poor to demand their rights-based entitlements enshrined under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).<sup>1</sup>

Text-to-speech and touchscreen computers housed in info kiosks allow workers to easily access relevant information including general workers' rights and entitlements enshrined under the Act, and specific details of their own work and income accrued. The innovation also leverages GPS and biometric technologies to expedite and make transparent worksite attendance.

#### DAISY FOR ALL

Digital Talking Books (DTBs) are mainstream and alternative text-based educational materials converted to audio form. Through the use of Digitally Accessible Information System (DAISY) open source technologies, DTBs are being deployed to the print-disabled – visually impaired and illiterate – populations of Bangladesh.

A range of marginalized groups are using the DTBs to access information on social issues such as HIV/AIDS and violence against women, and legal issues including child marriage and dowry.

#### **CITIZENS' VOICES**

A web portal designed for citizens of Bangladesh to digitally report issues about public service delivery to providers. The main objective of the project is to bring citizens in conversation with public service providers.

The web platform gives citizens a 'voice' through report submission via multiple mediums of technology including email, mobile (SMS, voice, MMS) or directly through the internet. It also encourages public service providers to engage with follow-up reporting.

# SMS-BASED MONITORING SYSTEM

The SMS reporting system facilitates daily local monitoring of ten development programs in the Indian state of Bihar's 534 blocks<sup>2</sup>. Block development officers (BDOs)<sup>3</sup> and other scheme implementing officers are advised to report scheme details through SMS from a registered mobile to a dedicated central phone number.

Monitored activities include the National Rural Employment Guarantee Scheme (NREGS), the Integrated Child Development Scheme (ICDS), Indira Awas Yojana, distribution of dress and bicycle, pensions, and scholarships, construction of bridges and roads, basic health and food measures, rainfall and mutation (sale and purchase of land).

# GEOINFORMATICS FOR FOREST RIGHTS

In Maharashtra, India the geoinformatics land measurement and satellite imagery for verification system helps forest dwellers and cultivators to claim individual land rights as ensured by the Forest Rights Act, 2006.

The digital operationalization of the Geoinformatics Act enables objective and evidence based decision making through enhanced transparency. To date, 160,000 cases have been measured through GPS and more than two thirds of these claims have been decided in favor of the claimants. The creative use of ICT for accessing vital land rights information has also discouraged illegal diversion of forest land for non-forestry purposes.

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India's landmark social security legislation that allows for the right to employment on demand, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) aims at enhancing the livelihood security of people in rural areas by guaranteeing one hundred days of wage employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work.

The local administration of India is divided into three hierarchical levels: district, block and village. The block is equivalent to the 'subdistrict' or the administrative division comprised of multiple villages.

<sup>&</sup>lt;sup>3</sup> An appointed administrative officer responsible for all development schemes at the subdistrict level.

#### I PAID A BRIBE

Ipaidabribe.com is a web portal designed to tackle corruption in India by harnessing the collective energy of citizens. Citizens can anonymously report for publication the nature and location of corrupt acts. The platform aggregates data and presents it as a dynamic snapshot of bribery across Indian cities.

As a unique, crowdsourcing<sup>4</sup> web-based platform that targets an issue of popular concern, I Paid a Bribe is a powerful tool for citizen-led access to information.

## RESEARCH METHODOLOGY

#### **FOCUS**

Research was conducted to provide a basis for understanding the modes of access and types of information offered through existing innovation practices in India and Bangladesh. Case studies included in this report emphasize the use of technology and the exchange of information towards an observable impact on strengthening accountability for governance.

The seven A2I case studies are presented for the purpose of knowledge exchange and replication through learning. Specifically, the aim is to motivate informed actors – public officials, information and technology practitioners, and interested citizenry – to take forward proposed recommendations.

#### **APPROACH**

All efforts to gather information towards the production of good innovation practices in A2I were conducted through the use of action-oriented, participatory and applied research methods.

#### **Action-oriented**

Case studies will focus on innovation, the 'how to' and 'for what purpose' of described efforts. In this way, the actionable objective of the study shapes the way in which data is collected.

#### **Participatory**

There are a number of stakeholders engaged in innovation practices. In order to fully understand the functionality and impact of the innovation practice, these stakeholders will need to be involved in the learning exchange process.

#### **Applied**

Good practices are written with the intention of knowledge exchange for replication. For this reason, case studies include qualitative and quantitative analysis (inclusion of visual aids – graphs, diagrams, and tables).

#### PRIMARY RESEARCH

Primary research was conducted over the phone and through visits to implementation sites. Field visits consisted of focus group discussions with key actors, observations of use by beneficiaries, and semi-structured interviews and surveys of key stakeholders. The goal was to reflect on the strengths and weaknesses of practices in A2I and collect data (qualitative and quantitative) to this end; then to document and analyze results for mitigating threats and exploiting opportunities in practices to bring about change or improvement in the service, and/or encourage its replication elsewhere.

#### Focus Group Discussions (FGDs)

FGDs were used as an entry tool to collecting qualitative data from key stakeholders.
Focus groups were facilitated by one to three researchers with five to 10 innovation users or related actors. Group sessions were informal and semi-structured. Researchers broadly focused on areas to develop further detailed questions. Reponses were used for narrowing further research and anticipating key issues in program design and impact.

#### Observation of Use

Demonstrations of ICT functionality as used for access to information were requested for visual aid in understanding functionality. To verify processes, researchers requested users to show how they operate the technologies and utilize the information.

#### **Interviews**

Key stakeholders were identified and contacted through formal e-mail and followed-up over phone. Interview questions were based on secondary research. Questions were generated to fill gaps in understanding and to expand

<sup>&</sup>lt;sup>4</sup> To solve a problem through the outsourcing of tasks to a group of people or a community through an 'open call' system.

knowledge in focus areas. Questionnaires were designed according to a couple of key principles:

Order – questions were arranged in consideration of thematic and chronological focus. For example, as gaps in broad understanding of the innovation practice are filled, such as objectives or roles of stakeholders, detail oriented questions are asked. This includes gaps in working design, program functionality, etc. Interview questions attempt to understand impact and the feasibility and desirability of replication and/or upscaling.

**Depth** – Secondary information provides an understanding of the innovation practice at a superficial level. Primary research aims to build on this knowledge and develop a deeper understanding of the 'what', 'how' and 'why' of the program.

#### Surveys

Questions: Content, Scope and Purpose
Surveys contain dichotomous questions (yes/no)
and questions based on level of measurement
(i.e. scale 1-10). Dichotomous questions are
followed up by filter/contingency questions (i.e.
If yes, then...) in order to determine reasons
for outcomes. Questions were developed for
structured responses with the goal of affirming
the following:

- 1. Do stakeholders have the necessary information to provide an accurate answer?
- 2. Will respondents answer truthfully?
- 3. Is the question unbiased?
- 4. Does this question have a significant purpose? Will the answer suggest relevant conclusions?

#### SECONDARY RESEARCH

Secondary research was completed taking into account the following:

Government reports, working papers, and case studies – to ensure a holistic understanding of ICT · facilitated A21.

Respected media sources – to develop general knowledge of the socio-political context of the development issues surrounding the identified good practices. ICT research and organizational websites – to determine the confluence of factors that can create innovative platforms; to familiarize oneself with key actors in the ICT sector.

Right to Information (RTI) research and related knowledge portals – to ground good practices in a concrete understanding of pertinent policy that shapes A2I efforts.

#### **CONTEXUAL ANALYSIS**

#### INDIA

India is the largest democracy and the second most populous country in the world. It emerged as a major global power in the early 1990s. Much of its clout rests in its strong military and nuclear power, cultural influence and a fast-growing and robust economy.

Home to 1.2 billion people,<sup>5</sup> 70 percent of which live in rural areas,<sup>6</sup> India is an extremely diverse country with a myriad of cultures, languages and religions. The major religions are Hinduism, Islam, Christianity, Sikhism, Buddhism and Jainism.

India's diversity is also reflected in its federal political system, embedded in a parliamentary system of government wherein power is shared between the Union government, 28 States and seven Union Territories.

To fulfill its commitment to ideals of justice and equality India boasts a large social sector working in various areas of development. Landmark legislations like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the Right to Education (RTE) also hold immense promise for bolstering the government's efforts to eradicate unemployment and illiteracy.

The Indian economy enjoys a growth rate of 7.5 percent (2009-10)<sup>7</sup> and an industrial and services sector growth rate of 8 and 10 percent respectively.<sup>8</sup> The country was ranked second in global foreign direct investments in 2010, with cumulative FDI equity inflows (2000-2010) of 189.8 billion US dollars.<sup>9</sup> A fast-growing number of mobile telephones and internet connectivity has made India a prime market for global goods. Despite economic success, the agricultural industry, which employs the majority of Indians, continues to struggle, contributing to high levels of malnutrition.

<sup>&</sup>lt;sup>5</sup> Government of India. Census of India Provisional Population Data. 2011

<sup>5</sup> Ibid

<sup>&</sup>lt;sup>7</sup> Reserve Bank of India. Annual Policy Statement. 2010-2011

<sup>&</sup>lt;sup>8</sup> Government of India. Central Statistics Office. Advanced Estimates. 2010-2011

<sup>&</sup>lt;sup>9</sup> Government of India. Department of Industrial Policy and Promotion. 2010

Table 2: India Country Profile - By States from which Innovations were Selected

	Bihar	Rajasthan	Karnataka	Maharashtra
Population*	10,38,04,637	6,86,21,012	6,11,31,704	11,23,72,972
Density of Population (per sq km)*	1,102	201	319	365
GDP per capita (INR)+	7,875	17,863	27,291	37,081
Literacy rate (% of population)*	63.82	67.06	75.60	82.91
Health				
Sex ratio (0-6 yrs)#	942	909	946	913
Life expectancy at birth (in years)~				
Male	65.66	62.17	62.43	66.75
Female	64.79	62.80	66.44	69.76
Infant Mortality Rate (per 1000 live births)++	61	68	50	36
Maternal Mortality Ratio (per 100,000 live births)**	371	445	228	149
Employment in organized sector (in lakh <sup>10</sup> )##	3.94	12.21	21.47	36.83

Note: INR refers to Indian Rupee

- \* Government of India. Census of India Provisional Population Data. 2011
- + Directorate of Economics and Statistics of respective state governments. 2005-2006
- # Government of India. Census of India. 2001
- ~ Government of India. Ministry of Health and Family Welfare. 2001-2006
- ++ Government of India. Registrar General of India. Sample Registration System (SRS) Bulletin. Vol. 41. No.1. October 2006
- \*\* Government of India. Registrar General of India. Special Survey of Deaths 2001-2003. 2006
- ## Government of India. Ministry of Labor and Employment. Directorate General of Employment and Training. 2008

The Right to Information Act (2005) in India was the result of vast advocacy by citizens and certain sectors of the government to promote transparency and accountability in governmental operations. While India had already provided constitutional guarantees for freedom of speech, the RTI Act has proven to be a path-breaking policy for enhancing access to public information. At the same time, however, the process of eliciting information from the government remains unclear and cumbersome at times and in effect, continues to exclude a large number of people from using it. Owing to these hindrances, support is required to sustain the effective functioning of RTI in the country.

#### BANGLADESH

One of the world's most densely populated countries, Bangladesh is rapidly urbanizing. It struggles with issues of poverty and poor governance, but simultaneously has managed to reduce population growth and improve health and education over time.

With 164 million people,<sup>11</sup> based mainly in rural areas, the population in Bangladesh is mostly Muslim, followed by Hindu, Buddhist and Christian. It has a rich cultural heritage of Bengali literature, theater, music and dance. Nearly 40 percent of the population is poor<sup>12</sup> but access to clean drinking water and sanitation facilities is on the rise.<sup>13</sup> Bangladesh's large social sector has also been active and effective in bringing about pro-poor gains.

The economy of Bangladesh is rapidly developing. Its exports and imports have nearly tripled from 1994 to 2006. Agriculture is the main area of employment in the country but it fails to meet the national demand for jobs. As such, the government is working on diversifying the economy, with an emphasis on industrial development. Encouraging private sector investment, upgrading infrastructure and ensuring a large, skilled workforce remain priorities for the government.

<sup>&</sup>lt;sup>10</sup> An Indian numerical value equivalent to 100,000

United Nations Secretariat. Department of Social and Economic Affairs. Population Division. World Population Prospects: The 2008 Revision. 2008

<sup>&</sup>lt;sup>12</sup> World Bank, World Development Indicators. 2005

<sup>&</sup>lt;sup>13</sup> UNICEF. Bangladesh Country Statistics. 2008

<sup>&</sup>lt;sup>14</sup> Bangladesh Bureau of Statistics. Bangladesh datasheet. 2006

Challenges to democracy previously existed in Bangladesh, hence the Right to Information Act (2009) in Bangladesh has been a welcome step forward. RTI is still a very new concept for the country; record management and citizens' awareness about RTI are major challenges to the future success of this policy.

countries: the Mazdoor Kisan Shakti Sangathan and the National Campaign for People's Right to Information in India, and the RTI Forum led by the Manusher Jonno Foundation in Bangladesh. However, legislations like the Official Secrets Acts (1923) have worked to limit transparency in government affairs. As such, the implementation

Table 3: Bangladesh Country Profile - By Division from which Innovations were Selected

	Chittagong	Dhaka
Population	6,612,140*	8,511,228*
Density of Population (per sq.km.)	1,251*	5,813*
GDP per capita (USD)	520*	550*
Literacy rate (%)	50.29**	64.79*
Health		
Sex ratio (0-6 yrs)	900**	806*
Life expectancy at birth (in years)		
Male	65.5**	64.4*
Female	67.9**	65.7*
Infant Mortality Rate(per 1000 live births)	43**	50 <sup>+</sup>
Maternal Mortality Ratio (per 100000 live births)	337**	158##
Employment in organized sector (%)	25**	27*

<sup>\*</sup> Bangladesh Bureau of Statistics. Census of Bangladesh. 2001

## World Health Organization. Maternal Mortality Estimation at the Sub-national Level: A Model-based Method with an Application to Bangladesh. June 2010

# INDIA AND BANGLADESH: A COMPARATIVE ANALYSIS

Navigating the bureaucracy to claim basic public services has long been a complicated and frustrating experience for citizens of most developing countries because of the lack of information required for deciphering government rules and regulations. As a result, India and Bangladesh have implemented Right to Information Acts which have made it possible for citizens to demand public information from the government in a systematic manner. This has breathed new life into concepts that lie at the heart of democratic governance – transparency and accountability.

The Right to Information was enacted in India in 2005 and in Bangladesh in 2009. It was solidly bolstered by civil society organizations in both

of RTI is to be approached through the ongoing struggle for democratic institutionalization, better governance and public service delivery, control of corruption as well as a matter of fundamental right which has the potential to change the lives of the poor in these countries.

RTI seeks to realize democracy by empowering people to ask questions to their representatives and thereby, exercise agency. To enable this agency, and in response to the quest for solving the problems which citizens encounter on a daily basis while dealing with service providers, India and Bangladesh have implemented Citizen Charters (CC). A CC represents the commitment of the organization towards standard, quality and timely service delivery, grievance redressal mechanisms, transparency and accountability. The majority of the government departments in both countries have clearly displayed CCs on notice boards and on websites.

<sup>+</sup> Bangladesh Bureau of Statistics. Sample Vital Registration System (SRVS). 2007

<sup>\*\*</sup> Bangladesh Bureau of Statistics. 2006-2007

Government of India. Ministry of Personnel, Public Grievances and Pensions. Department of Administrative Reforms and Public Grievances. Web. 20 April. 2011. < http://darpg.nic.in/>.

In Bangladesh, the RTI Act mandates units for information provision from the head to the divisional, regional, district<sup>16</sup> office or subdistrict (upazila)<sup>17</sup> offices of the government. The Union Council, the lowest unit of administration in Bangladesh, is not included in the Act. In India, however, the policy includes the village level administration; specifically, village secretaries in each panchayat<sup>18</sup> are required to assume the role of information officers. As a result, there are reported instances of villagers, armed with authentic information, contesting panchayat elections in India. Furthermore, all levels of the government (center, state, district and village) have put their records in regional languages in the public domain. Similar examples exist in Bangladesh, but in absence of an appropriate authority for seeking information from the Union Council, local people find it difficult to procure information regarding matters of direct concern to them.

Proper management of information is crucial for its swift disclosure. Considering that data management in India and Bangladesh was entirely manual until recently, it will take time before all records are updated, catalogued and digitized for use by Public Information Officers (PIOs). However, some progress has already been made in this regard. For example, e-reforms in the Human Resources Department of Bihar, India, have enabled easy identification of 1.5 lakh documents through a computerized catalogue. <sup>19</sup> Similarly, the Bangladesh government's initiative, 'Digital Bangladesh', aims to digitize all public records. <sup>20</sup>

Analyzing media and communications in a country can provide insights into people's capacity to access public information.

Newspaper, radio, television, mobile phones, and internet are all modes of access to information. According to the 2009 International Telecommunication Union's report,<sup>21</sup>

Bangladesh fares poorly in terms of mobile phone subscriptions and internet connectivity, while India scores relatively better.<sup>22</sup>

As time goes on, the exact functioning of RTI will be different in India and Bangladesh because each country operates under its own type of democracy with different socio-economic environments. While India formally adopted a democratic model of government immediately after independence in 1947, democracy had to wait until 1990 to take root in Bangladesh. Despite India's per capita income being double to that of Bangladesh, social indicators in the latter are relatively more positive. India's income advantage does not reflect well in other indicators that affect people's ability to lead a good life.<sup>23</sup> For example, life expectancy in Bangladesh is 67 compared to India's 64.24 Instances of infant mortality and total fertility of Bangladeshi women are lower than that in India. Similarly, Bangladesh enjoys a better sex ratio than India and more people in Bangladesh use improved sanitation facilities<sup>25</sup> than those in India.

Taking from this scenario, it is clear that democracy must not only be a form of government but a form of associated life, grounded in rights and deliberation, mutual respect and shared ways of life. In order for democracy to be substantive, it is necessary for structures of privilege to be dismantled. Possession of knowledge and information is necessary for exercising control over other resources and for keeping the disadvantaged excluded from sharing the benefits of government policies. The Right to Information and the Right to Know strike at the core of limiting this privilege through widening possession of information.

<sup>&</sup>lt;sup>16</sup> The highest local unit of administration in India and Bangladesh.

<sup>17</sup> There are three units of local administration in Bangladesh: district, upazila and village. The 'upazila' is equivalent to the 'subdistrict' and is comprised of villages.

<sup>18</sup> The democratically elected body responsible for village level administration in India. It is often referred to as the local unit of self government in rural areas

<sup>&</sup>lt;sup>19</sup> Government of Bihar. General Administration Department. 2008

<sup>&</sup>lt;sup>20</sup> Government of Bangladesh. Prime Minister's Office. Board of Investment. Web. 20 May. 2011. <a href="http://www.digitalbangladesh.gov.bd/">http://www.digitalbangladesh.gov.bd/</a>>.

<sup>&</sup>lt;sup>21</sup> International Telecommunication Union. Asia and the Pacific. *Information Society Statistical Profiles*. 2009

<sup>22</sup> Ibid.

 $<sup>^{23}</sup>$  Amartya Sen's capabilities approach refers to the freedom that a person actually has to do this or be that.

<sup>&</sup>lt;sup>24</sup> UNICEF. Country Statistics. 2009

<sup>&</sup>lt;sup>25</sup> According to UNICEF, improved sanitation facilities include flush/pour flush to piped sewer system, septic tank, or pit latrine; ventilation improved (VIP) latrine; pit latrine with slab; composting toilet. Only private facilities are considered to be improved.

**Table 4: Country Profiles at a Glance** 

	India	Bangladesh
Population (in millions)	1210.1+	164.4##
Density of population (per sq. km)	382+	1111.1+++
Rural population (% of total population), 2001	72.18++	76.18**
Urban population (% of total population), 2001	27.81++	23.81**
Poverty headcount ratio at national poverty line (% of population), 2005	27.5#	40#
Unemployment (% of total labor force), 2004	4.4#	4.3#
GNI per capita (USD), 2009	1170	590
Median age (years)	24.7*	24.1*
Sex ratio (males per 100 females)	107*	102*
Total average adult literacy rate (%), 2005-08	63	55
Life expectancy at birth (years), 2009	64	67
Infant Mortality Rate (per 1000 live births), 2009	50	41
Fertility Rate (average no. of children per woman), 2009	2.76	2.36
Maternal Mortality Ratio (per 100,000 live births), 2008	230	340
Estimated no. of people living with HIV (in thousands), 2009	2400	6.3
Population using improved drinking-water sources (%), 2008 <sup>26</sup>	88	80
Population using improved sanitation facilities (%), 2008 <sup>27</sup>	31	53
No. of telephones per 100 persons, 2008	29	28
No. of internet users per 100 persons, 2008	4	0

UNICEF. Country statistics.

- + Government of India. Census of India Provisional Population Data. 2011
- ++ Government of India. Census of India. 2001
- +++ United Nations Statistics Division. Country data. 2008

## United Nations Population Fund. Report on The State of World Population. 2010

The Right to Information Act in India and Bangladesh has spurred immense awareness about and participation in government affairs by the average citizen. Democracy now means more than the right to vote: it also encompasses the right to question and be critical of government policies, to ask for

an explanation for the way public money is being spent, and to seek redressal for citizens' grievances. Government is now necessarily required to be more open and accessible to the people and, at the same time, public service delivery more prompt and accountable.

<sup>\*</sup> United Nations Secretariat. Department of Social and Economic Affairs. Population Division. World Population Prospects: The 2008 Revision. 2008

<sup>\*\*</sup> Bangladesh Bureau of Statistics. Census of Bangladesh. 2001

<sup>#</sup> World Bank. World Development Indicators. 2004

<sup>&</sup>lt;sup>26</sup> According to UNICEF, improved drinking water sources include piped water into dwelling, plot or yard; public tap/standpipe; tube well/borehole; protected dug well; protected spring; rainwater collection.

<sup>&</sup>lt;sup>27</sup> According to UNICEF, improved sanitation facilities include flush/pour flush to piped sewer system, septic tank, or pit latrine; ventilation improved (VIP) latrine; pit latrine with slab; composting toilet. Only private facilities are considered to be improved.

# Executive Summary

Through a select set of seven innovations, five from India and two from Bangladesh, the following analysis provides insights into: the existing models of access to information; the mode of the technology through which access is enabled; and the type, form and use of information as it affects governance particularly in terms of democratic processes and public service delivery. This section will highlight cross-cutting issues and discuss the key lessons learned for addressing them in future efforts.

### THE MODEL

# CHOOSING THE RIGHT PLATFORM

ICT-facilitated access to public information innovations explored in this report can be categorized into three functional models: Government to Citizen (G2C), Third Sector/Hybrid to Citizen (32C), and Citizen to Citizen (C2C). Of the seven case studies presented here, three can be described as G2C, where the government is the primary institution facilitating citizens' access to information; two are 32C models in which a combination of public and private or non-profit organizations plays the role of facilitator; and two are citizen-led information exchange with other citizens (C2C).

Research findings suggest that there is no 'silver bullet' to success and that certain models might work better in particular contexts given different conditions. However, the C2C model stands out as the most promising platform. A C2C platform for ICT based access to public information is citizen-led but moderated by public, private, third sector entities or some combination of the three. Although this model is relatively new in the context of South Asia, and therefore not yet fully understood, preliminary research indicates a dynamism that is unique to it. This quality shows the potential for large-scale, adaptable, and constant improvements in governance.

The major advantages of a citizen-led platform are:

- 1. Minimal dependencies as per a diverse and widespread primary facilitator
- 2. Easy adaptability and possibility for upscaling
- 3. Infinite demand that is rapidly and organically increasing over time.

#### AWARENESS FOR ACTION-ORIENTED USAGE

#### Building an 'Actor-Network'

Individuals, organizations and the technologies they use to access information comprise networks that are constantly and continually undergoing changes. The formation of these networks will determine the capacity of the innovation model to impact a sizeable audience.

Actor-networks can be understood through the cooperation of three major stakeholder groups:

NGOs: Organizations with similar objectives can be delegated the task of interacting with government agencies. NGOs build a rapport with local officials and trust with beneficiaries they can be leveraged to campaign for change locally.

Citizens: Individual citizens can use their democratic right to set up meetings with public officials and advocate for governance reforms. They can be trained by primary facilitating organizations.

Government Officials/Political Leaders: Public servants in favor of institutional reforms can act as informal ambassadors. Key stakeholders with past experience in working with government should build on this experiential knowledge.

Developing a strong network comprised of local champions and similarly oriented organizations, and exploiting individual abilities and organizational expertise, helps to overcome common issues that arise when attempting to provide widespread access to information. The following are problems that actor-networks can address and hence, reasons for creating them:

#### Supply Side Issues

- To overcome resource shortages by exploiting networked capacities
- To deal with knowledge gaps through provision of specialized training

#### Demand Side Issues

- To reach remote user groups by leveraging locally established organizations
- To expand users' interest in the program through extensive outreach
- To understand user needs and demands and match them with relevant information, as per comprehensive data collection and management

Developing detailed action plans for partnership building will expedite innovation upscaling in a manner that is manageable, monitorable and sustainable. A strategic framework for reaching this goal should entail:

- Strengthening existing relations with partner organizations by offering consistent updates of progress made through e.g. newsletters, media and research highlights.
- Expanding organizational partnerships through presentational efforts of process documentation e.g. promotional materials such as brochures.
- Deepening penetration with current user groups through adapting tools to identified user preferences and understanding level of potential usage.
- Widening user group access through scalable outreach.

## MODE OF TECHNOLOGY

# APPROPRIATE TECHNOLOGY CHOICE

#### Offering Multiple Mediums

The abundance of technologies characterizes the world we live in today. Technology needs and preferences will vary between and within populations. They will depend on socioeconomic profiles of users; in the context of access to public information in South Asia, influential factors will be economic status and educational level. Due to the extreme diversity in these factors within the region, it is reasonable to conclude that the range in technologies offered to access information would need to be great. As the teledensity in developing countries grows at rapid rates, mobile solutions should be continuously looked at for possible integration. Offering varied technologies - mobile, web, radio or other - will extend the reach of innovation benefits to make access inclusive.

#### **Matching User Needs**

User groups differ in a number of ways and as such, their interests in informational type and form and mode of access also vary. These complexities are best addressed through acting on observations made about user behavior and through feedback. Innovation usage will grow if technologies and information are developed and adapted to user needs. Paramount to ensuring this is treating users as a heterogeneous population that may require customized interventions.

#### Open Source Vs. Proprietary

One of the major considerations in developing an ICT-led innovation is the use of open source

or proprietary software. Open source software is often cheap or even free and the 'source code' is freely shared, as opposed to proprietary software where rights of usage have to be purchased.

The case studies in this report suggest that the popular choice is a hybrid of the two types depending on a variety of factors. Sustainability is a major consideration - particularly, the costs of the technologies over time. Adaptability is also important; cases in this report focus on the ability to localize software to fit the context e.g. multilanguage options. Development expertise in a certain platform influences software decisions. Interoperability or the availability of software to work smoothly with varied hardware is considered as well.

Case study results indicate a preference for using proprietary software when developers have previous experience in using it and when selected hardware operates optimally on it. However, open source is opted for when keeping costs low and customization are priorities. Feedback from stakeholders also suggests a leaning towards using open source if at all possible.

# INFORMATION TYPE AND USE

#### RICH, UNBIASED AND CREDIBLE

Quantitative data can help to develop a preliminary understanding of outcomes but determining reasons for results requires a second level of data. In most cases, qualitative information would provide the necessary further insights into appropriate action for addressing gaps and exploiting benefits. Multiple sets and types of data will heighten the richness of information and hence, result in the most appropriate action for improved public service delivery.

Due to a confluence of varying social, political, and economic conditions, information, whether citizen, government or social organization developed, is always at risk of being biased in some way. As a result, when accessing information users should also be informed of these issues and absorb the information accordingly.

Resistance to transparency in governance is a commonly observed scenario. Generating trust in information credibility is therefore important to bring about change.

# SUSTAINABILITY AND IMPACT

# CLOSING THE LOOP – 'LAST MILE CONNECTIVITY'

# Capitalizing on Existing Links and Creating Missing Ones

The supply of information and the demand for it each constitutes a process that can be broken down into stages. Case studies examined in this report show a tendency to implement innovations that fulfill the first stages of the process, but face barriers when seeking to connect the final links. On the supply side, information is generated but often not monitored or evaluated for understanding areas in need of improvement. On the demand side, information is accessed but feedback is not given and the application of it is minimal. Success will stem from the information providers' aggregation, manipulation and analysis of information for improved provision; in the same way, the utilization of information for desired benefits by users accessing it will define results.

Desired impact from obtaining information for improved public service delivery and/or democratic practices may be contingent on a final action or procedure that lies outside of the realm of the original innovation; in these instances, expanding the scope of the innovation to provide support for the final link should be considered.

# Engaging with Existing Systems for Institutionalization

To ensure innovation sustainability, research findings support a need to consider and engage with existing systems. An A2I innovation that operates on its own, without absorbing the original process in some way, may face barriers to sustain efforts. Powerful institutions and policies make networks that influence outcomes at various levels; innovations can effectively

shape outcomes through facilitating access to information by institutionalizing efforts.

Institutionalization of innovations can occur through the following steps: One, concrete efforts to understand traditional and current systems. Two, molding the new innovation to integrate it into the existing network. Three, capitalizing on synergies between the two systems for improved results.

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#### Case Study 1

## Jaankari

## BIHAR, INDIA

#### IN BRIEF

As outlined in the 2005 Act, the Right to Information (RTI) is the legally enforced entitlement of all Indian citizens to access information from public authorities through a written application process. While it is intended to bridge the communication gap between government authorities and the citizens of India, it remains with areas for improvement.

In order to tackle the problems preventing the Act from having a positive impact, the Government of Bihar (GoB) has implemented Jaankari – a call center equipped with web-based RTI application software and voice recording hardware, designed for the provision of: a RTI helpline, a phone line for the direct filing of RTI applications, and a grievance redressal number for those who have been harassed while making a request in person.

Since its inception in 2007, Jaankari has proven to be beneficial in a number of ways. First, no physical movement is required by the applicant, thus saving time and money on travel. Second, due to elimination of direct communication with public officials, citizens are not at risk of being harassed. Third, as a result of using ICT, information is accessible to a wider audience – citizens from remote and underdeveloped areas and those who are minorities and/or illiterate are accessing Jaankari services. Lastly, citizens are being educated on the Act and guided on how to exercise their entitlements in a more effective manner.

#### DESCRIPTION

Statewide call center plus integrated web portal for streamlining of RTI requests. Implemented through over-the-phone and online application submission, query and grievance redressal.

## LESSONS FOR THE FUTURE

- Awareness is a necessary but insufficient condition for turning innovation usage into realized impact. To make citizens aware of information access such that they engage with the innovation will require strategic partnering with organizations of different expertise.
- Adaptability is key to sustainability. Use of technology at the State level leaves room for unexpected and organic changes in model structure on the ground. These would need to be acknowledged and integrated for best results.

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PIO: Public Information Officer

RTI: Right to Information

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List of Abbreviations	
ACD: Automatic Call Distribution	
APIOs: Assistant Public Information Officer	
BELTRON: Bihar State Electronics Development Corporation Limited	
BEST: Bihar E-Governance Services and Technologies Ltd	
BPL: Below Poverty Line	
BSNL: Bharat Sanchar Nigam Limited	
C2C: Call2Connect	
CSC: Common Service Centers	
CSMPL/CSM: Cybertech Software and Multimedia Pvt. Ltd.	
FARR: Frequently Asked RTI Requests	
GAD: General Administrative Department	
GoB: Government of Bihar	
HRD: Human Resource Department	
ICT: Information and Communication Technology	
IVRS: Interactive Voice Response System	
IWDMS: Integrated Workflow and Document Management System	
NGO: Non-governmental Organization	

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## **BACKGROUND**

Broadly, Jaankari aims to support the implementation of the Right to Information Act (RTIA) through the use of information technology; thus, it seeks to help citizens act upon their right to obtain government (central, state and locally) held information. Jaankari seeks to do so through the provision of an easily and widely accessible way of directly requesting information from the appropriate Public Information Officers (PIOs).

The Government of Bihar (GoB) launched Jaankari in January 2007. The project falls under the directive of the General Administration Department (GAD). It was originally conceived by the Bihar State Electronics Development Corporation Limited (BELTRON). At its outset, operations were outsourced to the private firm, Call2Connect. In December of 2010, Cybertech Software and Multimedia Pvt. Ltd. (CSMPL or CSM hereafter) replaced Call2Connect and took charge of over-the-phone RTI citizens' requests and appeals. Bihar E-Governance Services and Technologies Ltd. (BEST), the private partner of BELTRON, is responsible for the development and management of the integrated online platform. The telecommunications service provider for this project is the government owned, Bharat Sanchar Nigam Limited (BSNL). Application fees for citizens are Rs. 10 (.22 USD) which is automatically charged to their BSNL account. Jaankari services all citizens in the State of Bihar - 38 districts and 103.8 million people (Census of India, 2011).

#### WORKFLOW

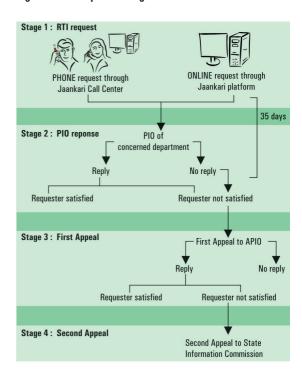
#### Stage 1: Request Through Jaankari-Phone & Online

Jaankari call center is open from 8am to 8pm during which operators manage incoming calls to three phones lines:

- 155311 Application number premium number (PRI)
- 155310 General number status of application and information about RTI
- Harassment line This was set up upon the

advice of the Bihar administration; however, it is currently underutilized as the call center has received only 3 calls over the last 3 months.

Figure 1: RTI Request through Jaankari



Call center operators guide citizens on how to identify and frame their questions. They then input questions and relevant demographic data pertaining to callers into the Jaankari online request tool. A unique reference number is attached to the query received or application filed. It is accessible and answerable online in real time by PIOs through a unique ID login. The requests are additionally pushed to a formal letter template and sent as an email and a hard copy to the PIO of the concerned department, who is responsible for the answer reaching the citizen within 35 days. An additional copy is sent to the requester as a form of receipt.

In the case of no response received or requester dissatisfaction with the response, the applicant can file an appeal through Jaankari, which is then forwarded to the appellate authority. In case of no response to the first appeal, a second appeal can be filed in a similar manner and is sent to the State Information Commission.

A call center manager and team leader are on-site to assist operators with any questions that may arise while taking calls from citizens. Interview results suggest that the greatest challenge faced during this stage has been trying to make citizens aware that Jaankari is not a grievance redressal helpline, but a RTI-specific call center.

#### Stage 2 - 4: PIO Response, First and Second Appeals

After a RTI request is made, the responsibility lies in the hands of the PIO from the concerned department to respond within 35 days.<sup>28</sup> The low capacity of PIOs to fulfill their RTI-related duties, namely because they are only a small portion of what their total job demands, is common across the country.

During interviews with key stakeholders, three suggestions were given for improving this situation. The first was the upkeep and digitization of records/government files. Along these lines, the Human Resources Department (HRD) is undergoing an overhaul whereby written files are systematically being arranged in an easily accessible store room and simultaneously, files are being digitized. Secondly, according to a State Information Commissioner, half of citizen appeals are based on lack of a response to initial RTI requests, and the other half are due to their dissatisfaction with the response given. It may be reasonable to anticipate a decline in the number of non-responses as recordkeeping becomes increasingly sophisticated. Third, a

manager at BEST suggested that ICT additionally be leveraged towards empowering PIOs in a way that streamlines their work processes, for example by designing a digital template of answers to commonly made RTI requests. Offering extensive PIO training programs was also recommended for capacity building.

Appeals indicate a failure to provide information by the government to the citizen, provision of only partial information, or the citizen's dissatisfaction with the information provided to him/her. Appeals can only be made through Jaankari if the original application was filed through the call center. Generally, appeals only take a few minutes to file through Jaankari because it is expedited through the digital tracking system.

#### A NEW PHASE

A number of changes have been made to the Jaankari system since December 2010 when CSM<sup>29</sup> took over Jaankari operations. Operators grew in number from six to 12 and were technically trained for one month by the CSM call center manager and on RTIA by a lawyer. With the advancement in penetration of computing technologies throughout the state, as exemplified by the computerization of 1000 urban schools and establishment of 5000 Common Service Centers (CSCs) in rural areas,<sup>30</sup> the Jaankari platform was launched as a web-based system. This has made Jaankari easily accessible to all involved stakeholders. Table 1 is an extensive list of effects from the switch to an online platform.

Table 1: Phase II - A New Operator

As of December 2010	Impact
Integrated Online Platform	Requests cannot be changed after they have been registered in the Jaankari system, therefore post-request malpractice is mitigated
http://biharonline.gov.in/ RTI/	PIOs have direct, real time access to requests through the online platform
	Assistant Public Information Officers (APIOs) have a dedicated login for real time access to first appeals
	State Information Commissioners have a dedicated login for real time access to second appeals
	<ul> <li>As call center operators log requests into the system, they are digitally transferred to the concerned authorities</li> </ul>
Online RTI request	RTI requesters can directly file a request through the online form
	<ul> <li>Online payments can be made through Visa or MasterCard (Rs.11 = Rs.10 application fee + Re.1 processing fee; ~.24 USD)</li> </ul>

 $<sup>^{28}\,</sup>$  When RTI requests are not filed through Jaankari, PIOs needs to respond within 30 days.

 $<sup>^{29}\,\,</sup>$  CSM Technologies Private Limited. Web. 9 May. 2011. <a href="http://csmpl.com/>">.</a>

<sup>30</sup> As per a discussion with key BELTRON stakeholders.

As of December 2010	Impact	
Online citizen application tracking	<ul> <li>Any citizen requester can obtain, in real time, downloadable and printable requests with submission of a request number and the district from where the call was made</li> </ul>	
Use of an Interactive Voice Response System (IVRS)	<ul> <li>Automated transfer between operators based on time of operator stagnancy</li> <li>Calls are recorded - transparency allows for easy transfer of data and monitoring for friendly service</li> </ul>	

RTI as an Act has become increasingly understood as many NGOs have begun to actively promote it. A well-known RTI activist's recent election to State Cabinet Minister is a sign of citizens' prioritization of the policy. The promotion of the Act through citizen-centric organizations and the integration of interested individual actors have not only helped to promote RTI but subsequently the utilization of Jaankari as well. This is depicted in the increase in average number of calls per month from 1,200 in June 2010, to 3,000 in April 2011.

The entire Jaankari ecosystem, which is comprised of call center users, PIOs, NGOs, information commissioners, and CSCs, has reached a stage of maturity at which it actively engages with the system in a way that furthers the intended impact of transparent access to public information for enhanced accountability and improved public service delivery.

According to a survey completed by the Hindustan newspaper, 38 percent of RTI requests in Bihar are filed through Jaankari. This is a significant figure that validates the need for analyzing the benefits and impact of this innovation. The following table illustrates the obstacles faced by citizens while filing RTI requests prior to Jaankari, and matches them with Jaankari's addressal of them.

Other benefits include the environmentally friendly nature of the program as it moves towards a paperless system.

**Table 2: Key Benefits to Citizens** 

Pre - Jaankari	Post- Jaankari	
Citizens have to visit a local government office	Citizens can also file RTI requests by:	
and complete a written RTI request.	Calling Jaankari call center	
	Completing an online form through the web portal	
RTI requesters are required to physically visit a bank or post office to pay the 10 rupee application fee.	<ul> <li>Calls are restricted to the BSNL service provider. When the caller is connected with Jaankari, an automatic 10 rupees is charged to their phone account.</li> </ul>	
	<ul> <li>Online payment is available for MasterCard and Visa.</li> </ul>	
Citizens using RTI are not aware of how to demand information from the government.	Citizens receive instructions on how to most effectively formulate RTI requests from call center operators.	
Information related to RTIA is not readily available.	Citizens can call a separate call line for RTI-related queries.	
An in-person visit to the local government office can result in overworked and unfriendly officials who treat citizens poorly.	Citizens who have been harassed by government officials while filing a RTI request in person can call the grievance helpline.	

## **METHODOLOGY**

Qualitative data focused on innovation design and functionality, use of technologies, sustainability and impact was gathered from semi-structured interviews with key stakeholders. Interviewees included the Chief Technology Officer of BELTRON, the manager of Jaankari call center, and call center operators. Fifty citizen users of Jaankari services were surveyed at random to understand user preferences and satisfaction. Interviews were face-to-face and citizen surveys were completed over the phone. Quantitative data of Jaankari traffic was gathered from BELTRON.

#### DATA COLLECTION

#### Level of Operations

- Number of requests/calls made through Jaankari 1) to date and 2) per month
- Two sets of data were gathered to fulfill this objective. The first set is an aggregation of application requests, first appeals, and second appeals, and queries over the lifespan of Jaankari (Jan 2007 – Jan 2011). The second set is a monthly breakdown of this data.

## Reach of Services - from where, from whom

Number of requests per district 1) to date 2) in most recent month

 Two sets of data were collected: one, a district breakdown of requests to date and two, requests by district in the most recent month. This data was obtained through BELTRON.

Demographic profile of callers (literacy, gender, physical condition)

 Certain demographic data, such as gender and physical condition, is collected by Jaankari operators during calls. However, this data is held in the server which is not accessible in an aggregated format after the call. As such, analysis relating to this outcome was based on anecdotal evidence along with any conclusions made from citizen surveys.

#### **Impact**

Through interviews with key stakeholders, a qualitative assessment of impact was obtained. By speaking with various stakeholders from all involved organizations, researchers were able to gain an understanding of the impact.

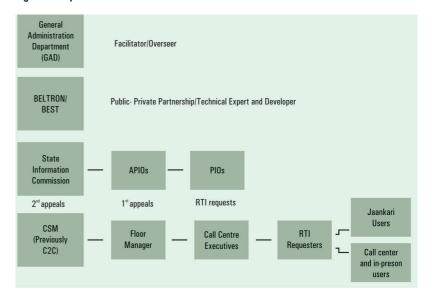
#### STAKEHOLDER ANALYSIS

"The future of Jaankari in Bihar is promising. Bihar boasts the fastest growing telecom industry in the nation and today, it is clear that telephone is the universal medium of change."

- Chief Technology Officer, BELTRON

The General Administration Department (GAD)-Government of Bihar, BELTRON, BEST, CSM, PIOs, and the call center manager/operators are together responsible for the effective implementation and upkeep of Jaankari.

Figure 2: Key Actors & Roles



#### **SWOT ANALYSIS**

#### Strengths

- Convenient no travel required
- Informative citizens are trained on how to ask questions
- Safety avoids 'face-to-face' harassment of citizens by government officials

 Inclusive – physically challenged, illiterate, women, poor and people in remote areas can access it

#### Weaknesses

- Basic knowledge of phone technology is a prerequisite
- Number of calls have decreased and remain low
- Does not address low capacity of PIOs to fulfill requests
- Single service provider (BSNL) connectivity issues and limited callers

#### **Opportunities**

- Increase usage through raising awareness
- Leverage social organizations at the grassroots level; for example, the use of KABIR, a Delhi-based NGO was used for RTI training of call center operators
- Utilize data for monitoring of the Act
- SMS tracking of requests
- Decentralize call centers
- Alter financial model to more aptly match user needs and for increase in revenues
- Expand partnerships with service providers

#### Threats

- Emergence of possibly exploitative intermediaries (e.g. in Sitamarhi District)
- Change in management private operator and/or government overseer/monitor

## **SUSTAINABILITY**

#### COSTS

The General Administration Department (GAD) has allocated approximately 9.5 million USD<sup>31</sup> for Jaankari operations since its launch in 2007. Funds are released on a 'as per required' basis. The following is a breakdown of expenditure and corresponding funding stakeholders.

Table 3: Breakdown of Costs

Expenditure Item	Expenditure Amount	Responsible Agency
Call center operator salaries (12, as of Dec 2010)*	Rs. 11,000/ month (~244 USD)	CSM
Premium phone lines (BSNL)	95,000/yr (~2111 USD)	GAD
Hardware & Software	13 PCs 1 Printer IVRS 12 Headsets 2 modems	CSM BELTRON
	Jaankari software Google Transliteration (free)	BEST
Post of Hard Copies**	Rs. 10.6/ application (~.24 USD)	GAD

<sup>\*</sup> Salaries of one floor leader and one call center manager are also required.

#### Call Center - User fees

Each caller is charged the regular application fee of 10 rupees (~.22 USD) for the first five minutes of the call; thereafter, he/she is charged 1.8 rupees per every three minutes. Interviews with operators revealed an average call time of approximately 10 to 12 minutes. This results in a 3 to 4.2 rupee charge per call to users in addition to the regular application fee. With an average of 3000 calls per month, this would bring the total monthly call center revenues to approximately 9000 to 12,600 rupees. This is just enough to offset approximately one operator's salary expense.

<sup>\*\*</sup> Since hard copies of applications are still required for verification of authenticity through signature, GAD bears the cost of approximately 10.6 rupees per application sent by post. This includes printing, stamping, and sending.

<sup>&</sup>lt;sup>31</sup> 1 USD is equivalent to 45 INR.

## **ASSESSING USAGE**

#### LEVEL OF USAGE

Jaankari receives an average of 2068 calls – applications, first and second appeals, queries, and grievances - per month, of which 386 are specifically initial RTI applications. Figure 3 illustrates the number of calls to Jaankari over its four years in operation.<sup>32</sup> Although the number of calls increased by five times from 2007 through 2010, it is apparent that the change in operator in December 2010 affected data collection and/or call traffic. Further research remains to be done on the exact effects due to the change in operator.

#### **GEOGRAPHIC SCOPE**

As illustrated in Figure 4<sup>33</sup> (refer to page 34), all districts of Bihar have utilized Jaankari services. Furthermore, nine districts have filed over 1,000 requests for either initial, first appeal or second appeal applications. Two districts, Patna and Sitamarhi, have filed over 7,000 requests each. The average number of requests per district is 952. Using the most recent full month of data, the average number of calls per month per district is 31.

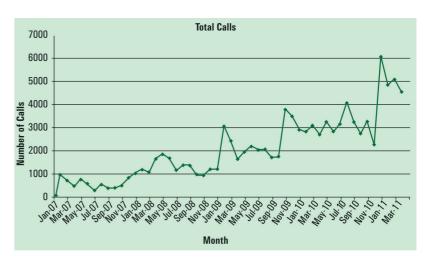
#### **USER SURVEY ANALYSIS**

A sample of 50 users was randomly selected for telephonic surveys from the total 3,050 citizens that filed RTI requests through Jaankari in March or April 2011.<sup>34</sup> Analysis based on the feedback gathered aims to determine a reasonably accurate representation of why people use Jaankari, to what extent, and how satisfied they have been with the service.

#### Purpose of Usage

Just over 40 percent of surveyed users had never filed a RTI application before Jaankari was introduced, and nearly all of those who had, have since only used Jaankari. This suggests a strong preference for Jaankari as a medium for submitting RTI requests. It is important to note that the primary reason for this preference is the convenience for users as they do not need to go

Figure 3: Total Calls Received by Jaankari (January 2007 - April 2011)



to a government office, contact the appropriate PIO for the desired information, risk facing harassment and/or being ignored, and obtain postal orders and/or demand drafts for payment of fees. According to anecdotal evidence, the gap in methods is large; 10 to 15 rupees (~.22 to .33 USD) and 10 minutes are required through Jaankari, while it takes an average of one and a half working days and approximately 400 (~8.9 USD) rupees to file applications directly with government departments.

#### Extent of Usage

Over 60 percent of sampled users have availed Jaankari services more than five times, 24 percent of which have used the system more than 50 times. This illustrates a strong leaning towards repeat usage of Jaankari.

#### **User Satisfaction**

Nearly all surveyed users found the Jaankari system very easy to use. Calling up the call center only requires a mobile or landline phone and a nominal fee. Most of the operators can understand local dialects spoken by users and appropriately frame their applications and appeals in Hindi or English. Mobiles have already reached a large number of people in rural areas and the rate of penetration continues to increase. Consequently, the citizens of Bihar are increasingly being empowered to take on a more active role in the democratic process of demanding their right to information.

<sup>&</sup>lt;sup>32</sup> The unusual decrease in the total number of calls for December 2010 may be attributed to poor record-keeping during the phase of transition from one call center operator to another.

<sup>&</sup>lt;sup>33</sup> Five areas have been removed from the dataset due to their location, which lies outside of Bihar; it is unknown from where the caller was calling as the mobile numbers are from outside of the state.

<sup>34</sup> The month of April 2011 had many public holidays and it must, therefore, be borne in mind that Jaankari usage was considerably low during this month.



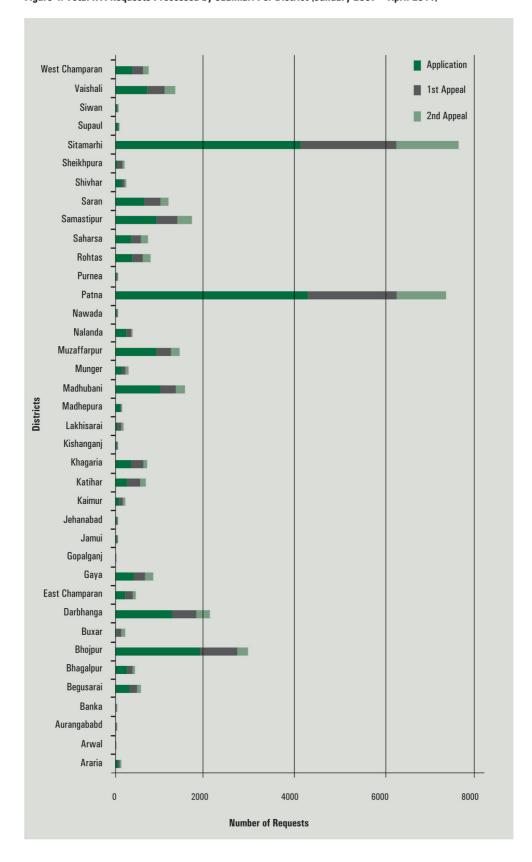
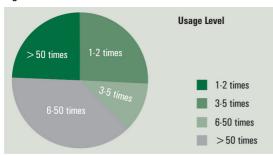


Figure 5: Utilization of Jaankari in Bihar



Approximately 35 percent of surveyed users reported having some connection to NGOs working on RTI, media groups using RTI to expose corruption, or mentioned that they themselves are independent RTI activists. We can also assume that the surveyed users that accessed Jaankari more times than what an individual would likely file on his/her own (Figure 5), represents this same community. The high number of times (>50 each) that they have used Jaankari attests to their satisfaction. This attitude is evidenced by their acknowledgement of the system's promptness and accuracy to aid in their work. They have also expressed contentment with Jaankari enhancing awareness about the RTI Act and hence, heightening their roles in their respective communities.

### Sitamarhi District: A Case Study On Emerging Intermediaries

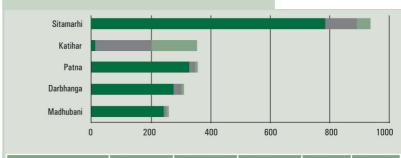


underdeveloped area with low levels of literacy and high population density. According to the manager and operators of Jaankari call center, this is due to a significant amount of NGO work that has concentrated in this area. Today, the highest traffic through Jaankari comes from NGOs, who are filing on behalf of many citizens. The following case study explains the linkage between NGOs, Sitamarhi and RTI request levels through Jaankari.

#### **Background**

The district of Sitamarhi is an important center for RTI activism in Bihar. Between January and

Figure 6: Jaankari Usage in Bihar - Top 5 Districts (January - April 2011)



	Madhubani	Darbhanga	Patna	Katihar	Sitamarhi
RTI Requests	245	278	331	13	786
First Appeals	8	25	21	193	107
Second Appeals	3	10	3	151	44

April 2011, the highest number of Jaankari requests, approximately 940, came from Sitamarhi. It is a figure unmatched by any other district in Bihar; Katihar and Patna are the second and third largest users of Jaankari in the state (See Figure 6). Sitamarhi has been able to achieve this feat owing to the large number of NGOs and activists who are working in the district on issues related to the RTI Act. This is an impressive performance considering the social and economic profile of the district wherein, according to the 2011 census data, 94 percent of the population is rural, the literacy rate is merely 38 percent and the work participation rate<sup>35</sup> is 32 percent.

Since its inception, RTI in Bihar has been limited to larger towns and cities. This is majorly because training, orientation programs and large-scale awareness campaigns were not organized for educating the rural masses about the Act. With the introduction of Jaankari call center in 2007, the user base of RTI widened significantly however it remains underutilized by many rural areas. RTI activism on the part of a few individuals and NGOs has made Sitamarhi the exception, encouraging a previously excluded population towards demanding transparency in governance.

### Field Interviews

Six NGO-related intermediaries were preliminarily interviewed in Sitamarhi district.

The number of total RTI applications filed by the interviewees through Jaankari ranged from 20 to 2800. The citizens who they file

<sup>35</sup> The ratio between the labor force and the overall size of their cohort

on behalf of are majorly agricultural laborers and farmers, below the poverty line (BPL) (~50 percent) and illiterate (~80 percent). The number of female requesters for whom someone else filed a request (~30 per cent)<sup>36</sup> is substantially higher than the number of female requesters who directly call up the Jaankari call center (~2 percent of surveyed callers). This suggests that local contact is significant for RTI to reach the remote and/or excluded population.

The role of intermediaries for filing requests is also important because evidence suggests that in most cases, it accrues no charge to the requester. Moreover, BPL persons are easily identified by local intermediaries - which Jaankari cannot do - and relieves the need of paying the application fee, as is mandated by the Act.

### Follow-up Phone Interviews

In-depth phone interviews were held with four out of the six previously interviewed individuals, chosen based on highest submissions of RTI requests and appeals. All of these activists received formal training in RTI procedures through the government or other NGOs.

According to feedback gathered from the second round of interviews, participation of activists has taken two forms in Sitamarhi: one, direct filing on behalf of the people and two, providing appropriate guidance to citizens for filing applications on their own. Much activism has focused on the latter in order to increase people's direct participation and interest in the process. As a result, rural citizens approach the NGO offices and request to make phone calls to Jaankari with assistance from the NGO workers. Topics on which information is most sought after include the national rural employment guarantee scheme, low income housing, BPL category registration, child development services, and agricultural advice.

Jaankari call center and the intervention of RTI activists in Sitamarhi have together helped increase the interest of the rural masses in the access to public information. Earlier, these citizens were not aware of the proper channel to follow or the appropriate authority to contact for solutions. Also, given their economic and educational status, it was not feasible for them to travel and complete a RTI application on their own. Today, the speed and accuracy with which requests are filed from Sitamarhi through this intermediary system is substantially high as compared to other parts of the state.

#### **INCLUSIVENESS**

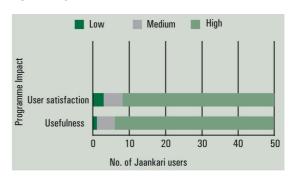
Survey results suggest that Jaankari enables demand for public information by the physically challenged, elderly and remotely located populations of Bihar. Almost 10 percent of sampled users had a hearing or mobility related disability, while 10 per cent were also above the age of 60.

Although surveys revealed a minimal number of female and illiterate callers, 40 percent of sampled users are likely to come from those filing on behalf of others and taking from the Sitamarhi case study, we can conclude that a significant portion of these requests came from illiterate and female citizens.

#### **IMPACT**

Jaankari only addresses the first stage of acquiring information from the government. It helps to make information requests precise and reach the appropriate department for response. None of the users surveyed had a prior understanding of Jaankari's exact role in the RTI process and as such, any discontent with Jaankari stemmed from the misconception that it is responsible for the provision of information as well. Even so, a mere six percent were dissatisfied with using Jaankari.

Figure 7: Impact of Jaankari on Users



Despite the usefulness of Jaankari call center, users are often divested of the information they had requested. Over 80 percent have filed a first

<sup>36</sup> Follow-up interviews revealed that applications are mostly filed by men belonging to BPL families in rural areas of the district. Engagement of women is said to still be low due to social barriers.

appeal and over 60 percent have filed second appeals - both mainly because no information was provided to them within the stipulated time period.

## ASSESSING TECHNOLOGY

Two major uses of technology are worth noting:

First, as of December 2010, Jaankari changed from an internal, offline, telecom platform to a web-based platform.

### WEB-BASED PLATFORM

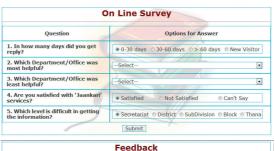
This was developed by BEST and is linked to all call center operators and 67 government departments. It is a thin application so bandwidth is not a problem and thus, even remote locations can access it easily. Proprietary software including Microsoft - SP software for frontend development and SQL for backend is used. Developers gave three main reasons for using Microsoft products: first, they perceive them to be user friendly; second, BEST has expertise in using these platforms; and third, they want to build a partnership with Microsoft because of its brand name. Innovative features of the platform include:

- Bilingual input and display in Hindi and English. Call center operators use the open source product, Google Transliteration, to record call requests in Hindi.
- Real-time application tracking system
- Online Feedback Integration through user feedback form and online survey
- Integrated stakeholder access. User groups access the web-based platform with private logins and customized tool portals:
  - → PIOs
  - APIOs accessing, responding to, monitoring 1st appeals
  - State Information Commission accessing, responding to, monitoring 2nd appeals
  - Citizens of Bihar requesters
  - → Jaankari employees

Figure 8: Screenshot of Jaankari Online Platform



Figure 9: Screenshots of Online Survey and Feedback Form





### INTERACTIVE VOICE RESPONSE SYSTEM (IVRS) + AUTOMATIC CALL DISTRIBUTION (ACD)

The IVR system housed in Jaankari call center operates on Drishti<sup>37</sup> open source software. It receives users' input through a punch-in number and distributes calls according to an algorithm that calculates operator call attendance. It is beneficial for two major reasons: first, it is completely programmable and as such, can be taught to give audible phone directions. Second, it records voice so all calls can be monitored.

#### LIMITATIONS AND PROGRESS

There are still a few limitations to existing technologies including voice clarity and connectivity. Some users also indicated that due to problems in network connectivity they often

<sup>&</sup>lt;sup>37</sup> Drishti-Soft. Web. 9 May. 2011. <a href="http://www.drishti-soft.com/">http://www.drishti-soft.com/>.

have to make multiple calls in order to complete their application. Users from Khagaria district said that they faced difficulties in using their fixed line telephone connections to call up Jaankari. In some instances, users had not been allocated their application numbers immediately and had to follow up for days to procure proof of application submission.

Over the past year, however, call drops have greatly decreased with only 3 to 4 occurring per day as of May 2011. There are also new provisions to deal with this hassle; specifically, if the call drops after the caller received his/her RTI request number, he/she can call back and be transferred to the original operator. The allowance of online applications also gives Jaankari users an opportunity to avoid phonerelated difficulties.

### **ACHIEVEMENTS**

## Provides guidance to citizens on formulation of requests and RTI in general

Citizens often know the problems they face, however formulating related questions that will lead to resolutions is not an easy task. For example, a citizen may know that s/he needs a road that connects their house to their farm land, but stating the problem in a RTI application will not result in an explanation of why the road has not been built or if it is on the agenda to be built.

Jaankari operators are critical for this purpose; they are able to guide requesters to frame questions related to their problems.
Furthermore, considering that the literacy rate in Bihar is 63.82 percent (Census of India, 2011), the written Act is illegible for nearly 40 percent of the population and likely not comprehendible to many more due to language barriers and/or difficult to understand legal jargon. The RTI helpline of Jaankari allows for this population to develop a real understanding of the Act.

### Provides access to underdeveloped areas

Data suggests that many citizens utilizing Jaankari services come from underdeveloped localities. Although there may not be large variances in development indicators across districts in the state of Bihar, anecdotal evidence suggests a general consensus of underdeveloped areas in the state, thus it is reasonable to assume that differences are noticeable to a larger degree on the ground. It is also then reasonable to say that the correlation between low development indicators in certain districts, and high use of Jaankari services in the same localities, illustrates the ability of the call center to attract citizens from the most disadvantaged areas.

### Provides access to remote areas & eliminates the need for travel

Data collected from call center operators along with anecdotal evidence gathered from key stakeholders, suggest that remote areas are using Jaankari services. As a telephone-based initiative and hence an eliminator of travel, it is expected that remote localities would reap the largest benefits from Jaankari. The data confirms that those who are aware of the initiative and living in remote areas, are making RTI requests through the ICT mechanism made available to them.

## Services disadvantaged populations (Handicapped, Women, and Illiterate)<sup>38</sup>

According to interviews with call center operators and managers, approximately 10 percent of Jaankari callers are handicapped in some way. Stakeholders also noted that there are women and illiterate users of Jaankari services. Conclusions made from survey data confirms that nearly 30 percent of requesters are illiterate and over 10 percent are female.<sup>39</sup>

## EXPLORING GAPS IN INNOVATION

### **USE OF MOBILE**

Plans for enhancing Jaankari include the use of mobile technologies. A SMS confirmation of request submission is being developed. This plan can be expanded to include requests' tracking – SMS for all stages of the application process. Mobile can also be used internally between the

Gender is an existing field in Jaankari software, but disability and literacy are not. Operators told researchers that there is a place for additional notes in which if revealed by the caller, they denote any handicap. From this, we can assume that there is already rich data for gender and handicapped levels and thus, the analysis of this data could confirm anecdotal and interview sample findings. Accessing this data was not available from the call centre and therefore remains to be analyzed.

<sup>&</sup>lt;sup>39</sup> If 35% of users are filing on behalf of others and 80% of the others are illiterate and 30% are female, then approximately 30% (.35\*.8) of total Jaankari requesters are illiterate and 10% (.35\*.3) are females.

ecosystem of Jaankari stakeholders for improved coordination, monitoring and analyzing of data and operations. The General Administration Department, BELTRON, BEST, and CSM would be able to exchange data, queries, and grievances through SMS, contributing to a quick, low-cost, and easy way of building overall capacities to deliver services through strengthening mechanisms of support.

### DECENTRALIZING THE MODEL

Jaankari is comprised of one call center and a web-based platform that together service the entire state of Bihar. Although the model has been adjusted to maximize impact potential, data on usage suggests that the system is underutilized. One way of increasing access to Jaankari and use of RTI is moving responsible agencies closer to the citizens that they are accountable to; this would mean decentralizing the call center to local level offices, through which the system could localize expertise and better service the people. For example, since many callers are not aware of the exact usage of RTI, local level call centers could promote the understanding of use in a personalized manner.

The southern state of Karnataka has determined to take up a decentralized model. Karnataka and Bihar, however, have different socio-economic conditions and governmental capacities. With call centers at the local level, usage of RTI could increase to a point that needs to be balanced with the capacity of PIOs to fulfill these requests. As such, it is important to consider this supply side factor to evaluate the most appropriate model. Access to public information in Bihar may reach a smaller population with a centralized structure, but its capacity to fulfill a greater amount of requests may only be possible in the future, once further support is built at the administrative level. Decentralizing the Jaankari model would be a change to consider for the future of RTI in Bihar.

### ASSESSING THE FINANCIAL MODEL

Today, when a citizen calls the Jaankari call center request line, 10 rupees are automatically charged to his/her Bharat Sanchar Nigam Ltd. (BSNL) account. Although this streamlines the application payment process, an otherwise lengthy procedure as it requires travel to the post office or bank, it has also created problems. RTIA stipulates that below poverty line (BPL) citizens can file requests free of cost, but through Jaankari's automated system, there is no way of detecting whether the caller is BPL or not. Additionally, the system is restricted to BSNL users. Although stakeholders are already in discussion with Tata Indicom for diffusing the choice of telecom provider, the current restriction to BSNL is accompanied by connectivity problems that are generally associated with this provider. The transition to a toll free number and expansion to multiple service providers would eliminate these issues and allow for an easy upscale to the entire country; however, a simultaneous solution to the application fee payment would be necessary - this could be explored through the internet, or mobile as an alternative.

Long-term financial sustainability may also be a concern in the Jaankari model. Revenues earned through over five minute calls are minimal, so the incentive for a private operator to provide these services may decrease over time. Additionally, although a low-cost model, it is dependent on government funding for any and all enhancements. As RTI continues, the gaps in functioning will become increasingly understood and government resources may be determined more useful to for example, support PIOs or computerize and organize documents. As priorities shift and resources are allocated accordingly, maintenance of Jaankari may be best supported through a sustainable revenue model. Given that the Jaankari caller profile is typically able to afford the post-five minute call charges, a nominal user fee for each request may be an appropriate change.

In any way that the Jaankari financial model may be reassessed, a thorough analysis of supply and demand side financial constraints is necessary to ensure impactful access to public information.

### LEVERAGING JAANKARI FOR BUILDING PIO CAPACITY

Jaankari helps citizens to access public information by streamlining the first stage of the process. Desired impact, or the obtaining of information for improved public service delivery and/or democratic practices, is contingent on

response to the request by the government. It is in this light that Jaankari as a platform for supporting the post-request stages of RTI should be assessed.

As an increasing amount of publically held documents are being organized and stored in an easily traceable manner under the Integrated Workflow and Document Management System (IWDMS), there are a growing number of opportunities for developing a RTI database for requests made and responses given. Using Jaankari call center as a support mechanism whereby the operators would have access to the database, PIOs could receive quick and easy telephonic instructions for RTI response. This advice should include:

- Benchmarking check for existing similar requests and base response advice on existing knowledge
- 2. Frequently Asked RTI Requests (FARR) (per department) refer to FARR's to guide government officials in approach:
  - a. Location of reference material
  - b. Appropriate point of contact
- 3. Guidelines on development of new information the response may require information that is not readily available but can be developed through learning from varied existing cases and taking the appropriate steps to apply this to the newly identified issue.

### REFERENCE

Anand, Nicole. Jaankari.Best Practice Documentation. Governance Knowledge Center. Department of Administrative Reforms and Public Grievances. June 2010. Web. 20 May. 2011. http://indiagovernance.gov.in/bestpractices.php?id=393/>.

## ANNEXURE A - Stakeholder Interviews

## GENERAL ADMINISTRATION DEPARTMENT (GAD)/CM SECRETARIAT

- Promotion of Jaankari is one of GAD's responsibilities. How has GAD promoted Jaankari to date? Through what mediums - circular letter to departments, advertisements etc.?
  - a. What do you think the level of awareness of Jaankari is in Patna? Across the state?
  - b. Do you think there is room for increasing awareness? If so, can promotional efforts help to increase awareness/usage? If so, how can this be done?
- 2. Jaankari is a centralized call center whereby a lot of data is gathered regarding RTI requesters and requests. How does GAD utilize or plan to utilize this data? What role does GAD play in the monitoring and evaluation of Jaankari call center?
- 3. Over the last year, what major changes in Jaankari have occurred? Awareness levels, usage levels, operational & technical changes etc.?
- 4. Last year, Call2Connect was the Jaankari operator. Now, CPSML controls operations of the call center. Can you explain why this transition took place?
  - a. Has the change in operations impacted the call center? If so, in what way?
- 5. At the start of Jaankari, KABIR, an NGO based in Delhi was asked to help train Jaankari operators in RTI. Has training continued in this manner? Have other NGOs/private organizations been approached to help in the training, operations, and/ or monitoring/evaluation of Jaankari?
- 6. The low capacity of PIOs has been a challenge in completing RTI requests. Does GAD have a plan to build the capacity of the PIOs? If so, how? Do you think Jaankari can help to achieve this?
- 7. How appropriate do you feel the call center platform is for RTI? Is telephone the best method for RTI requests? Is a centralized model (as opposed to call centers throughout the state) the best option?
  - a. Do you think other technologies need to be integrated or added? If so, which, how and why?
- 8. According to our knowledge, there is a Phase 2 planned for Jaankari. This includes the submission of requests directly through the website and the receipt of submission through SMS. Is this still part of the enhancement plan? If so, can you expand upon this?

#### BELTRON

- Over the last year, what major changes in Jaankari have occurred? Awareness levels, usage levels, operational & technical changes etc. Is the service provider the same - BSNL?
  - Have technical issues call drops, connectivity problems etc. - improved over the last year?
     How has BELTRON addressed this issue?
- 2. BELTRON is responsible for the technical training of Jaankari operators. Operations have changed from Call2Connect to CPSML was new training required with the change in operator? If so, how were these conducted?
- 3. Can you explain the financial model of Jaankari in further detail? What is the size of the project? Who is supplying the funds for operations? For how long and at what intervals?
- 4. How appropriate do you feel the call center platform is for RTI? Is a centralized model (as opposed to call centers throughout the state) the best option? Do you think other technologies need to be integrated or added? If so, what and how?
- 5. According to our knowledge, there is a Phase 2 planned for Jaankari. This includes the submission of requests directly through the website and the receipt of submission through SMS. Is this still part of the enhancement plan? If so, can you expand upon this?

### **CPSML**

- When did CPSML take over operations of Jaankari?
   Why did CPSML decide to become the operator?
- 2. Can you explain the role of CPSML in regards to the Jaankari call center?
- 3. Last year, Jaankari attended to 3 phone lines one, for RTI-related queries, another for filing requests, and the last for grievance redressal. Do all 3 lines exist today? If so, can you explain the operations of each?
- 4. What do you think are the major advantages to Jaankari call center?
- 5. Please provide the following details according to most recent numbers (End of April):
  - a. Number of calls (total) requests \_\_\_\_
     grievances \_\_\_\_ queries \_\_\_\_
  - b. Number of first appeals (total)
  - c. Number of second appeals (total)
  - d. Call center staff
- 6. How has the following changed over time- May 2010-2011 (collect quantitative data):
  - a. Number of calls
  - b. Number of Appeals
  - c. Call center staff

- d. Call center technologies
- e. Other
- 7. Do you have any suggestions for increasing usage of the call center?
- 8. Are there plans to enhance/upscale the call center? If so, what will be changed and how staff, technologies, training, promotion, other operations?
- 9. In what way(s) do you think Jaankari benefits the citizens of Bihar?

### **CALL CENTER**

- 1. Please provide the following details according to most recent numbers (End of April):
  - a. Number of calls (total)
  - b. Number of first appeals (total)
  - c. Number of second appeals (total)
  - d. Call center staff
- 2. How has the following changed over time May 2010-2011 (collect quantitative data):
  - a. Number of calls
  - b. Number of Appeals
  - c. Call center staff
  - d. Call center technologies
  - e. Other
- 3. Do you have any suggestions for improving/ enhancing the call center?

### **CALL CENTER EXECUTIVES**

- Can you describe the training you received at the start of your job? Technical? RTI related? (who provided the training, for how long, and in what manner)
- 2. How long have you been working at Jaankari?
  - a. (If worked for a significant period of time)
     How have things changed over time?
     Technologies, number/type of caller etc.?
- 3. On average, how many calls do you attend to in one day?
- 4. On average, how long does a single call take?
- 5. What is the most challenging aspect of your job?
- 6. Do you have any suggestions for improvement for the call center?

### STATE INFORMATION COMMISSIONER & PIO

- 1. What role does the State Information Commission play in regards to RTI and Jaankari call center?
- 2. Do you believe Jaankari helps with RTI in Bihar? If yes, how so? How does Jaankari help increasing transparency and enhancing accountability in government?

- What do you think are the major advantages to using Jaankari?
- 4. Are there disadvantages to using Jaankari? If so, can you explain?
- 5. Do you think a call center is the most appropriate platform for RTI requests?
- a. If so, why? Can you comment specifically on the technologies used?
- b. If not, can you suggest a better model?
- 6. The low capacity of PIOs has been a challenge in completing RTI requests. Does GAD have a plan to build the capacity of the PIOs? If so, how? Do you think Jaankari can help to achieve this?
- 7. Do you have any suggestions for improving/ upscaling Jaankari?

# INTERVIEWS WITH INTERMEDIARIES (RTI ACTIVISTS/ SOCIAL ORGANIZATIONS I.E. NGOS) - SITAMARHI DISTRICT

- Prior to Jaankari call center, what was your/ your organization's role in RTI related activities? For example, advocacy of the Act, training in how to file a request etc.
  - a. Through what medium was this performed? For example, ICT (radio, internet), print media (newspapers, brochures, posters etc.), television etc.
  - b. How has your role changed since the introduction of Jaankari?
- 2. What encouraged you/your organization's involvement in RTI?
- 3. How many RTI requests do you submit to Jaankari per day? Per week? Per month?
- 4. What method of RTI request do you/your organization follow in filing RTI request: Jaankari, post, or in-person? Why?
- 5. Can you provide us with profile of the average RTI requester?
  - a. Economic status
    - i. Type of jobs:
      - 1. Agricultural laborers
      - 2. Factory/Shop workers
      - 3. Farmers
      - 4. Service/Other
    - ii. What percentage of the requesters are BPL?
  - b. Gender
    - i. Percentage of females/males:
  - c. Age

- i. Below 18
- ii. 18-25
- iii. 26 40
- iv. 41-60
- v. Above 60
- d. Disability
  - i. Percentage of physically challenged (include partial disability):
    - 1. In seeing
    - 2. In speech
    - 3. In hearing
    - 4. In movement
- e. Literacy
  - i. Literate
    - 1. Just sign

- 2. Can read/write well
- ii. Illiterate
- f. RTI awareness level
  - i. 0 unaware
  - ii. 1 have heard about the Act
  - iii. 2 familiar with the Act
  - iv. 3 Complete awareness
- 6. Can you tell us a breakdown of the nature of RTI requests?
  - a. Thematic area (collect categories from Jaankari call center)
- 7. There is a fee for every RTI application. Do you/ your organization offer assistance to those who cannot afford this fee? If so, how?
- 8. Do you charge any fee for helping/filing RTI application for other people? If so, how much?

## ANNEXURE B - Citizen Survey

- 1. Why do you use the NGO to file a RTI request?
- Do you pay any fee for filing RTI request? If so, how much?
- 3. Are you aware of Jaankari call center by the government? If yes, how did you come to know about it?
  - a. Have you called the call center directly?
- 4. Do you use any other medium to file a RTI request? For example, in person, by post
  - a. If yes, which one do you prefer?Jaankari, in person, or by post?

### ICT Ecosystem for the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

### RAJASTHAN, INDIA

### IN BRIEF

Under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), anyone who is willing to perform unskilled labor can demand employment for 100 days per year. To ensure scheme success, it is important that citizens are aware of the provisions of the Act. While the government has attempted to impart knowledge about the scheme to its intended beneficiaries, the details of exercising the right to work and payment for the same remain unclear. Due to low levels of education, workers are not aware of the basic rights and hence, they are susceptible to deception by middlemen or public officials' reluctance to share information. Some of the challenges faced during the implementation of the program are related to corrupt practices in job allocation and calculation of workdays for payment.

For addressing conventional scheme-related problems, a myriad of technologies have been leveraged to provide essential details to rural workers' about their rights-based entitlements. By providing access to otherwise difficult to obtain information, the ICT Ecosystem for MGNREGS innovation has strengthened public accountability at critical points of program administration and implementation.

The innovation consists of four major components: info kiosk, community radio, biometric enabled and global positioning system (GPS) verified attendance system and mobile-based job card retrieval. By e-enabling scheme processes, any worker can visit the info kiosk and use a touchscreen, text-to-speech computer, in lieu of approaching the public official, to seek information and demand employment Rural workers can use this localized technology to register complaints and monitor their work progress through obtaining details of their wages earned and days worked.

### Case Study 2

### **DESCRIPTION**

End-to-end ICT ecosysteminfo kiosk, biometric and GPS applications, SMS and community radio for effective guarantee of employment.

### LESSONS FOR THE FUTURE

- Holistic understanding of awareness and usage patterns will depend on outreach to nonusers and users.
- Connecting the final leg of an innovation will ensure complete transparency for improved public service delivery.

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### List of Abbreviations

A2PI: Access to Public Information

APL: Above Poverty Line

Gol: Government of India

GPS: Global Positioning System

ICT: Information and Communication Technology

MGNREGA: Mahatma Gandhi National Rural Employment Guarantee Act

MGNREGS: Mahatma Gandhi National Rural Employment Guarantee Scheme

MoRD: Ministry of Rural Development

NGO: Non-Governmental Organization

OWFI: OneWorld Foundation India

SMS: Short Message Service

UHD: Unified Handheld Device

UNDP: United Nations Development Program

### **BACKGROUND**

Today, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)<sup>40</sup> is the largest social safety net program in the world, with over 150 million beneficiaries and annual allocation of almost USD 8 billion for the year 2010-11.<sup>41</sup> While this program is appreciated for its ambitious goal of providing livelihood opportunities to all rural households, limitations to generating expected levels of outcomes has left many skeptical of its value.

Welfare programs in India have often struggled to create sustainable impact due to widespread corruption. Although several mechanisms to ensure public accountability are included in the provisions of MGNREGS, studies reveal that intended beneficiaries are still being deceived by public officials through misappropriation of funds through late wage payment and falsified attendance.

### Mahatma Gandhi National Rural Employment Guarantee Act

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, in rural households, willing to conduct unskilled labor. It promises:

- Work for a maximum of 100 days per household per year
- Work within 15 days of request
- Payment of up to the minimum wage of 120 rupees per day
- Unemployment allowance

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.

MGNREGA mandates proactive disclosure of essential information at the local level of government (panchayat). Given that rural literacy is low, workers prefer to speak with public officials to receive details about the Act; this gives officials significant control over the extent to which public information is released.

Multiple visits to panchayat offices are required for obtaining satisfactory information. Officials are often absent, engaged, or in the field. Even when officials are present, complete and/or accurate information is hard to come by due to lack of interest in providing it. In any case, workers need to visit the panchayat office and complete a written form to enroll in MGNREGS and receive an official job card.

To improve public accountability through increased transparency in MGNREGS operations, the Ministry of Rural Development (MoRD), Government of India (GoI) announced the National Policy Framework on biometrically enabled end-to-end ICT applications on August 20, 2010. Based on OneWorld Foundation India's ICT innovation model, the framework calls for:

- Biometric based identity authentication and worker registration
- Demand for work through touchscreen and text-to-speech 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 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

## WORKING DESIGN OF TECHNOLOGIES USED

The ICT Ecosystem for MGNREGS innovation 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 Program (UNDP). On October 2, 2009, the innovation program was piloted in two districts, three panchayats and across 20 villages in the state of Rajasthan.

The Mahatma Gandhi National Rural Employment Guarantee Scheme is enacted under the Mahatma Gandhi National Rural Employment Guarantee Act. This case study refers to the implementation of the Scheme, however cites the Act (MGNREGA) when referring to the legal provisions of the Scheme.

<sup>41</sup> Government of India, The Mahatma Gandhi National Rural Employment Guarantee Act, Web, 22 April 2011, <a href="http://nrega.nic.in/">http://nrega.nic.in/</a>,

### Pilot Layout

Bhilwara – Ten villages, spread across four gram panchayats (Kanda, Suwana, Haled and Rupaheli) of Suwana Block in Bhilwara District; Villages are located within 20 kilometers of the district headquarters in Bhilwara and 12 kilometers 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 Paramdaand are located within 12 kilometers of the information kiosk in Koraber Gram Panchayat.

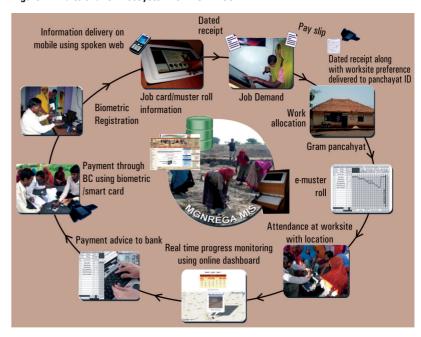
The OneWorld innovation aims to strengthen accountability in MGNREGS through enhanced transparency, enabling the poor to demand their rights based entitlement to employment as set out by the Scheme. The ICT ecosystem for MGNREGS is comprised of tools that are appropriate for its intended users - rural, largely illiterate, and resource-poor. Although the technologies used are virtually brand new to the context that they have been introduced to, the populace accesses them based on the unders tanding that they obtain impartial and correct information. The innovation targets local demands and supplies integrated tools for addressing them.

The four major components that contribute to making the innovation a complete end-to-end ICT-enabled ecosystem are:

- Soochna Seva Kendra (Info Kiosk) housing text-to-speech enabled and touchscreen computers with biometric access to job demand, job card information, job enrolment, and accrued wages for overall program monitoring.
- 2. Portable, biometrically enabled, and GPS verified attendance tracking tool for formulation of worksite muster roll.
- 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.
- SMS job card retrieval for easy access to job card information (number of days worked/ remaining for work).

Figure 1 illustrates the integrated workflow of these key technologies. It is important to note that stages eight and nine are under development and as of May 2011, not yet operational.

Figure 1: End-to-end ICT Ecosystem for MGNREGS



### SOOCHNA SEVA KENDRA (INFO KIOSK)

Located in the panchayat office, the Info Kiosk houses a computer with biometric access and a text-to-speech application. One time biometric registration is required, after which anyrss the following:

- 1. Information about the Scheme
- 2. Worker entitlements under the Act
- Information on unemployment allowance
- List of prerequisites for work under the Scheme
- 5. Worksite information
- 6. Grievance submission
- 7. Job demand
- 8. Job receipt
- 9. Payment slip receipt
- 10. Worker history (with all past job details)

All details of worker transactions made through the system are stored in a local database. Job demand and grievance data are transferred in real-time to a countrywide central National Informatics Center (NIC) database accessible to government officials through a dashboard for monitoring and redressal.

To illustrate the efficiencies that have been created through the ICT innovation, Figures 2 and 3 present the job demand process before and after its introduction.

Figure 2: Job Demand Process Prior to Info Kiosk

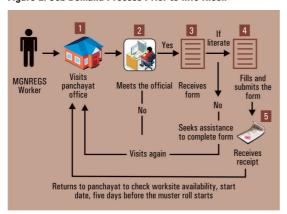
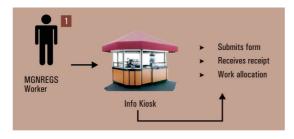


Figure 3: Job Demand Process Post Info Kiosk



### **COMMUNITY RADIO**

In 2004, OWFI created a community radio program called Ek Duniya Ek Awaaz (One World One Voice). As of 2011, an average of 15,000 listeners across more than 12 states tuned in to weekly episodes aired on the program. Apna Gaon Apni Baat (Our Village, Our Message), the official radio program run by Suwana Block members and managed by OWFI, was launched on the Ek Duniya Ek Awaaz platform, AIR FM Rainbow India, on October 21, 2009 at 4:30

pm. Broadcasting occurs every third Wednesday of the month. Following live broadcasts, programs are also narrow cast at info kiosks and through listeners' clubs - where local radio producers personally visit surrounding communities to playback recordings. The intention of leveraging radio is to stimulate local knowledge exchange about the ICT innovation.

### **BIOMETRIC & 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 program. The portable computer with biometric device to digitally generate the worksite muster roll also boasts a GPS 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 an online Knowledge Repository at nrega.net 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, instead 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.

Table 1: Software Used in ICT Ecosystem

Name of Device	Name of Software	Type of Software	Use of Software
Hand-held device	Microsoft.NET framework 2.0 using ASP.NET and C#	Freeware	To develop frontend
	MySQL 5.1	Open Source	To develop backend maintenance of biometric worker profiles
			To keep track of attendance
GPS	Garmin GPS 60	Proprietary	To capture geographic parameters- latitude/ longitude
Info kiosk	Microsoft.NET framework 2.0 using ASP.NET and C#	Freeware	To develop frontend
	MySQL 5.1	Open Source	To develop backend maintenance of biometric worker profiles
	SQL Server 2005 Express Edition	Open Source	To access workers' profiles in offline mode
Biometric device	SecuGen FDx SDK Pro for Windows	Open Source	To scan thumb impressions at the infokiosk and at the worksite
Mobile	Microsoft.NET framework 2.0 using ASP.NET and C#	Freeware	To develop frontend
	MySQL 5.1	Open Source	To develop backend maintenance of biometric worker profiles

### **METHODOLOGY**

## LINKING ACCESS TO PUBLIC INFORMATION (A2PI) TO 'GOOD GOVERNANCE'

Public access to information is critical to fostering institutional transparency and accountability. Specifically, it encourages citizens to know their rights and exercise them by holding public officials accountable. Informed citizens can also monitor and evaluate outcomes and take action when dissatisfied with poor public

service delivery. In sum, information empowers citizens to demand good governance.

Similarly, the ICT for MGNREGS innovation empowers villagers through enhanced access to information. It informs potential beneficiaries of their right to employment and increases transparency through ICT-led verification and standardization of scheme processes; combined, these motivate the voicing of democratic demands for employment and movement towards this end through the mitigation of corrupt practices. As a result, the program enables the demanding and fulfilling of employment and hence, the ability for many to self-sustain livelihoods.

### STAKEHOLDER ANALYSIS

### **Oneworld Foundation India**

OneWorld Foundation India designed and developed the ICT ecosystem for MGNREGS innovation. They leveraged their existing mobile-based innovations, community radio and portal management programs to develop all components of the MGNREGS innovation. The organization is responsible for actual delivery of services from the info kiosk. It coordinates fieldwork, assists in capacity building, and develops the content for community radio.

### Ministry of Rural Development, Government of India (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. The Ministry implemented MGNREGA in 2005 and has since been working to support its functioning, namely through ICT and convergence efforts.<sup>42</sup>

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

### United Nations Development Program (UNDP), India

UNDP India is a partner of the Gol in the implementation of MGNREGS. To enhance the government's capacity for the implementation of the program, 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 program. 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.<sup>43</sup> UNDP is the funding agency for OneWorld's ICT Ecosystem for

MGNREGS pilot initiative in Bhilwara and Udaipur Districts of Rajasthan.

### **SWOT ANALYSIS**

### Strengths

### **Appropriate Technology**

- Given the socio-economic conditions of the user environment, the technologies used text-to-speech, icon-based user interface and biometric device - are simple to use
- Considered cost, prior development expertise, and interoperability when choosing a mix of proprietary and open source to maximize potential for best outcomes

### **Digital Information**

 Computerized information enables accurate and complete information dispersal

### **Effectively Mitigates Corruption**

- Offers digital grievance redressal
- Maps and computerizes worksite attendance

#### Institutionalization

 Suwana block has made it mandatory to demand for jobs through the Info kiosk

### **Capacity Building**

 The automation through technology and support provided through OneWorld field staff has reduced the workload of panchayat officials and given them the opportunity to focus on other development efforts

### Weaknesses

#### Low Usage of SMS Technology

- Lack of awareness
- Cost of sending SMS

### **Portability**

 Info kiosks are only located in few villages hence it is difficult for people from remote villages to access

#### Low awareness

 Users are aware of technology, but not of its purpose

<sup>&</sup>lt;sup>42</sup> Government of India. The Mahatma Gandhi National Rural Employment Guarantee Act. Web. 13 May. 2011. <a href="http://nrega.nic.in/">http://nrega.nic.in/</a>>.

United Nations Development Programme. India. Web. 13 May. 2011. <a href="http://www.undp.org.in/">http://www.undp.org.in/>.

### **Opportunities**

### SMS application

- Disseminate more information through SMS
- Make the SMS service available free of cost
- Add voice application for illiterate and visually impaired

#### Integrate banking component

 Payment directly deposited into bank accounts

#### Threats

#### Financial sustainability

Cost of innovation tools - handheld device,
 PC, biometric

#### **Administrative Changes**

 Attention given to the scheme and hence, also the innovation, is dependent on individual government official interest and overall policy prioritization

### CONTEXUAL ANALYSIS: MGNREGS IN BHILWARA

Eighty percent of the people in the district of Bhilwara are farmers or agriculture laborers. A rain fed river Banas runs through the district but 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 with over 400,000 employment opportunities for beneficiaries, totaling to 33.3 million person days of work. Of the total number of person days, 74.86 percent have been worked by women, 18.95 percent by scheduled castes and nearly 17 percent by scheduled tribes. Nearly INR 4.4 million (97 million USD<sup>44</sup>) has been spent on implementing the current count of over 4,000 MGNREGS works.<sup>45</sup>

As mentioned earlier, despite successes of the Scheme, much inefficiency still exists. Specifically, in Bhilwara, loopholes allow for the exploitation of vulnerable groups, leaving some workers with low or nil wages. The result is often that the poor women are left in a stagnate state of hunger with only false hope of attaining real access to improving their economic situations.

### DATA COLLECTION

Qualitative and quantitative data was collected through primary and secondary research. Secondary research was carried out prior to, during and following fieldwork. Data was obtained through open access resources found on nrega.nic.in, nrega.net and knowledge. nrega.net. Additional resources were obtained through gram panchayat functionaries and local NGO representatives.

Field based research was pursued at info kiosks and worksites of Suwana Block. Semi-structured interviews were conducted with key stakeholders whose familiarity with the context was expected to broadly provide a qualitative understanding of innovation functionality and impact. Interviewees included:

- UNDP Coordinator, Bhilwara
- Panchayat Secretary, Kanda Village
- Info kiosk Manager, Suwana Block
- Two MGNREGS Mates, Suwana Block

Quantitative data was gathered through surveys to determine end users' awareness, usage and perceptions of the innovation. Demographic data was also collected to develop a basic understanding of the socio-economic status - level of assets, income and education - of a typical user. A target of two to five percent of the 4500 visitors to Suwana kiosk (as of May 2011), resulted in the surveying of 101 MGNREGS workers in Suwana village.

### COSTS

UNDP provides funding for this innovation pilot. At present, al services are available to users free of cost, except for the SMS based job retrieval for which the cost of a local SMS is charged by the phone service provider. The following is the breakdown of annual expenditure of the ICT ecosystem.

<sup>&</sup>lt;sup>44</sup> Amount is calculated using an approximate conversion rate of 1 USD to 45 INR

<sup>&</sup>lt;sup>45</sup> Government of India. Ministry of Rural Development. National Rural Employment Guarantee Act. Web. 15 May. 2011.
<a href="http://nregalndc.nic.in/Netnrega/homedist.aspx/">http://nregalndc.nic.in/Netnrega/homedist.aspx/</a>.

Table 2: Annual Budget for Info Kiosks and Radio Program (September 2009 – December 2010) 46

Category of Expenditure	Total (INR)	Amount in USD (USD 1 = INR 45)
Program Expenses		
Tech Infrastructure (H/W)	4,46,000	9,911
ICT Innovation (S/W)	6,15,000	13,667
Personnel Expenses (15 months)	6,01,200	13,360
Kiosk Operating Expenses	3,54,000	7,866
ICT Training and Capacity Building at Grassroots	2,20,000	4,889
Right Based Advocacy at Grassroots	4,82,500	10,722
Monitoring, Quality Assurance, Documentation & Reporting	1,90,482	4,232
Administrative Expenses	1,26,988	2,821
Total Expenditure	30,36,170	67,468

### MEASURING AWARENESS AND USAGE

As of May 2011, Suwana and Kanda villages together recorded a total of 12,622 NREGA workers, out of which 8,638 were registered at an info kiosk. A total of 5,506 transactions were made by Suwana and Kanda villagers over the same period of time. Transactional data presented in Table 3 indicates that job card details are the most sought after information, closely followed by general scheme information. Transactions regarding job demand are expected to rise in the near future due to the overwhelming survey response indicating a preference for this feature and the recently mandated use of it in Suwana block.

Table 3: Total Transactions per Informational Category, as of May 2011

Purpose	Visitors
General Information	1102
Job Card Information	1270
Job Demand	840
Work Status/Days Information	783
Muster Roll	590
Wages Accrued/Received	499
Pay Slip	303
Grievance Registration/Status	60
Dated Slip	59

### **USER SURVEY ANALYSIS**

Over 95 percent of the 101 sampled workers were women. The majority own a house and at least some land - 49 percent own 0 to two bighas, <sup>47</sup> 23 percent own greater than two bighas; however, 77 percent of the surveyed workers have an annual household income of less than 30,000 INR. Eighty-five percent of surveyed workers belong to households above the poverty line (APL), likely due to their relatively high level of assets.

Despite their reasonably comfortable economic status, the level of literacy amongst the same sample is very low. Many users who have even attended school can only sign their names.

Figure 4: Education Level of Workers

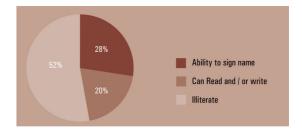
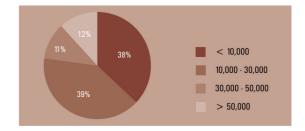


Figure 5: Annual Income of Workers (in INR)



 $<sup>^{\</sup>rm 46}$  The expenditure costs were obtained from OneWorld Foundation India.

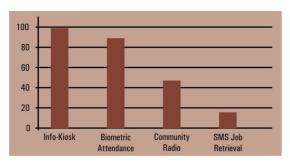
One bigha of land is equivalent to 1.67 acres.

This data suggests that the user group may be open to using new technologies but may require training on know how to operate them and for learning about what purpose they serve.

Considering this context, awareness about the ICT innovation amongst sampled workers is impressively high; however, it is also varied across the different program components – info kiosk, biometric attendance, community radio, and SMS job card retrieval system.

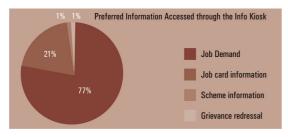
Of all four program components, the info kiosk has gained the highest level of awareness and utility amongst workers. Almost 75 percent of the surveyed village workers claimed to have visited the kiosk three or more times and all had the ability to explain its basic purpose and functioning. Only 18 percent, however, access the kiosk without any assistance. This may be explained by the fact that virtually no user had exposure to similar technologies prior to the introduction of the innovation.

Figure 6: Awareness Level of Program Components



When given the choice between all sources of information accessible through the info kiosk, nearly 80 percent of surveyed users responded with a preference for job demand.

Figure 7: Preferred Information Type Accessible through Info Kiosk



Data indicates that the awareness of some program components has not translated into awareness of all. Less than half of the workers

surveyed were aware of the community radio program and an even smaller number has been involved in it in some capacity. Its value for the workers lies mainly in the information it provides in relation to MGNREGS and agriculture. Only a marginal group of workers are aware of the SMS job card retrieval system. Although convenient, due to the present access to job card details through the Info Kiosk and planned future access of the same through the UHD, mobile job card retrieval may remain underutilized. When explained to workers in detail, some expressed an understanding of the potential benefits of the SMS system and an interest in using it, while others cited a lack of access to mobile phones and illiteracy as reasons for the impossibility of future use. The potential need for limiting, expanding, or altering mobile use is an exercise for future research.

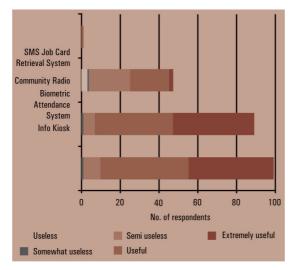
### **EVALUATING IMPACT**

When asked to rate the usefulness of the info kiosk, nearly 90 percent of surveyed users said it is very or extremely useful. When asked how much easier it has made job demand and access to scheme information, over 85 and 65 percent, respectively, said a great deal. User feedback points to the possibility that consistent usage of the system and enthusiasm for understanding its basic purpose have led to these perceptions.

The biometric attendance system has provided an efficient, fast and simple mechanism for tracking worksite attendance. It requires less manpower because data collected is instantly digitized. With GPS verification, corruption in the form of falsifying muster rolls is mitigated. Despite these clear benefits, there are a couple of issues with biometric technology that require further attention. First, anecdotal evidence revealed that thumbprints of some workers, for example the elderly, are not clear and require multiple scanning. Second, the tool requires recruitment and thorough training of an individual for operations.

Over 90 percent of surveyed users said the biometric attendance system is very or extremely useful. Ninety-four percent said it is very helpful in reducing corruption and 75 percent claimed that it greatly increased the speed with which attendance is taken.

Figure 8: User Perceptions of Program Components



Apart from the more visible successes of the program, an important benefit has been the development of workers' skills in terms of handling technology, becoming more aware and certain of dealing with their employment-related matters, directly keeping track of number of days worked, still left for work, payments due, and developing the confidence to seek redressal of their grievances.

Although the innovation program involves complex technologies, the components which workers need to operate on their own have been developed to be fairly simple. With more use and training, these innovations are likely to be adopted more widely - a trend that is already clear in Suwana village.

### **KEY BENEFITS**

### AVAILABILITY OF ACCURATE INFORMATION

Project stakeholder feedback points to a collective recognition of access to accurate information as the main achievement of this technology based intervention. Introduction of the Info Kiosk has ensured that precise information is available to the citizens at any time.

### EMPOWERMENT OF MGNREGS RECIPIENTS

Improved access to information has empowered the local population to be more aware of their rights under MGNREGS. For example, earlier workers did not know the exact amount of wages they were owed and as a result, had to trust that the amount given to them was correct; today, they can access actual wage details on their own and use the digital proof to hold the government accountable. Similarly, interview results revealed that the many people were unaware of their entitlement to an unemployment allowance; it was only through the info kiosk that they became aware of it.

According to the Kanda village secretary, now that women are able to seek and receive information on their own, it has increased their confidence levels. They feel comfortable in approaching the kiosks and operating the machines. Earlier, they were shy in approaching men for information or even going to the bank for receiving their payments. It is likely that the text-to-speech application in the info kiosk has proved to be critical in disseminating information among illiterate women.

### FILLING GAPS IN CAPACITY

Under MGNREGS, the village panchayat is the agency responsible for implementing the Scheme. The local officials have to take care of all aspects of administration and implementation at the village level. This includes providing information, registering beneficiaries, preparing muster rolls, monitoring worksites, and ensuring payments. Timely handling of requests becomes difficult when there are shortages in staff. One panchayat leader mentioned that he encourages people to visit the info kiosk to seek general information because it reduces his workload considerably and he is now able to focus on program monitoring.

### REDUCTION IN CORRUPT PRACTICES AND GRIEVANCES

Previously, corrupt practices were undertaken most frequently in relation to job allocation and wage payment. Since job demand through info kiosk is now mandatory in Suwana, job provision as per political pressures has reduced and anecdotally, there are almost no cases of favoritism. The biometric attendance system has ensured that only actual number of days worked are recorded so data manipulation to misdirect funds is no longer possible.

An increase in transparent procedures has reduced the overall number of scheme-related complaints. When workers do have grievances, the process of submitting them and retrieving responses is quick and easy because submission is digital and details are stored and published online for government official perusal.

### RECOMMENDATIONS

While the program has successfully leveraged technology to enhance transparency towards the operationalization of MGNREGS, a few areas of improvement have been recognized.

### **DESIGN FOR PORTABILITY**

At present, the info kiosk component of the ICT ecosystem for MGNREGS has been found to be most beneficial for users. Currently, however, there are only two info kiosks servicing 10 villages. Kiosks might not be convenient for workers residing in remote villages, which may be up to 12 kilometers away, especially since rural areas are typically characterized by poor roads and lack of efficient public transport. Additionally, social norms restrict women from traveling alone.

To increase access to information for villagers in remote areas, a more portable ICT solution should be considered. A Unified Handheld Device (UHD) is already developed by Intel, and a prototype is being tested at Suwana for attendance. Currently, the prototype does not function as an alternative to the Info kiosk as it only has limited information available regarding workers' receipt, entitlements and attendance. Since most of the villagers need job card or job demand information, these two applications should be integrated into the handheld device to make the program more inclusive.

Furthermore, the mobile-based job retrieval should be popularized amongst remote villagers. Survey suggests that low levels of usage may be due to low literacy rates, or possibly people are discouraged to use SMS because of the cost charged by the service provider. To address this issue, a text-to-speech feature, similar to the kiosk, can be explored for integrating into the UHD.

### **INCREASING USAGE**

### **Furthering Awareness**

There is a basic awareness of the ICT ecosystem, however a deeper understanding of its purpose and functionality remains relatively low. There is a need to inform and train people about reasons for using the technologies to sustain demand for these projects. If demand for the project declines, it risks becoming obsolete.

### Research for Understanding Nonusage – Targeting a Control Group

Approximately 30 percent of the total MGNREGS workers in Suwana and Kanda, have visited an info kiosk. Low penetration of usage is not fully understood because non-users have not been approached for inquiry. Primary research has focused on users of the innovation and how they perceive the tool, but identifying and interviewing a control group to determine the reasons for non-usage, for example lack of awareness, interest, or know-how, is yet to be carried out.

### Mandating Usage

The pilot project, although located in local government offices, has not been completely integrated with government procedures. In such a scenario, if the project is not institutionalized or made mandatory at district/state level, then the long-term sustainability of the program will remain uncertain.

## ADDRESSING FINANCES

### A NEW FINANCIAL MODEL

Under the existing innovation model, all services are offered free of cost. The absence of a revenue generating mechanism makes it difficult to determine the feasibility of upscaling. At the very least, the ability to sustain operations will depend on the availability of revenues for maintenance of technologies. The replacement of government and/or donor agency supplied funds by a self-generating revenue model, such as through nominal service fees for information sought out through the info kiosk, would be an important potential change to evaluate.

### INTEGRATING THE BANKING COMPONENT

Primary research revealed that inefficiencies still exist in the wage payment process. Since the final stage, or 'last mile', of the end-to-end innovation is not yet integrated, bank representatives directly visit worksites for cash disbursement of wages. While the banks are advised to make payments in a timely manner, this fails to happen in practice.

To address the issue of late payments, efforts should be made to introduce direct deposit of wages into worker bank accounts. Since it is already compulsory for workers to open bank accounts, this major step towards increasing transparency and mitigating corruption is possible.

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## ANNEXURE A - Stakeholder Interviews

### KANDA VILLAGE SECRETARY SUWANAVILLAGE SARPANCH<sup>48</sup>

### **BLOCK DEVELOPMENT OFFICER**

### SUWANA VILLAGE MATE (LEADER OF WORKSITE)

### **ONEWORLD FIELD COORDINATORS**

- What role do you play in the ICT MGNREGA program?
- 2. The program has been in operation for over a year and a half, hence villagers are aware of its existence, purpose and usage. However, do you think there is a need for more awareness generation and training?
  - a. If yes, why? And how do you think it should be carried out?
  - b. If no, why not?
- 3. Do you feel that the use of technology is necessary and appropriate for this purpose?
  - a. If yes, then why?
  - b. If no, then why not?
- 4. What are biggest changes you have seen in the past year in terms of:
  - a. Worker awareness of the technologies
  - b. Worker usage of the technologies
  - c. Change in technologies used
  - d. Involvement of other stakeholders
    - i. UNDP
    - ii. Other
- 5. How far has the OneWorld MGNREGS program succeeded in bettering the:
  - a. Process of job demand
  - b. Grievance redressal
  - c. Awareness about the scheme

Has it helped to establish a clear process flow between the villagers and the panchayat administration?

- How far has the OneWorld MGNREGS program succeeded in:
  - a. tackling corruption
  - b. increasing transparency
  - c. increasing administrative accountability to the citizens
- 7. What has been the single biggest challenge thus far?
  - a. If it has been overcome, how so?

- b. If not, how can it be?
- 8. In your opinion, what are the major factors that have contributed to the program's success?
- 9. There are discussions for up scaling the program to the remaining 30 panchayats in Suwana block. What is your opinion on this?
- 10. What changes do you want to see with the program in the future?

### UNDP COORDINATOR

- 1. What is UNDP's role in this MGNREGS program in Bhilwara?
- 2. Technology is not necessary for implementing MGNREGS. So based on your experience, what would you say are the benefits and of using ICT in MGNREGS implementation in Bhilwara?
- 3. How does OneWorld's initiative compare to other ICT based interventions for MGNREGS?
- 4. This particular program has a Soochna Seva Kendra, Biometric/GPS Attendance Tracker, SMS Job Card Retrieval and Community Radio. Considering the socio-economic background of the district, do you think that the program uses technology in an appropriate way?
  - a. If yes, why?
  - b. If no, why not?
- 5. The SMS based job card information component was introduced as part of the program. However, very few villagers have utilized this service. What do you think are the possible reasons for such low usage?
- 6. Do you think technology has helped in making the government more accountable to the people? / Have you seen any changes in government processes related to MGNREGS?
  - a. If yes, how/what?
  - b. If no, why not?
- 7. OneWorld has proposed to scale up the initiative to block level. What is UNDP's view on upscaling the program?
- \* The Block Development Officer (BDO), Shivraj Sharma, was interviewed over the phone due to his absence when researchers visited the field.
- \*The Subdistrict Magistrate (SDM) was recently been transferred and the replacement had not yet come, therefore an interview could not be carried out. The District Collector, the head of the District, changed in the beginning of 2011, therefore was very new to the constituency. As such, researchers determined that the level of insight into the program would not be sufficient for beneficial data collection.

<sup>&</sup>lt;sup>48</sup> Sarpanch is the elected political head of the village.

### **ANNEXURE B - User Survey**

### **Assessing the User Profile**

Full Name:	
Job Card #:	 Village:

- 1. Please choose one of the following:
  - a. Male
  - b. Female
- 2. Please tell us your age group:
  - a. <18
  - b. 19-25
  - c. 26-40
  - d. 41-60
  - e. >60
- 3. What is your marital status?
  - a. Single
  - b. Married
  - c. Widowed
- 4. Please tell us the number of people in your household:
  - a. 1-4
  - b. 5-6
  - c. 6+
- 5. How many children do you have?
  - a. 1
  - b. 2
  - c. 3
  - d. 4+
- 6. Please choose of the following that best describes your income status:
  - a. BPL
  - b. APL
- 7. Are you literate?
  - a. Yes (go to question 8)
  - b. No (skip to question 9)
- 8. Please describe your level of literacy by choosing one of the following:
  - a. Able to sign name
  - b. Able to either read or write
  - c. Able to read and write
- 9. Do you own a house?
  - a. Yes
  - b. No
- 10. Please describe your house by choosing one of the following:
  - a. Pakka
  - b. Semi-Pakka
  - c. Kutcha

- 11. On average, how many meals do you eat per day?
  - a. 1
  - b. 2
  - c. 3
  - d. >3
- 12. Do you own land?
  - a. Yes (go to question 13)
  - b. No (skip to question 14)
- 13. What is your/your spouse's occupation?
  - a. Casual labourer
  - b. Small shop worker
  - c. Driver (i.e. auto)
  - d. Skilled labourer (i.e. welder)
  - e. Factory worker
  - f. Other
- 14. How much land do you own?
  - a. <1 bigha
  - b. 1-2 bighas
  - c. 2-4 bighas
  - d. >4 bighas
- 15. What is your level of education?
  - a. No education
  - b. Primary education partial / full
  - c. Elementary education partial / full
- 16. Do you own some form of transportation?
  - a. Yes (go to question 17)
  - b. No (skip to question 18)
- 17. Please describe which of the forms of transportation that you own:
  - a. Cycle
  - b. Two-wheeler
  - c. Car
  - d. Other \_\_\_\_\_
- 18. Approximately what is the total annual income of your household?
  - a. < 10,000
  - b. 10,000 -30,000
  - c. 30,000 50,000
  - d. > 50,0000

### Measuring Engagement with Innovation

### Info Kiosk

- 1. Are you aware of the Info Kiosk?
  - a. Yes (go to question 2)
  - b. No (skip to question 9)
- 2. How did you become aware of the Info Kiosk?
  - a. Friends/Family

- b. Government officials
- c. OneWorld Employees
- d. Radio

e. Other	

- 3. How many times have you visited the Info Kiosk?
  - a. 1 time
  - b. 2 times
  - c. 3 5 times
  - d. >5 times
- 4. How familiar are you with the purpose of the Info Kiosk?
  - a. Basic ability to describe PC components
  - b. Extensive knowledge of PC applications
- 5. Did you know how to use the computer/biometric technologies before the Info Kiosk?
  - a. Yes
  - b. No
- 6. What information do you find most useful from the Info Kiosk? (choose one)
  - a. Job demand
  - b. Job card information
  - c. Scheme Information
  - d. Grievance redressal

	$\bigcirc$ iI			
e.	Other			

- 7. Do you find the Info Kiosk:
  - a. Difficult to use
  - b. Easy to use with some help
  - c. Easy to use without help
- 8. On a scale of 1 to 5, how useful do you find the info kiosk?
  - 1 (useless) 2 3 (semi-useful)
  - 4 5 (extremely useful)
- 9. On a scale of 1 to 5, how would you rate the ease with which you demand work since the introduction of the technology:
  - 1 (no change at all) 2 3 (some)
  - 4 5 (a lot easier)
- 10. On a scale of 1 to 5, how would you rate the increase in access to scheme information since the introduction of the technology:
  - 1 (no change at all) 2
- 3 (some increase)
- 4 5 (large increase)

#### Handheld device for worksite attendance

11. How familiar are you with the handheld biometric attendance system at the worksite?

- a. Able to describe how the biometric application works
- b. Able to describe more than the biometric attendance i.e. the receipt, gps, camera etc.
- 12. On a scale of 1 to 5, how useful do you find the biometric attendance system?
  - 1 (useless) 2 3 (semi-useful)
  - 4 5 (extremely useful)
- 13. On a scale of 1 to 5, how would you rate the decrease in corruption at the worksite since the introduction of the technologies:
  - 1 (no change at all) 2 5(large decrease)
- 3 (some change) 4
- 14. On a scale of 1 to 5, how would you rate the increase in speed of attendance at the worksite since the introduction of the technology:
  - 1 (no change at all) 2
- 3 (some)
- 4

5 (large increase)

### Community Radio

- 15. Are you aware of the community radio?
  - a. Yes (go to question 11)
  - b. No (skip to question 14)
- 16. Did you know what community radio was prior to this program?
  - a. Yes
  - b. No
- 17. How have you been involved in the community radio?
  - a. Just aware of its existence
  - b. Listener
  - c. Participated in developing a program
  - d. Other\_
- 18. What type of information have you found out through the radio? (Choose one or more)
  - a. MGNREGA scheme information
  - b. Other development information i.e. health, education etc.
  - c. Other
- 19. Do you think that radio is:
  - a. Easy to access
  - b. Not too difficult to access
  - c. Difficult to access
- 20. On a scale of 1 to 5, how useful do you find the community radio?
  - 1 (useless) 2 3 (semi-useful)

### SMS job card retrieval

- 21. Are you aware of the SMS job card retrieval system?
  - a. Yes (go to question 17)
  - b. No
- 22. Have you ever used the SMS tool?
  - a. No
  - b. Yes 1 2 3
    - 4+ times
- 23. On a scale of 1 to 5, how useful do you/would you find the SMS tool?
  - 1 (useless) 2 3 (semi-useful)
  - 4 5 (extremely useful)

### Daisy for All

### CHITTAGONG, BANGLADESH

### IN BRIEF

Young Power in Social Action's (YPSA) Information, Communication, Technology Resource Centers on Disabilities (IRCD) are located in three subdistricts of Chittagong and two subdistricts of the Chittagong Hill Tracts of Bangladesh. Under their Digitally Accessible Information System (DAISY) for ALL program, they provide Digital Talking Books (DTBs), also known as audiobooks, on topics of relevance as determined by the needs of a diverse set of print-disabled users. The innovative operational model employs volunteers and visually impaired employees in the development and editing of audiobook content.

Short term goals include digitizing secondary and tertiary education level textbooks and increasing content usage by promotion through community radio.

### DAISY for ALL-IRCD

Volunteers (part time): 25

Members: 500

Print-Disabled Regular Users: 1500+

Partner Organizations: 20 (including outside of Chittagong division)

#### Location

Chittagong: 3 subdistricts - Sitakund, Mirsharai and Chittagong Chittagong Hill Tracts: 2 subdistricts - Kawkhali and Rangamati

### Distribution (2011)

3000 CDs of 500 titles

### **Funding**

DAISY Consortium, Nippon Foundation, Action Aid Bangladesh, Disability Rights Fund, Access to Information (A2I) Prime Minister's Office (PMO), UNDP and YPSA (All except YPSA attached to a block of work and not ongoing).

### Languages

Bangla, English and Chakma (indigenous language of Chittagong Hill Tracts)

#### DESCRIPTION

Digital books in audio format. Designed for the print-disabled - visually impaired and illiterate- to access alternative and mainstream educational materials.

### LESSONS FOR THE FUTURE

- Know your users through feedback collection and continual interaction.
   With a diverse set of users, acknowledging heterogeneities through program adaption will be important.
- Monitoring and evaluation is key to tracking project progress and identifying gaps for provision of meaningful access to information.

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### List of Abbreviations

A2I: Access to Information

AMIS: Adaptive Multimedia System

APCD: Asia Pacific Centre on Disabilities

DAISY: Digital Accessible Information System

DTB: Digital Talking Books

IRCD: Information, Communication, Technology and Resource Centers on Disabilities

NGO: Non-governmental Organization

PMO: Prime Minister's Office

TTS: Text-to-Speech

UNDP: United Nations Development Program

YPSA: Young Power in Social Action

### **BACKGROUND**

One hundred and fifty million people live in Bangladesh – 10 percent are visually disabled and over 50 percent are illiterate. Together, these marginalized populations comprise the print-disabled.

Young Power in Social Action (YPSA) is a social development organization based in Chittagong District of Bangladesh. Amongst numerous efforts to enhance youth participation in development programs, is YPSA's Information, Communication, Technology and Resource Centers on Disabilities (IRCD). The IRCD model was launched in 2005 and is used for improving accessibility of reading materials by print-disabled persons. It also aims to provide livelihoods for the visually impaired through employment.

In order to enhance their capacity to serve the illiterate and visually impaired, YPSA partnered with Digital Accessible Information System (DAISY) Consortium, a not-for-profit international organization dedicated to the promotion of advanced 'audiobooks', also known as Digital Talking Books (DTBs). The Consortium is comprised of 55 country and 110 NGO members. All members pay a fee for the development of new technologies and maintenance of the DAISY standard in all products. DAISY technologies promote a set of standards or functional specifications for production of software and audiobooks and use of players. DAISY Consortium uses over ten types of software to create DTBs. This includes OB open source software, and My Studio PC, Sigtuna and Dolphin Publishers proprietary software. A DTB under DAISY standards consists of a (n):

- Audio file to convert from text and present aloud.
- Synchronization file to link up text and audio.
- Navigation control option to browse through the audio file with ease.

Audiobooks can be heard on standalone DAISY players, computers using DAISY playback software, mobile phones, DVD and MP3 players.

The YPSA-IRCD and DAISY partnership launched the DAISY for ALL program to leverage text-

to-speech technologies for converting written materials into audible works. Specifically, the initiative aims to develop DTBs for the print-illiterate throughout Bangladesh. The staff of YPSA-IRCD received training from the Delhi Resource Center, the South Asian focal point of DAISY activities in the region. Details of trainings given and received are discussed at a later point in this case study.

DAISY for ALL is a hybrid model, whereby the NGO is responsible for implementation, the Government of Bangladesh and UNDP provide funding, and the citizens are the users and ultimate beneficiaries. Today, DAISY for ALL has created over 500 DTBs. A Bangla language pack Adaptive Multimedia System (AMIS) was also created to play the audiobooks in local languages.

### **METHODOLOGY**

### STAKEHOLDER ANALYSIS

Since 2003, YPSA has been reaching out to various user groups through Digital Talking Book technologies. Current user groups include:

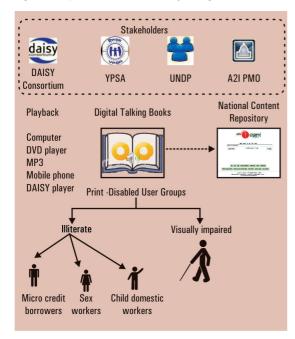
- Microcredit borrowers
- Sex workers
- Domestic workers
- Shipwrecking laborers
- Visually impaired persons

Users from marginalized populations such as those accessing the DAISY for ALL program are typically less vocal when approached individually, hence focus group discussions were determined to be the most appropriate platform for research. Five small groups, each with users from the similar backgrounds or occupations, were approached for group interviews based on their availability and widespread information needs.

Partner organizations help in many capacities, such as in developing Bangla screen reading software as achieved through cooperation with the Asian University for Women along with others. DAISY Consortium provides YPSA with technical support through training and expert advice. DAISY for ALL (in relation to the production and distribution of laws but not other

DAISY publications) is funded by the Access to Information (A2I) department of the Prime Minister's Office (PMO) and UNDP.

Figure 1: Key Stakeholders & Corresponding Roles



### **SWOT ANALYSIS**

### Strengths

- Targeted and localized knowledge dissemination to marginalized populations
- Sophisticated technology platform Allows for navigation
- Innovative cost structure
- Engagement of citizens through publication on the public domain - National Content Repository (Refer to corresponding section below)
- User needs are matched through YPSA's employment of visually impaired persons

### Weaknesses

- Difficult to explain what DTBs are
- Difficult to raise awareness among people about program value
- Limited amount of digital materials
- Low usage levels as compared to potential reach
- Restricted playback devices (DVD, MP3, etc.) due to high cost of certain technologies (DAISY players)

 Lack of a monitoring mechanism for tracking users and usage and/or collecting feedback

### **Opportunities**

- Raise levels of DTB production
- Increase penetration of use
- Use of mobile for audio playback

### Threats

- Financial sustainability difficulty in conveying value of program to obtain donor funding
- Inability to match user needs to mode, form, and/or type of information dispersed

## ANALYZING TECHNOLOGY

DAISY technologies are considered advantageous for a number of reasons. First, many are free of cost and all DTBs can be played back using free and open source software called AMIS. Anecdotal evidence suggests an inability to sustain operations under a model that would require use of costly software. Second, as open source products, DAISY technologies are easy to localize. Third, DAISY Consortium is an active supplier that continuously upgrades products, and offers training and assistance.

### DIGITAL TALKING BOOKS

### Type

At present, there are five types of DTBs:

- Audio only Quickest and least expensive way of generating DTBs. Contains a table of contents that users can use for navigating to a page, section and sub-section of a talking book. It also has a sentence level navigation that allows the user to skip, repeat and/or go to a particular sentence. It can be recorded in any language.
- Full text, full audio Human narrated audio synchronized with visible text. Text is highlighted as per voice narrative. This is most useful for those with partial vision, color blindness or dyslexia because it helps them to focus on the text.
- 3. Text-to-speech (TTS) audio only Automatic robotic synchronization. Invisible text, only TTS.

- 4. Full text, full audio synchronized with TTS Visible text and TTS.
- Printed Braille books Print outs in Braille format can be taken from DAISY standard text files.

#### Content

DAISY format focuses on key subject areas including the following:

- Legal Information
- UN Convention on Rights of Persons with Disabilities
- English textbooks
- Literature/novels
- Disaster Preparedness and Management
- Primary and Reproductive Health
- Livelihoods/Agriculture

### Composition

Each DTB consists of an audio file, synchronization file, and navigation option. The synchronization file allows for the audio to match up with the text. The navigation enables users to locate any file, page, or subheading and change font size, or repeat sections.

### **Digital Talking Dramas**

For the user groups that have little to no education, YPSA has designed over 100 Digital Talking Dramas. These audible stories are in local languages and present legal issues such as dowry and child marriage as simple and easy-to-understand concepts. Production of a digital talking drama, including topic identification, script development, and editing takes approximately one day depending on the length of material. Popular digital talking drama topics include:

- HIV/AIDS
- Arsenic
- Dowry
- Violence against women rape, acid etc.
- Child marriage
- Polygamy
- Property rights

### Distribution

DAISY books can be distributed on a CD/DVD,

memory card or over the Internet. 3,055 CDs have been distributed.

### Playback

Audiobooks can be heard on standalone DAISY players, computers using DAISY playback software, mobile phones, DVD players and MP3 players (with limited navigation).

DAISY players range in cost from 300 to 1,000 USD but are expected to fall in price to 100 in the near future. Even so, due to the low cost alternatives, the DAISY for ALL program does not use DAISY players. The most popular playback device is the free DAISY software running on PCs in telecenters. The second most used tools are DVD and MP3 players. Many NGOs work with DVD players because it can serve a group audience. Students choose to use low-cost MP3 players because they are convenient to carry around, low cost, and multi-functional. Activists and grassroots workers also choose to playback DTBs on MP3 players because they are the best option for going door-to-door in remote areas.

### NATIONAL CONTENT REPOSITORY

Over 20 organizations and 500 visually impaired students have become members of YPSA-IRCD. A selection of DTBs (approximately 100) is stored online at http://www.infokosh. bangladesh.gov.bd/. The online repository can be navigated in two ways: one, a keyword search and two, thematic selection. Themes include: agriculture, health, education, legal and human rights, disaster management, allied institutes, public services, tourism, job opportunities, science and technology, and institutions.

Figure 2: Screenshots of the National Content Repository





### **ASSESSING ACCESS**

### **AWARENESS & USAGE**

YPSA informs potential users about DAISY for ALL through awareness raising meetings, federation meetings focused on a single topic of discussion, fairs, workshops and seminars, and training sessions. Users access DTBs through four YPSA Resource Knowledge Centers (RKCs) and one Multimedia Center or through doorstep MP3 playback services whereby users can listen to DTBs from their own home on a YPSA correspondent's portable device.

Awareness levels of DAISY technologies and YPSA's DTBs vary from urban to rural settings, visually impaired persons to other potential user groups, and institution to institution. In urban areas, visually impaired communities, government and disability and/or ICT-related organizations are highly aware of DAISY technologies and in turn, DAISY for ALL. However, rural communities and a significant amount of uneducated persons remain unaware, which leaves DAISY for ALL with great scope for expanding reach.

#### Focus Group Discussions

Five focus group discussions (FGDs) were held to gather insights from users of DTBs. Each FGD consisted of a semi-structured group discussion in which participants were asked about and shared their thoughts on their use of DTBs, satisfaction levels with the tool, and desires for the future.

### #1 GRASSROOTS WORKERS/ACTIVISTS

Where: Youth Community Multimedia Center, Shitalkundu

Who: Grassroots activists working with YPSA

Feedback: During the discussion, participants elaborated on the benefits of DAISY in their specific constituencies. Digital content on women's' health and disability laws were mentioned as particularly powerful topics that could be easily conveyed to other community members. One woman activist explained that she has both benefitted at an individual and community level by listening to talking dramas.

#### #2 GIRL DOMESTIC WORKERS

Where: Anandlok Learning Center

Who: Domestic workers – girls between 9 to 15

years old

Feedback: According to teachers at the learning center, fourteen domestic workers visit the AnandLok center every evening for two hours to receive basic primary education. A workshop is conducted at the start with the domestic workers' employers to explain the importance of education to underprivileged children. The students demonstrated their new skills in English, Mathematics and Picture Learning and expressed a high level of satisfaction with the program.

### **#3 SEX WORKERS**

Where: Madhumita Center

Who: Street based sex workers

Feedback: According to Madhumita employees, the center focuses on the prevention of sexually transmitted diseases and HIV/AIDS through the following strategies. First, sex workers attend medical check-ups twice a week. Second, skill building programs such as candle-making, weaving, and batik work are offered. Finally, YPSA peer educators use DTBs to educate sex workers on issues related to their health and security. The sex workers expressed a high level of satisfaction with the DTBs, but also suggested including visuals with the voice recordings to make concepts easier to understand. They shared stories of spreading awareness in their own communities about what they had learned through the DTBs.

### **#4 MICROCREDIT BORROWERS**

Where: Rural Knowledge Centre,<sup>49</sup> – Shayerkhali

Who: Women microcredit borrowers

Feedback: When asked about the most useful information provided to them through DTBs, a majority agreed upon learning about arsenic as a toxin in water and prevention of early marriage, dowry, and violence against women. In regards to understanding content and using DAISY, they expressed an ease in learning from audiobooks. They shared a preference to listen to Digital Talking Dramas because of easy comprehension. They also noted that telecenter information managers are present to help them in case they need assistance.

### **#5 VISUALLY IMPAIRED STUDENTS**

Where: YPSA office

Who: Visually impaired students from poor economic backgrounds

Feedback: Many visually impaired students said that they found it difficult to perform well in school because Braille books are costly and limited. As such, they find audiobooks to be a viable alternative due to their simplicity and affordability. The students told researchers that they were trained by YPSA employees on how to use DTBs. They noted that they seek information from textbooks and newspapers in order to learn about policies and legal rights, job opportunities and current affairs. Students requested the production of audiobook dictionaries to search word meanings and increase their vocabularies.

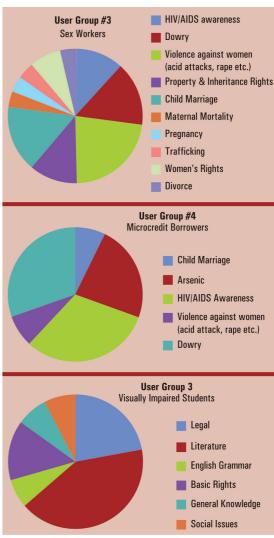
After group sessions, the microcredit borrowers, sex workers and visually impaired students were surveyed on a one-on-one basis.<sup>50</sup> Survey results indicate that information sought out and accessed through DTBs is variable and topics are many. In a sample of 21 surveyed users, 15 different topics were highlighted in total, each group with their own favorites.

Feedback from sex workers suggests that over 20 percent of their access to information through audiobooks is related to issues of violence against women and 15 percent on dowry, 15 percent on HIV/AIDS. More than 80 percent of the information accessed by microcredit borrowers, mostly women, is focused on child marriage, HIV/AIDS and arsenic in water.

Visually impaired students provide a dramatically different picture as 40 percent of their usage is of literature and more than 20 percent is legal issues. The variety in type of information desired and disseminated to meet needs illustrates the value of DTBs as enabling tools for many sectors of society towards impactful education.

Surveys also revealed that nearly all users became aware of DTBs through YPSA or partner NGO outreach staff. This suggests that engagement with DTBs and access to information is limited to those approached by owner organizations. Nearly all surveyed users indicated using DTBs a minimum of 10 times with the majority claiming a usage level much higher than 10. Moreover, 80 percent of the user sample expressed an ability to use DTBs with ease and no need for assistance. Analyzed

Figure 3: Usage of DTBs – Type of Information Accessed per User Group



<sup>49</sup> Rural Knowledge Centers were set up by UNDP, Government of Bangladesh and YPSA and act as community multimedia centers to provide computer training and access to knowledge to citizens at the local level.

<sup>50</sup> Activists were not individually surveyed because data collected from the FGD was determined to be comprehensive. Girl domestic workers were determined to be too young for surveying.

together, this data suggests that the mechanism through which DTBs are distributed limits the size of the audience it reaches; however those who have been introduced to DTBs find them useful and easy enough to repeat usage. Thus, the mode of technology and the type and form of information distributed may be appropriate, but the greater model of access may require some adjustments.

# LINKING ACCESS TO PUBLIC INFORMATION (A2PI) TO EDUCATIONAL DELIVERY

- 1. Diverse Education: DAISY for ALL empowers marginalized citizens towards the pursuit of alternative and higher education. User groups are highly diverse and hence, demand varied materials; visually impaired students prefer to use audiobooks for higher education purposes - literature and legal rights, while illiterate and poor populations tend to use them for social education, such as gender-related issues - dowry, property rights, and violence against women. Advocacy efforts including informing shipwrecking workers of their rights and labor laws, and lay citizens of the ban on public smoking, are also led by YPSA through the use of DTBs. The ability to reach such diverse and underserved populations is a great advantage of this program.
- 2. Bridging an often ignored educational divide: Illiterate and visually impaired persons have a disadvantage in institutionalized learning as text is inaccessible to them. The situation is exasperated by the lack of providers of public information to these populations. As a result, they can suffer from unemployment and poor standards of living. DAISY for ALL has creatively leveraged technologies that are easy and low cost to produce and use with the goal of solving this problem.
- 3. Adaptable Educational Materials: YPSA-IRCD has created 3000 CDs based on 500 titles in Bangla, English and Chakma. Uneducated users groups including sex workers, domestic workers, microcredit borrowers, and shipwrecking workers have the option of listening to the audiobooks in a format known as Digital Talking Dramas –

legal knowledge presented as easy-tounderstand stories. Such information is useful for illiterate persons to exercise their own rights and aware community members of the same.

### CAPACITY BUILDING

### EMPLOYMENT OF VISUALLY IMPAIRED

Seventy-five percent of employees at YPSA-IRCD telecenters are visually impaired. This allows for better servicing of the visually impaired user groups as needs are understood at a personal level.

### TRAINING IN DAISY TECHNOLOGIES

Employees, including the program manager and focal person of DAISY in Bangladesh, received international trainers' training to develop local technical knowledge of DAISY technologies. This provided YPSA-IRCD with the know-how to develop the DAISY for ALL program. Today, YPSA promotes DAISY for ALL through local training courses and workshops on the use of ICT for development of visually impaired informational materials. This continual learning exchange helps to create a sustainable platform for capacity building. The following is a list of training courses taken and given by YPSA to date:

Duskin Leadership Training: A one year training program delivered to people with disabilities in Japan. Two YPSA employees had received this training on DAISY technologies prior to joining the organization.

International Trainers Training on DAISY: Three YPSA employees were trained under this program.

**DAISY and Information Technology**: One month training from The National Association of the Blind in New Delhi, India.

ICT training for visually impaired persons: Run by the Asia Pacific Centre on Disabilities (APCD) Foundation. International Training Workshop on Computerized Braille Production: Held in Chittagong and supported by Japan Braille Library and Malaysian Association for the Blind.

DAISY focal point training: First YPSA training of 10 individuals in Bangladesh on DAISY technologies.

# UTILIZING INFORMATION, SUSTAINABILITY & IMPACT

### APPLIED LEARNING

Focus group discussions revealed users' learning of various social and legal issues resulting in their sharing of knowledge within their communities. Furthermore, they cited instances in which they practically applied concepts they learned. For example, one user shared her understanding of early marriage as an act that can be detrimental to a women's health and as a result, a story of her stopping a family in her village from marrying off their girl child. In another instance, an activist shared a story of sending a man to jail who had thrown acid on his wife. The practical application of information accessed through DAISY for ALL supports its ability to create real impact; in this case, it is clear that the use of audiobooks for information dissemination can result in educational services that deliver desired results.

### **FINANCIAL ISSUES**

The DAISY for ALL financial model is unique because it uses innovative ways of keeping costs low. DAISY technologies are open source - some are free while others can be purchased; YPSA only uses the free of cost software. All content development and editing are done in-house by volunteers or employees. Playback devices are either supplied by YPSA to user organizations or are user's personal items. For example, DVD players are given to NGOs working with sex workers, while low cost MP3 players are owned and used by visually impaired students. The DAISY players have not yet been deemed necessary for playback, thus expenditure on

more than two of these devices has not been incurred.

Revenues are generated through production of new DTB materials. For example, Dhaka University might request DTBs on particular health-related issues for which YPSA will charge 3000 to 5000 taka per hour of production time.

Alternative revenue streams are from two sources. First, A2I and UNDP provide financial support when necessary. Second, through cross internal subsidization; YPSA runs a number of programs, some of which are profitable and are used to support DAISY for ALL operations.

Table 1: Financial Model

Revenues		
Production of New DTBs for user organizations	~3000-5000 Taka/hour (depends on quality)	
Contractual-based Donor Funding		
Expenditure		
Content	FREE - developed by volunteers	
Content Editing	Salaried YPSA employees - completed by visually impaired technicians	
Software	FREE - DAISY products	
Internal YPSA Hardware - PCs	Initial capital expenses	
User Playback devices - MP3, DVD, etc.	Nominal costs - some provided by YPSA, some users supply their own	

### **UPSCALING**

YPSA plans to reach audiences outside of Chittagong through the airing of talking dramas on community radio and the enhancement of partnerships with local and national civil society organizations.

The Government of Bangladesh plans to launch an e-book program which will digitize all textbooks from class three to 10. The Prime Minister has announced the plan to incorporate text-to-speech in this process. This institutionalization of DAISY for ALL will deepen its penetration throughout the country.

### RECOMMENDATIONS

### MONITORING AND EVALUATION

For understanding program usage, reach and limitations.

DAISY for ALL lacks a systematic tracking and assessment system of current operations. It would be useful and feasible to collect and analyze data to understand program scope and limitations and to examine options for exploiting future opportunities. Pertinent data for collection would include:

#### User access to information

- Number of users accessing DAISY for ALL How many people are using DTBs?
- User profile Who is accessing the audio information?
- Information type being accessed What type of audio information are users accessing?
- User needs/desires For what purpose are they accessing the information?

### Technologies preferred, used, desired

- Use of DTB playback tools Which playback device is used by what user group?
- Type of DTB accessed Which format of audiobook is accessed by whom?

### Utilization of information for real impact

 Use of new knowledge for change creation – Which applied learning efforts have users pursued?

Targets are an effective way of ensuring program progress and when informed through data gathered from users, targets are useful for accurately assessing program success. As such, it is suggested that targets are defined for the above data sets.

A database of total DTB users with corresponding profiles would enable easy and personalized access to gather feedback. Feedback would provide the necessary information to carry out a comprehensive examination of program gaps; knowledge of gaps would then provide a stimulus for filling them for improving overall service and impact.

### MATCHING USERS WITH APPROPRIATE TECHNOLOGIES & RELEVANT INFORMATION

Evidence from the field suggests that DAISY for ALL reaches a wide audience. Although this presents an opportunity for great impact, it simultaneously requires a more nuanced approach. User groups differ in a number of ways and as a result, their interests in informational type and form and mode of access also vary. These complexities are best addressed through acting on observations made about user behavior and through feedback.

In this case, focus group discussions revealed that illiterate women, such as the sex workers, preferred to both listen and watch digital talking dramas. They expressed an ability to better understand educational concepts if supported visually. Visually impaired students preferred a greater variety in digital materials, specifically requesting an audiobook dictionary and an expansive list of digital talking novels. With this feedback, we can conclude that it may be most appropriate to invest in pairing pictures with audible stories for illiterate populations, and digitize more high-level education materials for the visually impaired. The usage could grow if technologies and information are developed and adapted to user needs; avoiding the treatment of users as a homogenous group is paramount to ensuring this.

### **EXPLOITING POTENTIAL SCOPE**

At present, YPSA operates DAISY for ALL on a 'on demand' basis with minimal planning for future production and distribution. As discussed earlier, awareness is currently limited to visually impaired persons and a confined illiterate population. With a proper monitoring system in place that would allow for sophisticated user profiling, the ability to upscale in an efficient and effective manner would be possible and is recommended. With print-disabled persons comprising half of the country's population, there is no end to the reach of audiobooks and the great change in educational services that they can usher in. The following should act as guidelines for increasing the reach of DAISY for ALL:

- Strengthen existing partnerships with organizations through distribution of new audiobook materials. This will help to increase revenues that can be invested in hardware for distribution to NGOs or individuals who cannot afford them and/ or production of further digital materials. By using these organized channels for DTB distribution, YPSA will spread awareness in a way that will effectively ensure long-term program sustainability.
- 2. Deepen penetration in Chittagong with current user groups through adapting

- materials according to identified user preferences and understanding level of potential usage.
- 3. Expand partnerships by seeking out organizations based in and outside of Chittagong. Approaching other areas of the country will require a well-established name in Chittagong. Comprehensive documentation of standardized methods of production and distribution will help to achieve this.

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### ANNEXURE A - List of Daisy Legal Content

SI. No.	Topic	Content Name
	Disability	
1		Disability Acts (Bangla)
2		Biwako Millennium Framework for Action
3		Shishu Audhiker Sonod O Bangladesh-a Protibondhider Audhiker
4		Convention on the Rights of Persons with Disability
5		Protibondhi Baktiborger Audhiker Sonod O Oichik Protipalonio Bidhi Bidhan
6		Shohoj bangla Protibondhi Baktiborger Audhiker Sonod
	Children	
7		Shishu Audhiker Sonod
8		Jatio Shishu Nity 1994
9		Jatishonghuo Shishu Audhiker Sonod, 1989
	Women	
10		Narir Proti Shokol Prokar Boishomo Bilop Shonod
11		Jatio Nari Unnaion Nity
12		Jatio Nari Unnaion Nity (Details)
13		Nari O Shishu Nirjaton Domon Ayeein 2002
14		Nari O Shishu Nirjaton Domon Ayeein 2003
	Law	
15		Jormo O Mirto Nibondon Ayeein 2004
16		Ballobibaho Nirod Ayeein 1929
17		Muslim Bia O Talak Registrikoron Ayeein 1974

SI. No.	Topic	Content Name	
18		Acid Auporad Domon Ayeein 2002	
19		Joutok Nishidhokoron Ayeein	
20		Authoradhiker Ayeein	
21		Gram Adalot Ayeein	
22		Proribesh Shongrokhon Ayeein	
23		Madokdrobo Niotron Ayeein	
24		Prokasho Jua Ayeein	
25		Ayeeingoto Shohaiota Prodan Ayeein	
26		Aso ayeein Jani	
	Talking Drama		
27		Ballo Bibaho	
28		Bibaho	
29		Boho Bibaho	
30		Denmohor	
31		Dhorshon	
32		Hindu Uttaradhiker Ayeein	
33		Joutok	
34		Khash Jomi	
35		Kormojibi Mohila	
36		Muslim Uttaradhiker Ayeein	
37		Mutation	
38		Ovivabokotto	
39		Passport	
40		Shishu Nirjaton Shomporkito Oporadh Shomuho Ebong Er Shasty	
41		Tamak Shebon O Dhumpaner Khoti	
42		Voronposhon	
43		Wakf	
44		Borga chash	

# ANNEXURE B - Stakeholder Interviews

### YPSA-IRCD

- According to our research, there are three major stakeholders in the DAISY for ALL program: YPSA-IRCD, DAISY- the technology provider, and the printdisabled users. Subsidiary components of the project have been carried out through partnerships with the UNDP (legal digitization, DTB local distribution and talking dramas), Dhaka University (digital textbooks) and A2I (PMO) (Talking dramas). Are there additional stakeholders in this project? If so, please indicate who they are.
  - a. Can you elaborate on the role of each stakeholder?
  - b. Please explain the organizational structure how do all stakeholders work together under this program?
- 2. Can you explain the financial model of Digital Talking Books?
  - a. Through what funds are DAISY technologies procured? What does this amount to per DTB?
  - b. Are individual users charged for usage of DTBs? What about institutional users i.e. Dhaka University? If so, what is the user fee?
  - c. How does YPSA-IRCD ensure the financial sustainability of DAISY for ALL?
- 3. The following 10 focal areas have been addressed in some capacity under the DAISY for ALL program. Can you provide us with details - quantity of digitized materials to date, process of digitization, purpose of digitization - in each of these areas?
  - a. Disaster Preparedness and Management 4
  - b. Legal 500 pages (in partnership with UNDP)
  - c. UNCRPD in Bangla
  - d. Livelihood
  - e. Literature
  - f. Primary and Reproductive Health
  - g. Agriculture
  - h. HIV/AIDS
    - i. English language textbooks (in partnership with Dhaka University)

- j. Talking Dramas 100 (in partnership with A2I PMO & UNDP) to be aired on community radio; in local languages. Who are the partner community radio organizations? How does local language production take place?
- 4. Why was DAISY technology chosen for this effort? What is advantageous or unique about these specific technologies?
  - a. DAISY technologies are open source. Can you explain how this affects the program?
- What is the current level of awareness of Digital Talking Books in Chittagong Division? In Bangladesh? (High, medium, low - what percentage of the population is aware of this DTBs?)
- 6. What is the current level of usage in Chittagong Division? In Bangladesh? What percentage of the targeted population uses the technologies?
  - a. How do users access DAISY for ALL materials?
- 7. Can you explain the purpose of the National Content Repository? Why has YPSA-IRCD determined it important to publish materials in the public domain?
- 8. DAISY for ALL materials can be played back on mobile technology. How does this work? Is this method being used? If so, by whom?
- 9. What have the major challenges been thus far? How were these overcome or how do these plan to be tackled?
- 10. Are there plans to enhance/upgrade the DAISY for ALL program? If so, what do the future plans entail?
  - a. How will awareness grow? Penetration of use?

### **DAISY**

- 1. Can you explain the purpose/benefits of DAISY technologies working on an open source platform?
- 2. Please tell us the major DTB components and corresponding functions.
  - a. Audio file
  - b. Synchronization file
  - c. Navigation Option
- 3. Can you explain the avenues for distribution of DTBs?
  - a. CD/DVD
  - b. Memory card
  - c. Internet
- 4. Can you expand on the playback options of DAISY materials?
  - a. DAISY players What are they? How do they operate?

- b. PC with DAISY playback software
- c. Mobile phones
- d. MP3 players
- 5. What is the organizational goal for the DAISY for ALL program? Are there quantitative targets in terms of penetration of use?
- 6. What were the major challenges faced in program development, deployment and monitoring? How were these overcome?
- 7. What are DAISY's plans for upscaling of the DAISY for ALL program?

### Partner Organizations (UNDP, Dhaka University, A2I)

- What was the motivation behind partnering with YPSA-IRCD for the DAISY for ALL program?
- 2. Can you explain your organization's role in the partnership?
- 3. What has been the outcome of the collaboration (quantitative & qualitative)?
- 4. Did your organization provide funding for this effort? What level of funds was required?

### **ANNEXURE C - User Survey**

- How many times have you used Digital Talking Books?
  - a. Once
  - b. 2-4 times
  - c. 5-10 times
  - d. 10+ times
- 2. How did you become aware of Digital Talking Books?
  - a. Word of mouth/friends/family
  - b. YPSA-IRCD telecenter worker
  - c. Partner Organization i.e. UNDP, Dhaka University, A2I (government)
- 3. How would you rate the level of ease/difficulty with which you use DTBs?
  - a. Simple, no need for assistance

- b. Able to use with some assistance
- c. Difficult, not able to use easily
- 4. For what purpose have you used DTBs? (circle one or more)
  - a. Disaster Preparedness and Management
  - b. Legal information
  - c. UNCRPD
  - d. Liveliho od
  - e. Literature
  - f. Primary and Reproductive Health
  - g. Agriculture
  - h. HIV/AIDS
  - i. English language textbooks

### Case Study 4

### Citizens' Voices

### **BANGLADESH**

### IN BRIEF

Citizen Charters declare the people's right to be served by the State. To date, however, the charters that have been drafted in Bangladesh have yet to show a significant amount of tangible results. Furthermore, the Right to Information (RTI) Act 2009 has not either been fully used as most citizens are still unaware of it. As a result, the Access to Information (A2I) Program of the Prime Minister's Office (PMO) conceived Citizens' Voices (Nagorik Kontho in Bangla), a web portal designed to facilitate engagement between service providers and beneficiaries for operationalization of Citizens' Charters and RTI. The platform allows citizens to voice their needs and concerns in a convenient manner, which was not possible before.

Conceptualized in Dhaka, Bangladesh in 2006-2007, Citizens' Voices operates under a multi-stakeholder model funded by UNDP's Digital Thematic Trust Fund. UNDP also provides visionary guidance and imparts technical expertise to all other entities involved. Domain Technologies Ltd. developed the portal and continues to manage new iterations of it. Population Services Training Centre (PSTC) manages fieldwork through the training of citizen journalists in outreach for citizen submission of reports. ATN Bangla is a national news channel consulted for publicity and awareness generation of the online tool.

The A2I Program envisions Citizens' Voices to be an innovative platform that encourages a responsive government and an active citizenry.

#### DESCRIPTION

Web portal for citizens' multimedia reporting of issues in public service delivery and service provider engagement through online response.

### LESSONS FOR THE FUTURE

- Institutionalizing innovation goals does not require starting from scratch - building on existing policies can help in quick and effective promotion.
- One-sided access to information will not succeed in improving governance; it is the engagement of all responsible parties that will determine the nature of outcomes.

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### List of Abbreviations

A2I: Access to Information

C2C: Citizen to Citizen

ICT: Information and Communication Technology

ICT4D: Information and Communication Technologies for Development

MMS: Multimedia Messaging Service

PMO: Prime Minister's Office

PSTC: Population Services Training Centre

RTI: Right to Information

SMS: Short Message Service

UNDP: United Nations Development Program

### **BACKGROUND**

In 2006-07, the PMO and UNDP determined that ICT was underutilized in improving overall governance in Bangladesh. To enhance e-governance in the country, the creation of a concrete ICT framework to effectively and efficiently deliver services to the people was supported. A comprehensive analysis of the state of e-governance highlighted a demand side gap that ultimately motivated the development of the Citizens' Voices web portal.

In 2009, the Government of Bangladesh enacted the Right to Information (RTI) Act, which formally established citizens' access to public information In hopes of operationalizing RTI, government agencies articulated the proposed outcomes through a written charter for citizen's to view. Today, however, many citizens remain unaware of the charters through which these rights have been outlined, acknowledged and can be demanded for.

Born out of the timely coinciding of heightened e-governance efforts and access to information policies, Citizens' Voices, Nagorik Kontho in Bangla, was piloted by UNDP, the Access to Information (A2I) Program of the Prime Minister's Office (PMO), and Population Services and Training Center (PSTC) in three districts of Bangladesh: Rajshahi, Panchagarh and Barishal. Formally launched in May 2011, the program is actively promoting transparency and accountability in governance through a unique approach that entails citizen-to-citizen access to information, as facilitated through cutting edge technologies. The focal point of the program is a web portal (http://nagorikkontho.org/portal/) designed to eliminate the gap between service providers and citizens, and hence improve the effectiveness of public service delivery. Specifically, citizens can publish reports online on quality of service delivery for public scrutiny and simultaneously, service providers are given the opportunity to respond.

### **METHODOLOGY**

#### STAKEHOLDER ANALYSIS

Figure 1: Key Stakeholders and Roles



### A2I Program (PMO) & UNDP

Conceptualized, funded and manage the project.

- Designed vision and architecture of portal
- Supports PSTC in its activities
- Monitoring and evaluation
- Technical leadership
- Linking with national media organizations

### Population Services and Training Center (PSTC) & Citizen Volunteers

Population Services and Training Centre (PSTC), established in 1978, is a not for profit organization which aims to improve health, social security and the physical living conditions of the poor and socially disadvantaged. PSTC is responsible for mobilizing citizens and building awareness through:

- Identifying and training 'citizen journalists' local volunteers/champions
- Building partnerships with local civil society organizations
- Linking up with local media organizations

PSTC Area Coordinators lead programs in dedicated localities and Community Organizers engage with citizens in the field. Citizen journalist volunteers conduct training in report submission. They also help to facilitate follow up meetings with public authorities and citizens.

### Domain Technologies

Domain Technologies is the IT services company that developed the web portal through the use of the following open source technologies:

- Ushahidi PHP platform, used for overall portal framework
- Frontline SMS SMS report submission
- Wordpress blog development

### **Media Agencies**

Report-related stories are envisioned for broadcast through the media. ATN Bangla has become the first partner to push this agenda forward.

#### Service Providers

Service providers including but not restricted to municipalities, upazila porishads,<sup>51</sup> directorates, local government offices, and hospitals are expected to engage in the portal through the submission of follow-up reports and concrete action to improve public service delivery. The Ministries of Health and Education will be the first two providers targeted for engagement with the portal.

### **SWOT ANALYSIS**

### Strengths

- First of its kind online platform in Bangladesh - Citizen to Citizen (C2C)
- Appropriate Technology Choice
- Integrates a variety of technologies for content submission
- Hybrid model open source and proprietary
- Display of aggregated data on sophisticated platform (integration of google maps and graphical display)

#### Weaknesses

- Low level of awareness
- Low usage (>400 reports, but submitted by volunteers)
- Declining trend in usage (120 in Jan, 70 in March 2011)

- Lacks clear feedback mechanism/ engagement platform for service providers
- Verification level is low (1.9% of reports)
- Procedure for verification is vague

### **Opportunities**

- Encourage service providers to improve services through citizens' voicing demands
- Integration of new, low cost technologies for inclusiveness - reach to remote areas and marginalized populations

### Threats

- Failure to create an impact without engagement between citizens and service providers
- Resistance by government to recognize the legitmacy of the reports
- Failure to integrate mobile technologies would limit scope to advanced users and high income citizens

# LINKING ACCESS TO INFORMATION TO PUBLIC ACCOUNTABILITY

An essential feature of good governance is to make the citizens' right to know and freedom of expression a tangible reality. In this light, Citizens' Voices is an example of an emerging practice. The web platform is an emerging Information and Communication Technologies for Development (ICT4D) initiative that facilitates engagement between citizens and public service providers, namely government agencies. Through this engagement the service providers will be made accountable to deliver services in a transparent and timely manner. It aims to give a voice to citizens' demands and encourage service providers to respond to them. Two features that link this initiative to democratic processes for strengthening public accountability are:

 Pro-public and empowering: The topmost priority of a democratic government is the welfare of the citizens. In line with this is the objective of Citizens' Voices – to encourage citizens to exercise their right to access public information for improvements in service provision.

<sup>51</sup> These are the subdistrict administrative councils of Bangladesh. Each consists of a chairman, vice chairman, and a woman vice chairman.

Closing the 'citizen to provider' gap: The
portal presents an opportunity to connect
public service agencies to citizens. There
are five ways of submitting a report – voice,
SMS, email, online form and videos; such
variety makes submission easy, after which
concerned agencies can also respond quickly.

### **WORKING DESIGN**

### **CITIZEN REPORTING**

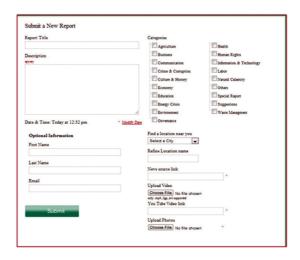
Citizens' Voices aims to encourage a wide range of citizen groups, from youth to marginalized populations to academicians, to use the platform for their own benefit and the society at large.

To satisfy the diverse set of needs and preferences of a large audience and embrace the many forms of information that exist today, reporting can be executed through various mediums of technology. Content can be submitted through the following in text, image, or audio form:

### Mobile:

- → SMS or Voice to 8801733498185
- → MMS to 'kontho'

Figure 3: Screenshot of Report Submission Form



#### PC/web

- Email to admin@nagorikkontho.org
- Directly through the online form (http:// nagorikkontho.org/portal/reports/ submit)

Public service reports require selection of a corresponding location and thematic area; citizens can choose from 17 categories of public services. Figure 4 illustrates how report data is aggregated and displayed according to location on a Google Map.

Figure 2: Process Flow of Stakeholder Portal Engagement

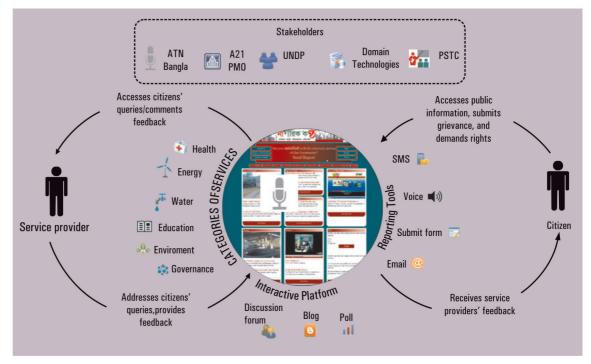


Figure 4: Screenshot of Report Submission Map

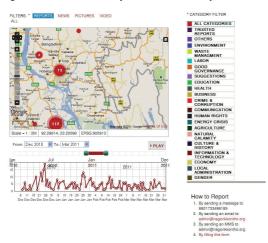


Table 1: Classification of Public Services

Classification of Public Services		
1.	Agriculture	
2.	Business	
3.	Communication	
4.	Crime and Corruption	
5.	Culture and History	
6.	Economy	
7.	Education	
8.	Energy Crisis	
9.	Environment	
10.	Governance	
11.	Health	
12.	Human Rights	
13.	Information Technology	
14.	Labor	
15.	Natural Calamity	
16.	Waste Management	
17.	Others	
There is also space for submitting		

SERVICE PROVIDER FEEDBACK

'special reports' and 'suggestions'.

A number of service providers are expected to submit follow-up reports, however only a handful have been published on the portal to date. UNDP and the A2I Program officials responsible for the innovation have said that service provider engagement will be the focus of the next stage. Plans include the implementation of a three-step

process: first, create a unique login for each service provider so that they can access a personalized dashboard; second, compile reports and electronically submit them to the appropriate service provider; and third, leverage 'one-stop centers' housed in district offices to build a rapport with service providers and motivate a habit of consistently visiting the portal and using the dashboard. The extent and outcomes of this interaction remains to be seen and hence, should be revisited at a later date.

### REPORT MODERATION & VERIFICATION

Currently there are five informal content moderators – two are PSTC employees, and three are UNDP consultants. PSTC plans to scale this up with the hiring of five additional interns. Sector-specific moderators are envisioned to maintain a high standard quality of reports. Moderation of content includes basic spelling and grammar correction, evaluation of content appropriateness, and localization/conversion of language between English and Bangla. There is room for error in the translation to Bangla because it is accurate only about 80 percent of the time. Guidelines for moderation are published on the portal for public viewing.

The process of report verification remains informal as resources are said to be too low for enhancements. As such, citizens are encouraged to submit tangible evidence such as photos and videos, and provide commentary on their report likes and dislikes; in this manner, citizens are ensuring the validity of their own reports.

### WORKFLOW

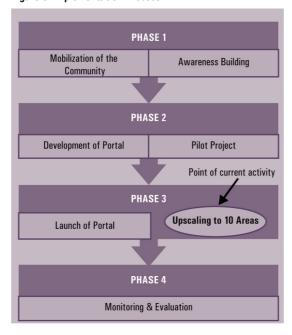
# PHASE 1: MOBILIZING THROUGH COMMUNITY TRAINING

At the outset of the program, PSTC trained 150 volunteers including college students, young teachers and practitioners, in:

- 1. Report writing
- 2. Citizen journalism
- Use of mobile for report submission Fifteen mobiles were supplied for this purpose.

4. Use of FlipCams<sup>52</sup> for video service delivery tracking – Two were procured for each of the three pilot areas. Flipcams were chosen for four major reasons: one, they are low cost; two, they are easy-to-use; three, they are highly portable; and four, they resemble mobile phones, so they can leapfrog the stigmatization typically received from using a conventional camera.

**Figure 5: Implementation Process** 



Over a four-month period, the volunteers and those who they informed through an advocacy campaign, submitted over 400 contents – written reports, blog posts, photos, and videos – for publication on Citizens' Voices. The campaign efforts targeted knowledge dissemination on RTI and Citizen Charters.

Awareness building has not only taken place through volunteer training, but also by using other PSTC programs such as promotional platforms, meetings with government and grassroots organizations to inform public opinion, campaigns that use traditional mediums of entertainment, and related forums such as on Health Rights.

### PHASE 2: DEVELOPING THE PORTAL & PILOTING

### Pilot Design

Based on the expertise of PSTC and the prioritization of basic needs, the pilot intervention

focused on two areas: health services and waste management. In an attempt to understand all possible outcomes, three locations were chosen based on varying socio-economic conditions and geographical areas. For similar reasons, a different unit of government was approached in each locality. Panchagarh municipality was selected to understand the potential engagement of a remote and poor population. Rajshahi City Corporation was chosen to observe outcomes in a large context. Barishal upazila porishad was identified to measure effects in a coastal area. PSTC's previous experience in the chosen pilot locations had also familiarized them with contextual nuances. Thirty volunteers attended to Panchagarh, 40 to Rajshahi, and 10 to Barishal.

### **PORTAL FEATURES**

Blog: There are 8 blog entries on health, innovative technologies and education. There is also an option for viewers to post comments.

Photos and Video gallery: Several photographs on culture and history, environment, waste management etc. have been uploaded, each with a short description inviting viewers' responses. Health services and waste management are presently the focus of these multimedia activities because they reflect the basic needs of all citizens. Users wanting to convey a message via videos have a space to post them.

Get Alerts: To view incoming reports within 20 kilometers of an identified area, a user can submit his/her email address and will receive the information via email.

Reports: Reports can be searched by category (health, education etc), location (district, subdistrict etc) and year. Those that prefer a visual representation of reports per location can see it on the map as all reports have been geotagged. Viewers can also post comments.

Frequently Asked Questions (FAQs): The guidelines for submitting reports and content parameters are included in the FAQs.

Objectives, goals, and expected outcomes of the initiative are also discussed here.

Important links: At present, links to the Ministry of Education and Police Department websites are available. The future plan is to list all

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<sup>&</sup>lt;sup>52</sup> CISCO. Flip Video. <a href="http://www.theflip.com/">http://www.theflip.com/>.

departmental links so that any user can directly contact them.

The portal (fan page) is available on Facebook and Twitter; viewers can share information on these platforms. Any video content posted on the portal is automatically uploaded to YouTube through automatic backend integration.

Special Features: While submitting/responding to a report, the user can type in Bangla (Roman script) and it can be converted into Bangla text. The user can also click 'bijoy to unicode Bangla convertor' to type in Bangla text directly. Hence, both Bangla and English typing options are available.

Once the report is submitted, viewers can like or dislike it by clicking the thumbs up or thumbs down buttons. This acts as a polling feature.

### Citizen Charters

As a 'declaration' by the agency of citizens' needs and desires, the Citizen Charter was picked up as an important document to use as a starting point for the portal. To date, 26 charters have been published on the site in English and six in Bangla. The plan is to publish the remainder on the portal in the near future. The power of the charters lies in their pointed outlining of what to monitor; as such, citizens can submit reports based on these points, service providers can respond accordingly, and monitoring and evaluation of progress in service delivery can be accomplished in a systematic manner.

Table 2: Program Highlights (Adapted from www.nagorikkontho.org)

### PHASE 3: SCALING UP

PSTC has identified seven locations to expand into by June 2012, which will bring total coverage to 10 out of the 64 districts countrywide.

The A2I Program is planning to partner with other rights-based organizations to further mobilize communities and train citizen journalists for the production of quality reports. Partnerships with public service agencies to encourage feedback are also being pursued. Linking up with local media, such as ATN Bangla, who can publicize the reports in their own capacity, continues to be on the agenda.

### **TECHNOLOGY**

### INNOVATIVE PORTAL FEATURES

Domain Technologies Ltd. developed the user interface of the platform with a few main considerations. First, all user interface features were simplified as much as possible to optimize for low bandwidth. However, some features, such as the Google map and geotagging to illustrate the geography of report submissions are only visible with high-speed internet. Second, the automatic backend downloading of a Bangla conversion application was integrated to streamline the bilingual text display. Third, the high quantity of dynamic information displayed on the homepage aimed to encourage users' interest in latest events.

	Objectives	Activities	Goals
•	Increase citizens' awareness about services	Citizen awareness campaigns	<ul><li>Improve citizens' lives</li><li>Increase service providers'</li></ul>
•	Build citizens' engagement with service providers through ICT	Train volunteers in journalism, technology and governance	<ul> <li>efficiency through feedback</li> <li>Assist in strengthening democratic institutions</li> </ul>
•	Use ICT tools and citizen journalism to claim rights  Draw attention of service	<ul> <li>Communicate with service providers and organize workshops</li> </ul>	
•	providers to citizens' needs  Partner with media for wide publicity of services and	<ul> <li>Update platform with reports and follow them up</li> <li>Engage social workers and</li> </ul>	
	awareness	civil society practitioners	

There are a number of notable features on the portal including:

Transliteration into Bangla – Users can opt to type in English or Bangla to simultaneously be transliterated into the other

- Automatic video integration with YouTube Users can upload a video and a YouTube link will be created
- Detection of spam reporting Sophisticated weaning out of incoming spam messages
- User polling Users can 'like' or 'dislike' reports
- Facebook and Twitter integration Users can access the portal through popular social networks

Another key feature is the moderator dashboard, which allows reports to be downloaded, printed and analyzed from the backend at any given point in time.

### **USE OF OPEN SOURCE**

The open source software employed for the development of Citizens' Voices includes:

Ushahidi platform (php 5.2): Crowdsourcing tool originally used for monitoring elections. Customizable to allow for content submission in Bangla and through multiple mediums: SMS, MMS, email, directly on the online form and voice calls.

Frontline SMS: Easy-to-use mobile text messaging program.

**Wordpress**: A highly customizable publishing platform used for the blog.

**Avro**: For transliteration – type in Roman alphabet, visual in Bangla.

### Advantages

According to the developers of Citizens' Voices, there are three major advantages of using open source technologies that prompted its use for this effort.

Customization is one of the primary reasons. Its advantages are the ability to: localize the language; simplify the tool features to be

compatible with lower bandwidth and less advanced users; and add special features, such as the blog, picture and video galleries, and overall journalistic feel to the crowdsourcing platform.

Sustainability is another reason for leveraging open source. In the short term, the ability to rapidly develop applications and to easily obtain support contributes to a working model. In the long term, financial savings through low or free of cost products will keep the program afloat. In other words, due to the low costs associated with using open source technologies, the program can channel revenues towards other areas that will help to expand and strengthen it, such as mass media promotion and monitoring systems.

Portability is the final advantage. For example, the use of Frontline SMS enables infrastructure-free activity.

### Disadvantages

Two disadvantages of using open source were also identified. The first is aesthetics - the frontend is possibly less visually appealing than it could potentially be because certain features are limited. The second is bandwidth - for example, the videos need to be redirected to YouTube because the open source platform does not have the capacity to run them smoothly.

### PORTAL USAGE, SUSTAINABILITY & IMPACT

When asked about goals for the future, stakeholders were not sure what to expect for number of initial and follow-up reports, but they did express the aim to experience 3000 portal hits per day by June 2011. This estimate is based on the previous experience of the A2I Program's citizen-centric portals including the Information Commission Portal and District Portals.

Data as of May 2010 indicates over 400 citizen reports submissions. Of these, nearly 2 percent have been verified through a follow-up report. To enhance supply side interaction, service provider engagement will be pushed through semi-formal meetings initially with large ministries. To date, two ministries have been approached - Health

and Education – and will remain the targets for the first stage of discussions.

### CITIZEN JOURNALISTS' SURVEY ANALYSIS

Ten percent of users were targeted for surveying. Since initially there were 150, and currently there are 80 full-time volunteers submitting reports, eight to 15 surveys were scheduled for collection of data.

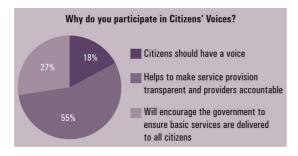
Based on availability, telephonic interviews with 11 citizen journalists were conducted. Contact details were obtained from PSTC. Surveyed users were questioned about their a) occupation b) age c) reasons for participation d) the most useful thing that they have learned and e) the number one aspect that requires attention for improvement.

Nine out of the 11 citizen-journalists identified themselves as college students and two as homemakers. Their ages ranged between 20 to 25 years old.

Citizen journalists were asked why they participated in Citizens' Voices. More than half of the respondents said that the portal will aid in increasing transparency and accountability in service provision, a lesser number said it would ensure basic public services are delivered, and an even lesser number said it would give citizens a voice.

When asked about what they have learned from engaging in Citizens' Voices, more than half of the respondents said journalism, as opposed to the fewer others who claimed technology skills or governance-related knowledge. The feedback may suggest that the innovation is most successful in providing access to understanding how to demand rights, and less of how to

Figure 6: Evaluating Citizens' Priorities in Governance



leverage ICT to this end. The sample size is too small to make concrete conclusions from data, but the results do shed some light on the aspects of the innovation that are working well and what could be strengthened. It highlights the ability of Citizens' Voices to empower people to learn ways of demanding information. At the same time, it suggests that the purpose of accessing information and the tools that can be used to access it efficiently could be conveyed better.

Figure 7: Understanding Innovation Strengths & Weaknesses



Nearly all citizen journalists surveyed said that building awareness amongst citizens should be the topmost priority. This may indicate a remaining need to increase citizen interest in and understanding of the innovation.

Figure 8: Identifying Innovation Gaps



### COSTS

UNDP provided 200,000 USD out of its Digital Thematic Trust Fund for the first phase of Citizens' Voices. Although additional funding has been allocated towards this project, UNDP is actively encouraging local agencies to take full ownership of the portal. As such, funds are mostly targeted at advocacy campaigns in the upcoming phases of the project.

#### **MEASURING IMPACT**

Citizens' Voices was developed as a citizento-citizen (C2C) platform due to the belief that only the demands of the people can push through the resistance faced when attempting to increase transparency in governance. Preliminary feedback is positive, both praise of the program and constructive criticism are being generated.

The hope is that this will have a cascading affect and ultimately lead to: one, an increase in responsiveness of government to peoples' needs; two, government reforms – changes in policy and business processes; three, a reduction in poverty; and four, incremental increases in democracy. These goals will also be appropriate benchmarks for measuring impact in future research.

### RECOMMENDATIONS

# INCREASING PENETRATION – REFINED AND CONCRETE PLANS FOR CITIZEN AND SERVICE PROVIDER ENGAGEMENT

Stakeholders have outlined future plans of outreach including hiring of interns for citizen journalism and report moderation, discussions with government to impart knowledge about the portal and its purpose, and identification and familiarization of new areas for citizen journalists to enter; however the approach to increasing portal traffic through these efforts remains vague and scope for their concretization is high.

Constructing a detailed timeline and agenda to refine these planned activities will expedite upscaling in a manner that is manageable, monitorable and sustainable. The following is a list of strategic ways to reach this goal:

- Motivating service providers to engage through portal modification – Refining the portal by linking original with follow-up reports for easy tracking of progress and developing a dashboard for service providers to effortlessly access concerned reports.
- Focusing government attention on related policy - Directing discussions with government towards integrating the portal into existing policy frameworks - RTI, Citizen Charters, etc.
- 3. Partnering with social organizations to launch grassroots movements Building a

coalition of NGOs towards a 'campaign for basic service delivery' with Citizens' Voices as the central platform for demands.

### TAKING VIRTUAL MOBILIZATION TO THE POLICYMAKERS

### Linking up with RTI

To ensure the portal's long-term sustainability, there is a need for tangible inclusion of the portal into existing policy. This form of institutionalization can be pursued in conjunction with the Right to Information Act. It would be beneficial for stakeholders to include a clear roadmap for inclusion of the portal in RTI as they form deeper relations with the various ministries of government who are responsible for service delivery to the people. One way of achieving this is to incentivize the government through offering Citizens' Voices as an alternative platform through which citizens can file RTI requests. Citizens could email or complete online forms whereby the concerned official would be automatically forwarded digital requests. By building a space to streamline RTI requests and hence, help the Act to gain traction, Citizens' Voices would be giving the government a helping hand.

### Informal to Formal Emulation of the Right to Service

Citizen Charters are declarations by service providers to provide high quality services to citizens. In 2000, the Public Administration Reform Commission recommended various public agencies develop charters. Since then, charters have been drafted but have failed to create desired outcomes due to a few problems. While formulating charters, people's participation was not actively sought out and as a result, the charters were not reflective of their needs or concerns. No specific body exists to coordinate the initiative and hence, staff members are unaware of their own departmental charter. A monitoring mechanism to verify the enforcement of the charter through tracking agency performance is not in place. Some charters are too generic to generate precise outcomes. Due to the lack of a conceptual understanding on the part of the service providers, and an absence of repercussions for

delivery failure, the charters have not contributed to a significant improvement in public service delivery.

The Citizens' Voices platform can play a proactive role in revised formulation and institutionalization of Citizen Charters by mobilizing the government, civil society organizations, other public service agencies and citizens towards this end. Citizen Charters may be the expression of understanding between citizens and service providers to give and receive quality public services, but they are not

meaningful until and unless they are legally enforced, such as under a 'Right to Service' framework as exemplified in the policy of Bangladesh's neighboring country, India. The Right to Service would enforce public services be delivered within a stipulated timeframe. Follow-up to reports submitted on Citizens' Voices could be time constrained under a policy that enabled this ability. Here, a built-in mechanism to publically highlight reports that have surpassed a time limit without any response would be appropriate and effective.

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# ANNEXURE A – Stakeholder Interviews

### POPULATION SERVICES AND TRAINING CENTRE (PSTC)

### Stakeholders

- According to our research, the major stakeholders in this project are PSTC, UNDP, Domain Technologies Ltd. and a new partnership with ATN Bangla. To our knowledge:
  - a. PSTC is the owner and manager of the project
  - b. UNDP provided funding
  - c. Domain Technologies developed the frontend of the portal

Can you expand on this list of providers and elaborate on each of their roles?

2. PSTC has partnered with ATN Bangla to broadcast report-related stories. What is the nature of this partnership? Are there more in the works? Are other avenues of media being approached - i.e. community radio? If so, please elaborate.

### **Technology**

- 3. Citizens' content is to be submitted through multiple mediums of technology including:
  - → SMS
  - → MMS
  - → Email
  - → directly through the online form
  - → Voice calls
  - a. Can you tell us which of these methods are functional today and which are to be operational and when?
  - b. What is the purpose of allowing for different mediums of technology for report submission?
- 4. What is the extent to which Citizen's Voices has leveraged open source technologies? According to our research, three open source actors have been involved:
  - i. Ushahidi to localize into Bangla
  - ii. Frontline SMS
  - iii. Wordpress
  - a. Can you describe how these actors are involved in the project?
  - b. Can you explain the use of these technologies in relation to the Bangla phonetic input system?
  - c. What is the motivation behind using open source technology? Where have proprietary technologies been used? How is the appropriate technology choice determined?

- d. How do you believe using open source will affect outcomes?
- 5. Outside of the mediums of technology used for report submission, the portal itself integrates varied applications including:
  - a. Google Maps
  - b. Graphical display of data

Can you elaborate on this? What and how are the other applications used? For what purpose?

### Content Submission & Portal Usage

- 6. Currently, there are 32 citizen charters published on the portal.
  - a. What is the purpose of this?
  - b. Are there plans to publish more?
- 7. To date, most reports have been submitted by PSTC trained volunteers.
  - a. What is the strategy for further promotion of awareness about and use of the portal? Will this begin with training workshops as it did in the pilot stage?
    - How will training proceed? Can you explain in detail the training methods in the four greas of focus:
      - → Report Writing
      - Citizen Journalism
      - Use of mobile for report submission
      - Use of FlipCams for video service delivery tracking
- 8. Can you describe the current verification process of contents submitted?
  - a. Is the verification process made transparent to the public?
  - b. The number of verified reports remains low (1.9%), is there a reason for this? Are there plans to increase this and if so, how?

### **Impact & Monitoring**

- 9. What challenges have been faced to date and how have they been overcome?
- 10. How will you gauge the success/impact of Citizens Voices?
  - a. Are there targets for number of contents submitted in any given time period? If so, what are these targets? To what extent have they been met?
  - b. Are there targets/expectations set for service provider engagement? To what extent have they been met?
  - c. What happens after the citizen submits his/ her report and the service provider gives their feedback? Are there steps in place to close the

gaps in delivery/ improve the quality of the service?

- i. If so, what does this entail who are the stakeholders involved in this process, how do these actions proceed?
- ii. How are the responses organized on the portal?

### **UNDP**

- 1. Can you describe the UNDP's involvement in the Citizen's Voices project in regards to:
  - a. Funding
  - b. Support through capacity building
  - c. Guidance in imparting development expertise
- 2. Why did the UNDP choose to engage in this project?
- 3. Does the UNDP have certain expectations of this project? If so, what are they?
  - a. Targets # of contents submitted/service provider engagement (quantitative)
  - b. Use of reports for observable change (qualitative)

### **ATN BANGLA**

- What is the nature of the partnership between your organization and PSTC for the Citizen's Voice project?
  - a. How often will ATN publicize report-related stories? At what cost?
  - b. What motivated ATN to develop this partnership?
  - c. What is the goal of this partnership?
- 2. How will stories be carried out?

### DOMAIN TECHNOLOGIES LTD.

- 1. Your organization developed the Citizen's Voices web portal. Can you please explain the step-by-step development procedure?
- 2. What are the unique/innovative aspects of the portal?
- 3. The project is just set to launch. Are there plans to enhance the portal at this stage? At a stage in the future? And if so, how?

### Case Study 5

## SMS-Based Monitoring System

### BIHAR, INDIA

### IN BRIEF

Through the implementation of the SMS-based monitoring system, Bihar has become the first state in India to leverage cheap mobile technology to monitor the daily progress of public service delivery at the local level. The system gives the citizens of Bihar an opportunity to learn about developmental progress in their own communities. At the same time, it works to strengthen government accountability to the citizens by increasing transparency in public service delivery.

The reporting system facilitates local monitoring of ten development programs in Bihar's 534 blocks. Block development officers (BDOs) and other concerned scheme officers are advised to report, on a daily basis, scheme details through a SMS from a registered mobile to a dedicated central phone number. Details may include, for example, project expenditure incurred, number of beneficiaries who received the service, and/or physical outputs. Monitored activities include the National Rural Employment Guarantee Scheme (NREGS), the Integrated Child Development Scheme (ICDS), Indira Awas Yojana (low incoming housing), distribution of dress and bicycle, pensions, scholarships, construction of bridges and roads, basic health and food measures, mutation (sale and purchase of land) and rainfall.

The General Administration Department (GAD) of Bihar introduced the SMS-based Monitoring System to serve the ambitious purpose of making information from the most remote locations accessible to all stakeholders, whereby accountability to even the largely ignored sectors of the public would be possible. Enabling real-time developmental monitoring through a low-cost, low-tech platform is working towards this goal. Owing to its preliminary successes, the Bihar model is being replicated in Rajasthan and has sparked the interest of a number of other state governments.

#### DESCRIPTION

Local daily monitoring through SMS to effectively monitor the progress of key development schemes from the ground up. Empowers policymakers and the public with tools to strengthen mechanisms for improved public service delivery.

### LESSONS FOR THE FUTURE

- Encouraging 'responsible' governance through ICT will depend on the collection, transfer and utilization of monitorable data.
- All stakeholders should be able to access relevant information with ease and for an actionable purpose.

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### **List Of Abbreviations**

A2PI: Access to Public Information

**BDO: Block Development Officer** 

BSNL: Bharat Sanchar Nigam Limited

BSWAN: Bihar State Wide Area Network

CUG: Common User Group

GAD: General Administration Department

IAY: Indira Awas Yojana

ICDS: Intergrated Child Development Scheme

NIC: National Informatics Centre

MGNREGS: Mahatma Gandhi National Rural Employment Guarantee Scheme

RTI: Right to Information

SecLAN: Secretariat Local Area Network

SIM: Subscriber Identity Module

SMS: Short Messaging System

USB: Universal Serial Bus

### **BACKGROUND**

"The SMS-based monitoring system has inculcated a sense of responsible reporting"

### - District Magistrate, Vaishali

The conventional public service monitoring system in Bihar follows a manual procedure under which periodic – weekly or biweekly – meetings are held at the block level and monthly progress reports are delivered to the state. Today, this continues for the purpose of authenticating reports through signature; however it is supported by daily reporting made efficient through short-messaging services (SMS).

With the enactment of the Right to Information (RTI), provision of public information became mandatory in India. As a result, reporting began to suffer due to delays from heavy demand combined with limited posts/special messengers. There was also little uniformity in reporting formats of different departments, which made it difficult to channel information from the block to the district, and later to the state. Eventually, data collection and collation, and production of reports became such a demanding task that monitoring officers were employed solely to develop monthly reports. Even then, scheme progress was not reported by the block to the state in a timely manner; BDOs took months to prepare a single report and no mechanism existed for proper verification of data. Moreover, the fact remained that the sheer number of blocks in the state proved monitoring to be an often overwhelming task.

The solution to these problems came through a committee of state secretaries who set out to exploit existing widespread mobile technologies to this end. They identified monitorable programs and parameters that would be informative yet simple enough to convey through SMS.

At the outset, suitable officials were identified and technical training was given to them by the National Informatics Center (NIC) on the use of mobile phones for composing and sending short standardized messages. A sense of competition between district level officers was introduced to motivate efforts towards the goal of 100 percent compliance in sending of daily SMS.

The workflow of the SMS-based monitoring system is simple. The BDO/implementing officer collects data from the appropriate persons according to defined reporting parameters and sends this in a SMS to a pre-determined mobile number. Then the SMS travels to the central server where the data is decoded, aggregated, and made into a presentable format on a daily basis.

In addition to ease of use, a foremost advantage to the system is its minimal dependency on factors such as infrastructure, electricity and internet connectivity. This, combined with its use of existing and multi-purpose hardware, contributes to a sustainable model.

All information collected via SMS is accessible by department secretaries, district collectors, and block officers through an integrated online dashboard. As such, an assessment of the data enables action for improved public service delivery. Data is also published for public scrutiny at http://210.212.23.52/smsbihar/; in this way, all citizens have the opportunity to personally monitor the public services intended for them.

### **METHODOLOGY**

This case study was conducted through secondary materials, mainly including a Department of Administrative Reforms and Public Grievances (DARPG), Government of India best practice study published in October 2010.<sup>53</sup> Few other secondary sources were available, many of which were media articles with minimal information.

Primary research was pursued to fill gaps in understanding innovation workflow, specifically regarding technologies leveraged and information accessed. The field study included interviews<sup>54</sup> with:

- Consultant, Software and Education Research Limited
- District Magistrate, Vaishali District

And a focus group discussion with:

- Circle Officer, Hazipur Block
- Block Development Officer, Bidurpur Block
- Sarpanch, Kanchanpur Village

Anand, Nicole and Attrika Hazarika. SMS-Based Monitoring. Best Practice Documentation. Governance Knowledge Center. Department of Administrative Reforms and Public Grievances. October 2010. Web. 9 May. 2011. <a href="http://indiagovernance.gov.in/bestpractices.php?id=393/">http://indiagovernance.gov.in/bestpractices.php?id=393/</a>.

<sup>&</sup>lt;sup>54</sup> To better understand the use of the dashboard at the State level, an interview with the Secretary, Department of Roads and Transport was pursued but was not conducted due to no availability.

# LINKING ACCESS TO PUBLIC INFORMATION (A2PI) TO 'GOOD GOVERNANCE'

Observable positive impact is the ultimate criteria for success in development efforts. When analyzing A2PI as an avenue towards good governance, the success factors will depend on how 'good governance' is defined. By looking at the desired impact as the democratic ideal of transparency and accountability in public administration with the intention of empowering citizens through effective public service delivery, the concept of 'responsible' governance stands out. This idea as it pertains to public service providers encompasses: one, the ability to avoid corrupt behavior; two, the determined pursuit of citizen-centric efforts; and three, the commitment to create real impact.

The success of the SMS-based monitoring system can best be measured through a 'responsible' governance lens.

Mitigating corruption – The paradigm shift from monthly to daily monitoring requires officials to actively uphold their duty to serve the public. The requirement to collect and transfer accurate data everyday creates a 'watchdog' system that can ensure upright behavior.

Citizen-centric - Tracking of public schemes may be the responsibility of the government, but it is the citizens at large under a democracy who will drive the change in services and ensure that the State is fulfilling their responsibilities. Data in the public domain allows for citizen engagement, but encouragement to engage may be required.

Impact oriented – By monitoring development schemes whose key stakeholders will be better served through the analysis of data collected, the action taken to pursue this should be central.

### STAKEHOLDER ANALYSIS

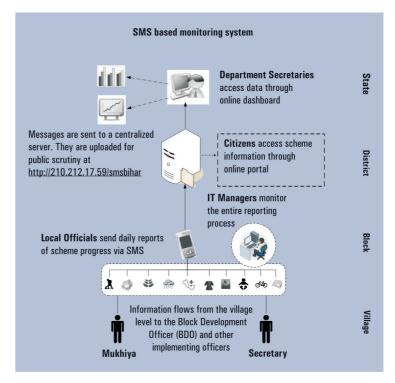
Identifying key actors, and their mode of access to and use of information, provides an overview of user interaction and sheds light on potential outcomes. The key stakeholders in the SMSbased monitoring system include:

- 1. State department secretaries
- 2. District collectors

- 3. Block level officials
- 4. IT managers
- 5. Rural citizens accessing the services
- 6. Citizens accessing the website

Figure 1 displays the role of each stakeholder as they relate to the technologies used, each other, and the overall monitoring system. At the ground level, block authorities collect information on scheme progress from the village leaders. At the highest level, state officials access aggregate data through a web-based dashboard.

Figure 1: Workflow of Key Stakeholders



### **SWOT ANALYSIS**

Determining the strengths and weaknesses of the program in the context of ICT-facilitated access to public information, lays the groundwork for identifying opportunities and threats that should either be exploited or mitigated for positive results.

### Strengths

### Easy to use and low cost technology

 Minimal training required and cheap mobile platform

#### Sustainable

- Mobiles are affordable, readily available at the local level, and can be used for multiple purposes
- Non-dependent on electricity, infrastructure and connectivity

Well-designed workflow for effective mitigation of laxity & corruption

 Concerned local officials report progress of schemes • IT managers monitor reporting and send reminders in case of noncompliance • District Collectors and State Department Secretaries track reported data through dashboard • Citizens can analyze data through website

#### Weaknesses

#### Underutilization of data

- Administrators are looking at the reports, but not taking subsequent action
- Citizens may be accessing the website, but there is no evidence of follow-up research, advocacy, or any associated action

### Reporting compliance

SMS are to be sent everyday from all blocks; however reporting is not consistent. Interviews shed some light on possible reasons for low compliance. Specifically, anecdotal evidence revealed that when levels of progress are zero, say food was not distributed that particular day, many do not feel the need to send an SMS. Others do not comply because they lack the technical know-how or are uninterested.

#### Verification of data

Scheme progress can be seen at the village level, yet is reported from the block. A systematic check on data transferred from the village to the block is not in place.

### **Opportunities**

Utilization of data for improved public service delivery

- Motivate concerned authorities to take action on problems that the data suggests
- Promote citizen-centric organizations & citizens to access portal data and act as a 'watchdog' through feedback mechanisms

### Increase compliance & ensure accurate reporting

 Through capacity building and/or positive and negative reinforcement.

### **Threats**

- Resistance by local level officials to report
- Fear of transparency leading to an administrative decision to dissolve program
- Collection of meaningless data as per the lack of validating its credibility

### **WORKING DESIGN**

### **TECHNOLOGIES USED**

One of the major advantages of the SMS based monitoring system is its low cost nature, particularly due to the existing supply and multipurpose usage of all hardware. Mobiles did not need to be purchased for this project since they were procured and given to local level officials for previous projects. Similarly, computers for accessing the dashboard were already in all departmental secretary, district collector, and block level official offices. The existing Secretariat Local Area Network (SecLAN) and the Bihar State Wide Area Network (BSWAN) offer the phones, servers and internet connectivity necessary for operations.

BSNL is the telecom service provider that supplies a common user group (CUG) SIM card under which a nominal fee of approximately 6.6 USD per month allows for unlimited texts and calls between all users. The SIM card can be placed in a USB stick, which acts as a constant active central server.

**Table 1: Financials of Technologies Used** 

Hardware	Cost in INR (USD)
1 GSM Modem	3000 (~66.67)
Common User Group SIM Card	300/month (~6.67)

Software	Open Source or Proprietary
SQL 2005	Proprietary
Visual Studio	Proprietary

### REPORTING THROUGH MOBILE

Implementing officers from every block in the state are required to send SMS' from their registered mobile number to a dedicated number between 6pm and 7pm every day. Parameters have been selected to assess scheme status on any given day; for example, health services are measured by the number of medicines available and number of outpatients (See Table 2). The monitorable parameters, although differing from scheme to scheme broadly include the block

name (BL), expenditure incurred (EX), number of schemes (SC), and number of employees onsite (NL). On the basis of these parameters, daily reports are generated for the following services:

- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
- 2. Indira Awas Yojana (IAY) rural housing
- 3. Integrated Child Development Scheme (ICDS) basic needs (food, health, education)
- 4. Bicycle/dress distribution
- 5. Pension distribution
- 6. Student scholarship distribution
- 7. Food services
- 8. Health services
- 9. Road and bridge construction
- 10. Mutation purchase and sale of land

Rainfall data is also collected through the SMS-based monitoring system. Table 2 displays the abbreviated SMS format required for tracking each scheme.

Table 2: SMS Format Per Scheme

Scheme	SMS text format	Reported by
National Rural Employment Guarantee Scheme (BL1)	BL1, EX (expenditure incurred in lakhs), SC (number of ongoing schemes), NL (number of labor) BL1,EX.40,SC12,NL100	Block development officers
Pension (BL2)	BL2, NW (national widow pension numbers), SW (state widow pension numbers), NP (national physically challenged number), SP (state physically challenged), OA (old age pension)  BL2, NW10, SW8, NP12, SP123, OA222	Block development officers
Bicycle/Dress distribution (BL3)	BL3, DS (number of dress distributed), BC (number of persons to whom bicycle has been distributed) BL3,DS7,BC50	Block and District education officers
Scholarship (BL4)	BL4,AS(no of students from class 1 to 6), DS (no of students from class 7 to 10), CS (no of students given scholarship for college)  BL4,AS44,BS99,CS545	District welfare officers
Food (BL5)  Applied for rice and wheat only in unit quintals)	BL5, BP (below poverty line), AP (annapurna), AP (antodaya) BL5,BP5000,AP388,AN4520	Block development officers

Scheme	SMS text format	Reported by
Road and Bridges (BL6)	BL6, RO (number of roads prepared in kms), BD (number of bridges being prepared), RW (number of rural roads prepared in kms) BL6,RO35,BD66,RW10	Block development officers
Health (BL7)	BL7, JB (number of deliveries), MD (medicines availability), PT (outpatient numbers) BL7, JB66,MD100,PT346	All medical officers and civil surgeons
Integrated Child Development Scheme (ICDS), (BL8)	BL8,CV(the code of centers visited and NOT number of centers visited) BL8,CV202,146,199	Block development officers
Indira Awas Yojana (IWA) (BL9)	BL9, TR (target which consists of last year's record and the current year's target), DA(first installment stage 1), DB (second installment stage 2) BL9, TR23100, DA560, DB2840	Block development officers and district development collectors
Mutation (BL10)	BL10, CU (cumulative numbers of mutations done)	
	BL10, CU127 (only cumulative figures must be reported and mutation on hearing shall not be included	Block development officers

Stakeholders declare that mobile is the most appropriate technology for linking local level developmental progress to state level monitoring and evaluating. M-technology is not dependent on infrastructure nor requires extensive training; in other words, it is low cost, easy-to-use and still effective.

The current model is designed such that SMSs are highly numeric and therefore, do not require language localization. Through a common user group, all reporting officials are able to send real-time SMS' daily.

### INTERNAL DASHBOARD

The web application was designed by Software Education and Research (P) Limited based on individual department's requirements including consideration of form of data, sender and receiver of data. Accordingly, it is in Hindi and English and graphically displays daily and aggregated data, which allows for trend analyses for informing of further policy.

Department secretaries, district collectors, and block officials have access to data through the online dashboard. Each level of official can track scheme progress as per their concerned level; state secretaries analyze data for the entire state, district collectors have access to all block data within their own district, and block officials - who, as of May 2011, have yet to begin accessing the data - can login to the dashboard to inspect their individual block data. All officials can access public data through the website, just as any other citizen might.

### **PUBLIC WEBSITE**

Through the Common User Group (CUG), all messages are directed to a central server where they are processed and uploaded to an online database in real time. This portal is accessible to anyone via the internet.

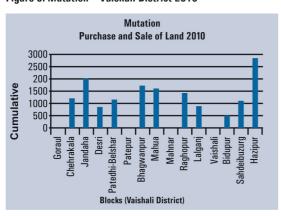
Figures 2-5 are adapted from the scheme information that is obtainable through the public website. The data pertains to the district of Vaishali and is displayed by block for the year 2010.

Figure 2: Screenshot of Portal http://210.212.23.52/smsbihar/



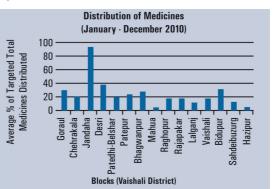
Land Use: The sale and purchase of land, or change in land ownership, can represent the level of productive use of land; therefore, we can deduce that the District Magistrate/Collector, in observing the following data, would be have minimal concerns about land use in Hajipur block but might consider probing into why land ownership has changed so few times in Bidupur district. Minimally, the District Collector would be alarmed by the absence of data on mutation from Garual, Palepur, Mahlar, and Vaishali blocks. He may determine that the assigned officers are not sending SMSs as they are expected to and hence, should face consequences for failing to do so.

Figure 3: Mutation - Vaishali District 2010



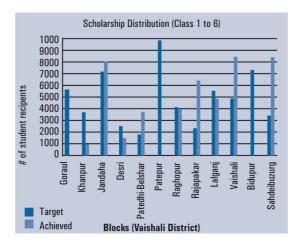
Health: One way of measuring service delivery in the health sector is by monitoring the number of medicines distributed to local citizens in a given period of time. Based on the following data, the monitoring officer might consider visiting Jandaha block to understand why and how such a high level of medicines were distributed in 2010 and/or he/she might visit Mahua district to determine the reasons for such low levels of medicine distribution. It is important to note that the interpretation of this data can vary; for example, a low level of medicines distributed may indicate a healthy local population or in contrast, a failure of the local administration to meet the needs of the people. This suggests that SMS data requires follow-up analysis to make reasonable conclusions on scheme status.

Figure 4: Distribution of Medicines - Vaishali District 2010



Education: Measuring service delivery in education is complex, however some indicators such as scholarship distribution are easier to monitor and can help in this regard. The SMS based monitoring system informs district collectors about total recipients of scholarships in class 1 through 6 per block as compared to block-wise targets. According to 2010 data, some blocks in Vaishali district have exceeded their targets, while others have not met them, and still others have not reported any data. This information helps to motivate concerned officials to examine the reasons for these results and address any identified weaknesses.

Figure 5: Scholarship Recipients - Vaishali District 2010



# DATA ANALYSIS AND IMPACT

#### **BENEFITS**

The SMS-based monitoring system mandates information to flow from local levels of government to the State. As a result, it has contributed to internal efficiencies, altering the approach the government takes to deliver public services in the following ways:

- Creates a transparent environment that:
  - Prevents tampering of data
  - Inculcates a sense of responsible reporting
  - Generates pressure to provide the correct information

- Motivates compliance through fear of non-performance
- Makes it easier to share information
- Allows for real-time information exchange to force on-time action
- Shifts performance expectations from collector to local level owner of impact

More than improving government processes, the system has the potential to impact the citizens through their own uptake and use of dailygenerated information.

### LIMITATIONS

The major challenge, as highlighted by the District Magistrate of Vaishali, with the SMS-based monitoring system is the dependency of compliance to report on the administrative skill of the local official. It is the officials required to collect and report data who have the power to share accurate and timely information.

Subsidiary limitations exist and include non-availability of multiple service providers, power cuts, and naxalite-related security issues.

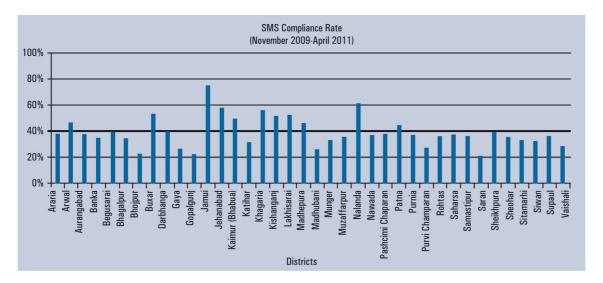
### **USAGE & ENFORCEMENT**

### **Use of SMS**

The statewide average compliance rate, from November 2009 to April 2011, is 40 percent. Reasons for noncompliance include an attitude that there is no need to report when distribution is zero, a lack of interest and/or know-how, and few repercussions for noncompliance. Key stakeholders, however, have cited instances where salaries were put on hold based on noncompliance.

The usage of daily reporting through SMS varies across districts and blocks. Jamui district has been an outstanding example with over 80 percent compliance in January and February 2011. Exemplary districts such as Jamui are used to encourage others to adhere to the policy in the same manner. Anecdotal evidence suggests that organically grown competition between districts to report has helped to raise compliance rates and increase awareness about the significance of monitoring.

Figure 6: SMS Compliance Rates Per District (November 2009 - April 2011)



### Use of Dashboard

All state department secretaries, district collectors and block officials responsible for monitored schemes have access to the online dashboard. Currently, there is no evidence of usage by block officials but varied usage across higher-level officials. The level of usage is unknown because it is not tracked, but a case-by-case analysis reveals that the Human Resource Development, Rural Development, and Agriculture departments are the most active in this regard.

### **Use of Website**

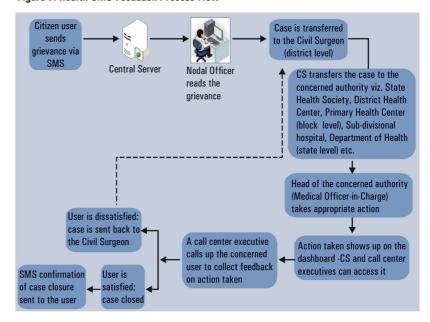
The website for citizen access to scheme information has not yet been monitored for access details. However, a link to the portal has been added to all department websites; this might contribute to an increased visibility of the website.

### **MONITORING & EVALUATION**

With few insights about use of the web portal, but an understanding of its importance, a hits counter will be added to the site. This will track traffic in real-time allowing for all interested actors to see the interest levels in such a program.

Feedback from citizens is significant for qualitative tracking of scheme-related issues. In May 2011, citizen health-related feedback through SMS was launched. On the inaugural day of the system, 113 SMSs were received. The goal is to roll-out this system for the other public services over time.

Figure 7: Health SMS Feedback Process Flow



### CAPACITY BUILDING

Gaps in operations are being evaluated and addressed by implementers. Two major advances have been planned to strengthen the innovation through capacity building. The first is allocating IT assistants to every block - 350 have already been hired. These officials would help to ensure compliance through imparting technical knowledge to local actors involved. The second effort will be extensive training of officials in 15 to 18 blocks in hopes of the acquired skills being passed on through subsequent local-to-local training.

## EXPLORING OPPORTUNITIES

### MOTIVATING COMPLIANCE IN REPORTING

The purpose of this intervention is to measure scheme impact on the ground by aggregating and analyzing quantitative data collected according to certain defined parameters. As such, the success of the program is entirely contingent on official compliance to report data through SMS.

Earlier, we observed as high as a 75 percent average compliance rate over a 1.5 year time span in the district of Jamui. Over the same period, the statewide monthly average compliance rate peaked at 52 percent (January 2011). A few districts like Jamui have complied consistently and to a great extent above the statewide average; however, there is still a large gap in tracking scheme progress as illustrated through the absence of SMSs more than 50 percent of the time. Based on these observations, when examined together, it is reasonable to conclude that while compliance remains low, it is possible to raise it to a significant degree. The question then remains how to achieve this.

Negative repercussions such as a salary freeze, or positive reinforcement like highlighting excellent performance, are some ways that are already in place to encourage compliance of daily SMS-based monitoring. Recommended additional ways include:

- 1. Analyzing scheme-by-scheme data to identify noncompliant blocks. Then,
  - a. Work with appropriate local level officials to track gaps in data transfer from beneficiary villages.
  - b. Conduct specialized knowledge training for local officials to impart knowledge of program purpose. Particular focus should be on conveying SMS delivery as a required job activity as well as the minimal effort required to fulfill this duty.

- 2. Analyzing scheme-by-scheme data to identify highly compliant blocks. Then,
  - a. Present awards of excellence to block authorities.
  - b. Highlight excellence through media and publicity.
- 3. Encourage healthy block-wise competition through comparative report distribution.
- 4. Advocate for portal usage by citizens and civil society organizations through media channels to stimulate bottom up pressure for compliance.
- 5. Emphasize impact. Provide examples of scheme improvement as a result of SMS monitoring.

### LINKING VILLAGE TO BLOCK REPORTING: ENSURING UNBIASED DATA COLLECTION

A good governance system will always keep the gap between service provider and beneficiary to a minimum. In this case, public services are monitored at the block, each of which is comprised of multiple villages wherein the services are delivered. Although a block as a unit of governance may be the most appropriate for organized transfer of data, village level data collection and block level reporting can result in difficulties that would prevent accurate and timely information provision; for example, data collection may be biased because of ground level vested interests and/or caste or class based hierarchies unbeknownst to the block level reporter.

It is in this scenario then that efforts must be taken towards closing local level gaps through:

- Leveraging IT assistants towards village data collection and aggregation
- Building cooperative relationships with grassroots organizations that hold the trust of the beneficiaries and have specialized knowledge of the community. Harnessing them towards ensuring appropriate methods are used to gather ground level data.

#### BUILDING RICH DATA THROUGH QUALITATIVE SUPPORT

Quantitative local level scheme data can be powerful when used for effective monitoring. However, as discussed earlier, numbers can lay the groundwork for a preliminary understanding of outcomes but determining reasons for results would require a second level of data. In most cases, qualitative information would provide the necessary further insights into appropriate action for addressing gaps and exploiting benefits.

The need to build richer data for a better understanding of public service delivery has already been recognized. The outcome has been the SMS citizen feedback system for health related issues. Through this innovation, citizens can voice concerns about health services. Feedback, combined with quantitative health indicators, provides a comprehensive picture of ground level realities; for example, if a block shows low levels of medicine distribution, and citizen feedback from the same block reveals misuse of funds in the local government, it would be reasonable to conclude that corruption played a part in the failure to deliver medicines.

It is through this type of deductive reasoning from a confluence of data sources that will result in the most appropriate action for improved public service delivery.

#### **EXPLOITING PUBLIC DATA**

The action-oriented analysis by government of information generated through the SMS based monitoring system, and citizen engagement with the same, is crucial to creating outcomes at a policy level. Concerned officials will need to use data, as described with the examples provided earlier of land use, health and education, to effectively improve public service delivery. Similarly, interested individuals may access the data, but it is namely the utilization of data by citizen-centric organizations for research, advocacy and development that has the potential to influence high-level policies.

Recognition of the program at higher levels of government will widen the scope of innovation impact and strengthen the accountability mechanism for refined monitoring. Capacity building efforts through training programs should be undertaken to motivate outcomefocused monitoring by government. Ways of engaging social organizations should include but not be limited to:

- 1. Use of media channels to grow excitement in innovativeness of the program
- Directly promote data availability through hosting of workshops/seminars and/or participation in conferences, panel discussions.
- Produce comprehensive process documentation for direct distribution to further the general public knowledge of the system.

#### REFERENCE

Anand, Nicole and Attrika Hazarika. SMS-Based Monitoring. Best Practice Documentation. Governance Knowledge Center. Department of Administrative Reforms and Public Grievances. October 2010. Web. 15 May. 2011. <a href="http://indiagovernance.gov.in/bestpractices.php?id=393/">http://indiagovernance.gov.in/bestpractices.php?id=393/</a>.

### ANNEXURE A - Stakeholder Interviews

# SOFTWARE EDUCATION AND RESEARCH LIMITED

#### Technology

1. Can you provide details for all software and hardware procured for this project - quantity and type (open source or not)?

#### Mobile

- a. Who provided the mobiles to the BDOs? How many have been distributed? Who is the network service provider?
  - i. Can SMSs be sent in local languages? If so, what is the purpose of this? If not, do you think this would be beneficial?
  - ii. Are there any other technologies that you feel could be leveraged to improve the mobile model?
  - iii. Do you feel like mobile is the most appropriate technology for this purpose? Why or why not?

#### PC

- How was the dashboard designed? What did developers consider when trying to optimize the platform? i.e. bandwidth, user-friendliness, language etc.
  - i. Who accesses the dashboard and how?
  - ii. Can you tell us what you think are the most unique or useful aspects of the dashboard?

#### Website

- a. How was the website designed? What did developers consider when trying to optimize the platform? i.e. bandwidth, user-friendliness, language etc.
  - iii. Who accesses the website and how?
  - iv. Can you tell us what you think are the most unique or useful aspects of the website?

#### Sustainability

- 1. What is the budget allocated for this project in total and for each of the following? What has been the expenditure incurred thus far?
  - a) Hardware mobiles, PC
  - b) Software
  - c) Technical consulting
  - d) Governmental support for capacity building salaries of IT managers, etc.

#### **Impact**

#### Mobile/SMS

- What are the targets set in terms of SMS retrieval per day/month/year?
  - a. In October 2010, the compliance rate of 83 percent. Has this improved? If yes, then what is the compliance percentage now?
  - b. Has there been any action taken for those BDOs who are not efficient and regular in sending SMS? If yes, what kind of action was taken by the government? If no, are there measures in place to take action and if so, what are these?

#### Dashboard

- 2. The dashboard and the website both hold a lot of data, which reveals how schemes are functioning on the ground.
  - a. How do government officials utilize the data on the dashboard to improve the delivery of services that are monitored through this project? If possible, please provide us with some specific past examples.
    - i. Does the data suggest targets have been met or unmet for certain schemes? Can you provide us with the details of those conclusions? And possible reasons for the performance?
    - b. How have website users used the data? For example, for research purposes, policy proposals etc. What have been the results of these actions?

#### Website

- How many citizens access/view the website? Per Month? To date?
  - a) Do you know what the profile is of citizens viewing the website?
  - b) Can citizens provide feedback on the reports available on public domain? If yes, then what kind of feedback is given?
    - a. Have their suggestions been looked into? If yes, then how many suggestions have been implemented thus far?
    - b. If not, then do you think this would be a useful enhancement to make - why or why not?

#### SECRETARY OF STATE DEPARTMENT

 Last year there were 10 schemes and rainfall being monitored by SMS. Have any schemes been added since? If so, which ones? Please provide us with the reporting details. 2) Could you please explain the monitorable parameters of each development program? Why and how were these parameters chosen?

#### Usage/Impact

#### Mobile/SMS

- 2) What are the targets set in terms of SMS retrieval per day/month/year?
  - a. In October 2010, the compliance rate of 83 percent. Has this improved? If yes, then what is the compliance percentage now?
  - b. Has there been any action taken for those BDOs who are not efficient and regular in sending SMS? If yes, what kind of action was taken by the government? If no, are there measures in place to take action and if so, what are these?

#### Dashboard

- 3) The dashboard holds a lot of data, which reveals how schemes are functioning on the ground.
  - a. How do you utilize the data on the dashboard to improve the delivery of services that are monitored through this project? If possible, please provide us with some specific past examples.
    - i. Does the data suggest targets have been met or unmet for certain schemes? Can you provide us with the details of those conclusions? And reasons for the performance?

#### Website

- 4) How many citizens access/view the website? Per Month? To date?
  - c) Do you know what the profile is of citizens viewing the website?
  - d) Can they citizens provide feedback on the reports available on public domain? If yes, then what kind of feedback is given?
    - a. Have their suggestions been looked into? If yes, then how many suggestions have been implemented thus far?
    - b. If not, then do you think this would be a useful enhancement to make - why or why not?
- 5) Do you think this program has been successful in creating transparency and enhancing accountability in governance? Why or why not?

#### IT MANAGER

- 1) Please elaborate on your role in the SMS based monitoring system.
  - a. Technical Training
  - b. Monitoring of SMS compliance what kind of action is taken when the BDO fails to report via SMS?
  - c. Overall IT management at the local level
- 2) There are 3 technology platforms used in this program:
  - a. mobile for sms
  - b. online dashboard tool for government monitoring
  - c. online public website for citizen monitoring

Do you think these technologies are the most appropriate for the context? If so, why? If not, why not?

What other technologies or methods absent of technologies could or should be used?

- 3) What sorts of challenges have you faced over time? How were these overcome or plan to be tackled?
- 4) Can you provide examples of how this system is beneficial at the local level of governance?

# BLOCK DEVELOPMENT OFFICER - DISTRICT: VAISHALI, BLOCK: HAZIRPUR

- Can you explain the process of monitoring development schemes prior to the SMS based monitoring system?
- What are the major advantages to the SMS system? How has is helped you in carrying out your job? In what way?
- 3) Do you face any challenges in gathering information on ground?
  - a) If yes, what kinds of challenges?
  - b) How do you overcome such challenges?

# MUKHIYA - HEAD OF GRAM PANCHAYAT

- Has the SMS monitoring system affected the implementation of development schemes in your village? If yes, what kind of changes have you seen? Please provide us with specific examples.
- 2) Do you have any suggestions for improving this program?

#### Case Study 6

# Geoinformatics for Forest Rights

#### MAHARASHTRA, INDIA

#### IN BRIEF

The Government of India enacted The Forest Rights Act, 2006 (Scheduled Tribes and Other Traditional Forest Dwellers – Recognition of Forest Rights Act) to give forest dwelling scheduled tribes and other traditional forest dwellers the opportunity to claim individual and community rights to forested land. The Tribal Research and Training Institute (TRTI) of Pune<sup>55</sup> has combined a GPS-based system for forest land measurement with satellite imagery software for verification of forest rights claims under the Act. The program aims to serve the intended population throughout the state of Maharashtra. Through persuasive ICT-led evidence, the system provides valuable precursory information to plane table surveyed forest land, expediting and lowering costs of the overall process. The use of technologies in this manner has helped to avoid conflict and mitigate corruption which has historically been connected to issues of land rights.

The Geoinformatics for Forest Rights Act program has succeeded in discouraging illegal diversion of forest land for non-forestry purposes as accomplished through the misuse of Act provisions. Public money has been saved through the use of technology in lieu of hiring official land surveyors from the Department of Land Records. Coordination of various levels of government - tribal, forest, and revenue - has helped to streamline provision of public information to its intended recipients. Through extensive technical training and conveyance of the system's credibility to officials and claimants, the program has resulted in valuable knowledge creation and exchange on ICT and land rights.

To date, out of the 338,000 claims made statewide, 160,000 cases have been measured by GPS, and a total of 105,000 cases have been decided in favor of the claimants.

#### **DESCRIPTION**

Spatial technologies harnessed for transparency in the implementation of the Forest Right Act. The use of GPS ensures the accuracy of land measurements undertaken to verify claim requests made by forest dwellers.

### LESSONS FOR THE FUTURE

- Conveying the purpose of using technologies to end users in a comprehendible manner is important for the support and uptake of the effort by the community it aims to serve.
- Iterations of determining appropriate technologies will result from experiential evidence gathered over time.

<sup>55</sup> City of India, in the State of Maharashtra

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#### List of Abbreviations

A2PI: Access to Public Information

BPL: Below Poverty Line

CSC: Community Service Center

CSRF: Cross-site Request Forgery

DILRA: District Inspector Land Records Agency

DIT: Department of Information Technology

DLC: Divisional Level Committee

FRA: Forest Rights Act

FRC: Forest Rights Committee

GIS: GeoInformatics System

GPS: Global Positioning System

GPX: GPS eXchange Format

MGNREGA: Mahatma Gandhi National Rural Employment Guarantee Act

NeGP: National E-Governance Plan

NIC: National Informatics Centre

NRSA: National Remote Sensing Agency

PHP: PreProcessor Hypertext language

SDLC: Sub Divisional Level Committee

SDO: Sub Divisional Office

SDU: Software Development Unit

SMS: Short Message Service

TRTI: Tribal Research and Training Institute

#### BACKGROUND

"We are providing the link between the villagers and the government with inputs that ensure smooth and accurate processing of cases. We are providing funding, training and an overall robust system to implement the Act effectively."

#### Commissioner, Tribal Research and Training Institute (TRTI)

Prior to the Forest Rights Act, 2006, forested areas were not necessarily approached with a desire to conserve but rather exploit them for produce. The new Act grants legal recognition of rights to traditional forest dwellers. Specifically, it defines areas and eligibility for individual and community forest rights that can be claimed. For the first time, it also empowers forest dwelling communities to protect the resources around them. It recognizes management rights in favor of communities who have traditionally managed forest resources for sustainable use. The Act calls for the recognition of habitation and cultivation rights to the eligible claimants if they are in possession of the forest land on or before December 13, 2005.

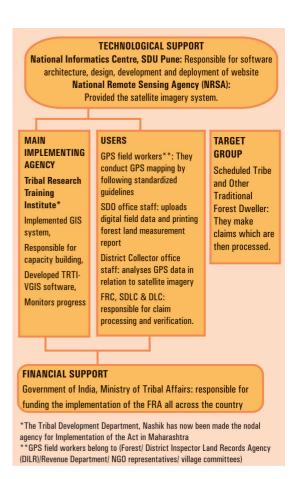
In 2008, following the issuance of subsequent guidelines, many Indian states and Union Territories began implementing the Act but faced numerous challenges in doing so. The administrative requirement of gathering evidence for land claim approval was found to be difficult due to a lack of expertise at the village level. The mandate to verify agricultural activities on claimed land was challenging to execute. Furthermore, the second stage of approving the land claim required the actual measurement of land; since forested areas are typically characterized by remoteness, the necessity to capture precise geographical details was difficult to carry out in a timely manner. In Maharashtra the District Inspector Land Records Agency (DILRA) traditionally followed a manual 'plane table' system of surveying and measuring land. This method required a lot of manpower, making it both expensive and subject to a great possibility of error. Given the confluence of hindrances, particularly that the evidence was not always straightforward, it was challenging to identify genuine cases. The problem was further exasperated by the involvement of stakeholders at multiple levels of the approval process.

To overcome these barriers, the Government of Maharashtra developed a geoinformatics based system for the forest rights recognition process. From 2009, the Tribal Research and Training Institute (TRTI) began to facilitate global positioning system (GPS) led surveying of forest land to assist in determining the validity of claims. The TRTI has since pursued capacity building through advocacy efforts and training modules at various levels. Those who received training now help in the decision making process through local committees. A website with open access to the public was also developed for promoting awareness about the Forest Rights Act, the system of implementation, roles and responsibilities of stakeholders, information regarding claimants, land measurement, and verification of claims.

#### **METHODOLOGY**

#### STAKEHOLDER ANALYSIS

Figure 1: Key Stakeholders and Roles



#### **SWOT ANALYSIS**

#### Strengths

- Innovative and easy-to-use tools
- Clear cut roles of the various committees with proper training imparted at every level of operation
- Time, manpower and cost savings as compared to traditional plane table method
- 13 digit code for quick identification of cases; expedites the claim verification process
- Website to monitor information increases transparency and accountability
- Establishing the efficacy of GPS and GIS based systems for highly marginalized sectors of the population

#### Weaknesses

- Insufficient usage of awareness generating tools
- Gaps in capacity to fulfill goals
- The satellite imagery process is difficult for villagers to understand, making them completely dependent on officials operating the software
- Technological limitations:
  - a) Connectivity of GPS is hampered due to weather conditions
  - Possible mistakes in measurement (overlaps, GPS polygons are not closed properly) lead to delays and can lead to wrongful dismissal or acceptance of claims
  - c) A GPS machine has a storage capacity of only 20 measurements.
  - d) Website is inaccessible to claimants
- Failure to implement community rights

#### **Opportunities**

- Conduct more publicity and awareness generating activities
- Increase awareness levels of villagers by involving them in the satellite imagery analysis phase
- Build up capacity through regular trainings
- Pursue implementation of community rights

#### Threats

- Land is a sensitive issue; possibility of problems related to its politicization
- Wrongful dismissal or approval of claims
- Resistance by government departments and officials to the transparency created by the use of technologies
- Technological malfunction (GPS, satellite imagery, website) can lead to delays and undermine the system's credibility
- Change in nodal authority for implementation could affect commitments towards carrying out work

#### PROCESS FLOW

Figure 2 illustrates the design of the geoinformatics system, which is characterized by three crucial stages of verifying and approving land claim requests through ICT.

Figure 2: Innovation Process Flow



#### STAGE 1: CLAIM REQUEST AND FIELD MEASUREMENT— VILLAGE LEVEL

The actual land verification process begins with a claimant submitting a written request, with supporting documents, to the Forest Rights Committee (FRC) at the village level. The FRC, upon the acceptance of the claim request, prepares a 'case file' containing all the information related to the claimant request. Then the GPS men, in the presence of the FRC,

conduct the measurement of the claimed land and assign a thirteen digit alpha-numeric unique ID to each claimant. The first two digits represent the district, the second two the taluka (subdivision level), the following five the village, and the final four the claimant's name. For example: 0106dha01VNP0 means the claimant is Vishnu Nawal Pandu of Dhawalipada village, Nawapur Tahsil (06), Nandurbar District (01). They then submit this digital measurement (polygon) to the Sub Divisional level Committee (SDLC).

At the Sub Divisional Office (SDO), the field measurement data is uploaded onto the computer and the polygon is converted into a GPX file which is used to generate a measurement report. This GPX file and related data is stored online on TRTI's web server. The Sub Divisional Level Committee (SDLC) then updates the case file with a printout of land measurement and sends it to District Level Committee (DLC).

#### STAGE 2: CLAIM VERIFICATION PROCESS – BLOCK AND DISTRICT LEVEL

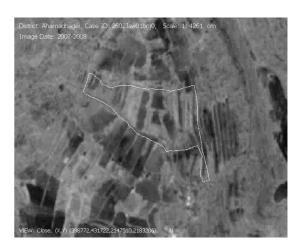
The DLC checks the case file received from the SDLC for the measurement report and GPX upload slip. The GPX file from the web server is then downloaded by the DLC and superimposed onto Cartosat-I satellite images of two time series (2005-06 and 2007-08) and Google Earth images of any date available after 13 December 2005. The in-house software, TRTI-VGIS, displays the Cartosat-I Satellite images side-by-side which allows for comparative analysis of elements such as vegetation cover and cultivation proof.

This measurement analysis is uploaded on the TRTI website and its printout is attached to the case file. If the measurement report shows evidence indicating a clearance of vegetative cover for cultivation after December 2005 and continued vegetative cover after December 2005, and/or no signs of cultivation on or before December 2005, the forest right's claim on the land is dismissed. On the other hand, if it shows evidence of cultivation on or before December 2005, then the claim is approved.

In figure 3 the first image is taken in November 2005 and shows cultivated land, as does the 2008 image following it.

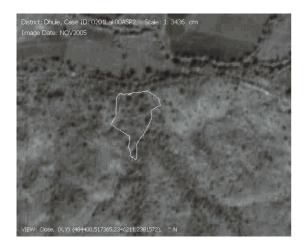
Figure 3: Satellite Images of an Eligible Claim Case





In figure 4 the first image taken in November 2005 shows forested land, while the second image taken in 2007 indicates cleared land.

Figure 4: Satellite Images of an Ineligible Claim Case





# STAGE 3: FINAL DECISION MAKING – DISTRICT LEVEL

The measurement analysis report is then printed out and attached to the case file. The District Collector examines this completed case file and based on its results, approves or disapproves a claim. If a claim has been approved, the claimant is given a certificate of possession.

### ANALYZING TECHNOLOGY

Appropriate needs-based geoinformatic technologies are used to streamline activities as per the roles of various stakeholders. The technological components were implemented jointly by TRTI and National Informatics Center (NIC) after discussion with various stakeholders

regarding their requirements. A combination of open source and proprietary software are utilized at different levels of implementation, however, open source software is preferred for in-house development as directed by the Department of Information Technology (DIT), Government of India.

# GPS MACHINES FOR LAND MEASUREMENT

Handheld GPS Machines are employed to accurately measure land at the village level. Garmin<sup>56</sup> GPS machines were chosen for procurement through a needs-based open tendering process. Each GPS machine runs on MapSource proprietary software.

GPS was chosen for use because of the advantages its boasts. For one, considering the hilly terrain of forest areas, use of a portable GPS device allows for quicker measurement than plane table surveying. Secondly, upon the completion of measurement, a polygon is displayed on the screen of the GPS machine, which can then be shown to the claimant for verifying shape of the land.

# WEB SYSTEM FOR INFORMATION EXCHANGE AND DISSEMINATION

A web-based system is designed to facilitate information exchange between stakeholders. There are two parts to the website:

- First, a static space accessible to anyone for monitoring<sup>57</sup>
- Second, a dynamic platform accessible only to authorized users based on their role in decision making

Government authorities use the tool to upload land measurement reports, verify forest rights' claims, and monitor decisions regarding claims.

NIC, Pune designed and developed the web system using cost-effective, open source software; specifically, Linux, PHP and Apache software are leveraged for the main web based components. TRTI monitors the entire system through a central server. To ensure smooth functioning, the system was tested against all possible threats

<sup>&</sup>lt;sup>56</sup> Garmin International. < http://www.garmin.com/>.

<sup>57</sup> State of Maharashtra. Tribal Development Department. Tribal Research and Training Institute. Web. 25 May. 2011. <a href="http://trti.mah.nic.in/forest/static\_pages/frm\_formain.php/">http://trti.mah.nic.in/forest/static\_pages/frm\_formain.php/</a>.

such as cross site scripting, denial of the service attack, CSRF attack and SQL injections, and the necessary changes were made accordingly.

### TRTI-VGIS FOR LAND CLAIM VERIFICATION

TRTI-VGIS software is developed in-house to aid in the matching of imagery with measured land for claim verification. This software displays parallel Cartosat–I Satellite images for the two concerned time series: 2005-2006 and 2007-2008. The software is built in such a manner that the official at the DLC can use it to open the GPX file of any claimant and then superimpose the GPS-measured polygon onto the satellite image to rapidly assess the validity of the claim. The software also employs Google Earth to assist the official at the DLC level in cross checking evidence.

#### Cartosat-I Satellite Imagery

 Cartosat-I satellite images were procured from the National Remote Sensing Agency (NRSA/NRSC) to identify cultivated land for verification of agricultural activities prior to December 2005.

#### Google Earth

 After superimposition of the Cartosat-I satellite images, cross verification is completed using Google Earth, an open source product. Google Earth images are useful because they offer greater details through colorful images, but are also limited because they are only available beginning 2007.

#### SMS FOR FIELD COORDINATION

An online bulk SMS facility operates from the NIC gateway. Implementation instructions are sent to field officers via SMS. SMS are filtered according to role and functions of officers and sent accordingly. Earlier, due to the absence of an NIC gateway, this bulk SMS was sent through BSNL Sancharnet, a private network provider which charged 25 paise (~.55 USD) per SMS. However, since the development of the NIC gateway, SMS are sent free of cost.

#### CAPACITY BUILDING

In order to familiarize users with the new technologies, TRTI led a number of capacity building efforts. First, a manual was developed, distributed in hard copy and uploaded to the website, to inform officials and GPS men about the geoinformatics system. Further trainings were provided at all levels to educate officers in the technologies to be used in their respective roles. Comprehensive training was also given to GPS men.

# LINKING ACCESS TO PUBLIC INFORMATION (A2PI) TO PUBLIC SERVICE DELIVERY

The critical aim of the Forest Rights Act is to provide land to the marginalized sections of the population. The allotment of land requires objective assessment of requests made by the citizens, and transparent procedures to facilitate the implementation process. The use of appropriate and innovative technology to gather and disseminate information at every stage of the process ensures efficient and effective execution.

The geoinformatics system uses technology to facilitate the flow of information at two levels:

- a) Citizen: GIS provides the link between the government and citizens in the implementation of the FRA. It delivers forest rights to the remotely placed forest dwelling target populations. It enables the granting of the legal right to live on specific land thereby increasing and validating these remote citizens' access to their rightful resources.
- b) Government: GIS provides the most necessary input for the implementation of the FRA - tangible evidence. This information flows between various levels of government, providing vital assistance to performing their respective roles in the forest rights allocation process.

Table 1: Salient Features of Technologies Used

Level	Hardware	Software	Application
Forest Land Claimed	GPS Machine	-	<ul> <li>To measure claimant land using GPS machine</li> <li>To assign a 13 digit code to measured land</li> </ul>
Sub Divisional Level Committee (SDLC)	Computer O.S Windows Xp Broad Band Modem Laser Printer	Mapsource Software from GPS device manufacturer	<ul> <li>To acquire data from the GPS machine</li> <li>To prepare individual claimant's GPX</li> <li>To check/verify the area of land measured by GPS</li> </ul>
		Internet Explorer 7+	<ul> <li>To enter claimant details onto website i.e. online entry</li> <li>To upload the GPX file pertaining to claimant onto the website</li> </ul>
		Adobe PDF Reader	<ul><li>Measurement report viewing &amp; printing</li><li>Viewing details from website</li></ul>
District Level Committee (DLC)	Computer O.S Windows Xp Broad Band Modem Laser Printer	Internet Explorer 7+	<ul> <li>Downloading GPX file uploaded by SDLC</li> <li>Online data entry of measurement analysis of each claimant under consideration which returns measurement analysis report</li> </ul>
		Mapsource Software for GPS device Google Earth	<ul> <li>Viewing and analyzing polygon generated using downloaded GPX file</li> <li>To verify the area of measured land mentioned in measurement report</li> <li>To view polygon in Google Earth</li> </ul>
		TRTI-VGIS Tailor made software prepared by TRTI Pune using following components (VB. Net, Microsoft .NET Framework 2.0, MapwinGIS Active-X controls)	<ul> <li>To superimpose polygon generated using downloaded GPX file on satellite image for the two different time series i.e. Year 2005 &amp; 2008</li> <li>To create image file consisting of satellite image showing polygon generated by GPX file along with claimant details</li> <li>To analyze polygon superimposed on satellite image</li> </ul>
		Adobe PDF Reader	<ul> <li>Measurement analysis report viewing &amp; printing</li> <li>Viewing details from website</li> </ul>
State Level	Web Server	O.S.: Linux Database: Postgresql Software: PHP, Mapserver Software	<ul> <li>Publish the FRA and its rules on web to public in multiple languages</li> <li>Awareness and capacity building on Forest Rights Act implementation</li> <li>Generate centralized database for GPX file along with claimants information and data on progress</li> <li>Bulk SMS system for implementation</li> <li>Dissemination of Forest Rights 'Plus' Concept</li> </ul>

# MEASURING USAGE AND IMPACT

To increase awareness about the technological intervention, the government worked with citizens as well as government. Awareness building activities focused on imparting knowledge about the Act and the technologies being used.

The following steps were taken by TRTI to spread awareness about the role and operations of the geoinformatics for FRA system:

- Distributed copies of the Act and rules in English, Hindi, Marathi and 8 tribal dialects
- Organized meetings and seminars with villagers, officials at the sub-divisional, district and state levels and representatives of civil society organizations
- Played traditional folk song based jingles on All India Radio
- Published advertisements in newspapers, on buses and mobile vans
- Made a movie titled "Somache Swapna" (The dream of Soma) and screened it via Doordarshan in villages
- Created a bilingual Marathi and Hindi website for information dissemination (http://trti.mah.nic.in/frm\_HomePage.php)
- Conducted technology handling and operating training sessions at various levels of government (SDLC, DLC, GPS men etc.) and generated a team of 'master trainers'

A total of 4,522 trainings were organized, under which approximately 5,500 personnel were trained from seven government departments. Trainings were also offered to 95,321 GPS men and Forest Rights committees. However, interviews with GPS men revealed that the quality of these trainings was not uniform across the state. This has resulted in a lack of understanding of GPS functionality by some. It has also left others uniformed about the full process of implementation, which has contributed to the absence of final evidence dissemination to claimants.

The geoinformatics system is being used to process a large number of claims. Table 2 shows the usage level to date:

Table 2: Level of Usage

No. of claims filled at Gram Sabha Level:	339,005
No. of claims recommended by the Gram Sabha to SDLC:	287,418
No. of claims recommended by SDLC to DLC:	113,255
No. of claims approved by DLC for title:	105,489
Forest land approved for individual claims (in acres):	162,399

#### DATA COLLECTION

To gather user insights on the impact of geoinformatics in enabling access to information, primary research to collect qualitative and quantitative data was conducted. Ahmednagar District was selected for a field study as it is one of the two districts that have fully implemented the geoinformatics system.

Semi-structured interviews were held with senior public officials responsible for implementation at district, block and village level. Claimants were surveyed in 5 villages in Sangamner Block in Ahmednagar district to understand their perceptions of the program.

In Sangamner Block, there were 100 people who received land through the use of GPS measurement. Based on availability, 92 were surveyed. It is important to note that government authorities were present during surveying (reasons for which are unknown), which may have biased claimant responses in some way.

#### RESULTS

Survey data suggests that the majority of claimants belong to the marginalized sections of society – 56 percent said they were illiterate and 82 percent said they were below the national poverty line (BPL).

Figure 5: Surveyed Claimants' Level of Literacy

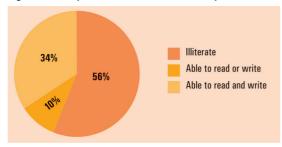
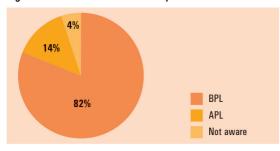


Figure 6: Economic Profile of Surveyed Claimants



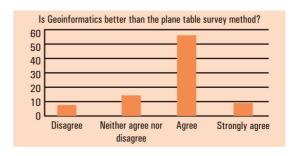
The awareness level amongst surveyed claimants is very high; 92 percent of them were aware of the geoinformatics system, but it may be important to note that they became aware only when government officials came to measure their land. A small percentage of respondents mentioned having attended a geoinformatics promotional meeting couple of years prior. The survey findings suggest that promotional activities were hardly carried out due to which claimants displayed a lack of clear understanding of the program.

Nevertheless, when asked about their perception of the new technologies, they positively replied that the GPS based measurement is better than the old process. There were two categories of claimants who preferred GPS: (a) the ones who owned land in hilly terrain where measuring land using plane table methods was cumbersome (b) the ones who had a bigger area of land and were pleased with the little amount of time it took to measure the land with GPS.

While praise of the system is high, some criticism also exists. One claimant strongly disagreed with the usefulness of the GPS machine, and revealed that his land was not measured because it was covered with water during paddy growing season so GPS machine could not read the data. Similarly, few people cited satellite connectivity errors during their land measurement process.

Overall, the majority of the claimants agreed that GPS has made land measurement easier and the scope for manipulation of data and error in collection is reduced.

Figure 7: Comparing Old and New Processes





#### COSTS

Institutionalization of Geoinformatics for Forest Rights in Maharashtra ensures that the program is financially sustainable in the long-run. At present, funds for the project flows from grants allocated to the State Government under the Forest Right Act. The major expenses for the implementation of the program include procuring GPS machines, establishing supportive infrastructure and generating awareness. From 2008 to 2010, a total of INR 32.23 million (USD 718,444) was spent on implementation of the Act.

#### KEY BENEFITS

At the start of the program it was difficult to educate stakeholders of varying qualification levels on the use of the geoinformatics tools. In time, however, the program was understood and has since illustrated its advantages.

Using appropriate technology to expedite processes: Technological initiatives can fail to create an impact because of inappropriate design. The geoinformatics system is contextually

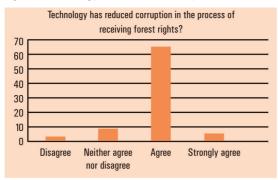
relevant because it employs easy to use technologies suitable for geographically difficult to reach terrain. The use of a web system further eases the transfer of data from one level to another. This role-based application of technology has made the complex process manageable and in turn, has also led to significant improvements in processes.

Table 3: Comparison of Plane Table and GIS

Criteria	Plane Table	GIS
Time taken for measurement	2-4 plot measurements in a day	Up to 20 measurements in a day
Manpower required	3 to 4 men for one measurement	Only one GPS man
Accuracy of measurement	Subjective. Depends on the expertise of the land surveyor	Accurate, with less scope of error

Introducing Transparency: Geoinformatics has succeeded in creating efficiencies through heightened transparency in the FRA implementation process. For example, land is measured in the presence of a land claimant who guides the GPS man on boundaries to measure. By streamlining procedures, geoinformatics has led to better practices among various government committees, enabling them to take objective decisions through unbiased evidence. Through online access for monitoring, to program also ensures that officials function in a responsible manner. Data from the field supports these conclusions as approximately 70 percent of the claimants surveyed agreed that the new technologies have expedited claim response retrieval and have generally made the government more accountable

Figure 8: Technology - Increased Efficiency



Community empowerment: By enabling timely recognition of forest rights' claims, the program benefits eligible claimants in a number of ways. First, claimants are able to pursue livelihoods without living in fear of being displaced. Second, if granted official rights to land, beneficiaries can consequently avail critical public services that were earlier inaccessible to them. With the obtaining of these rights, tribals and forest dwellers are integrated into the formal social network of the State and in turn, stand to gain through long-term social inclusion.

Development of a sustainable and replicable system: The geoinformatics system has introduced tools that will remain useful for future Act implementation and other related policies. The system is user friendly and simple to operate once proper training is imparted on its users. It is financially sustainable as it is part of the country's central policy. It also has a high usage value and can be leveraged for developing a common GIS based tribal development framework at the national level.

As a web-based and centralized application, the program is easy to enhance and replicate. This is illustrated in the Forest Rights Act PLUS, a proposed integration of geoinformatics for forest rights and the Mahatma Gandhi Rural Employment Guarantee Act (MGNREGA). The aim of this effort will be to consolidate all welfare programs at the State level so target groups under the Act are effectively brought above the poverty line.

#### RECOMMENDATIONS

Findings from the field suggest that the following improvements can be made to the geoinformatics system to enhance the overall efficiency of implementing the Act.

#### TARGETED APPROACH TOWARDS AWARENESS GENERATION

Field observations reveal an unclear understanding of the geoinformatic technologies by claimants. Surveyed individuals were not deeply knowledgeable about how the new claim verification process works. They understand the basic functionality of the GPS machine,

but are largely ignorant about the process of superimposition and the TRTI-VGIS software. This lack of knowledge may be the reason for cited examples of dissatisfaction with claims being dismissed or receipt of less land than was claimed.

This issue can be addressed by following a well planned awareness generation strategy in tribal and forest dwelling communities. Expertise of local actors like the FRC and Gram Panchayat (village council) can be harnessed for this purpose. These actors should be adequately trained to conduct awareness generation sessions on an as-needed basis and respond to any and all queries from claimants. These sessions should convey to the villagers the purpose of the FRA and their entitlements under it. This can be done by using creative audio visual content, appropriate for the largely illiterate population it intends to serve, such as an educational movie made by TRTI.

A thorough demonstration on how geoinformatics technology is being used for processing claims should also be given through gram panchayat meetings. The reason for selecting geoinformatics technology for the purpose of implementing the FRA should be explained to the villagers. Officials can take laptops to the field, select two to three claimant cases as examples, and conduct the process of superimposition on the satellite imagery, in the presence of community members. In this manner, the villagers can be taught why a particular claim is considered eligible or ineligible. This access to information will help in avoiding unnecessary conflicts.

# EXPERIENCE BASED TECHNOLOGICAL IMPROVEMENTS AND INNOVATIONS OVER TIME

While field interactions highlighted the advantages of using spatial technologies, they also revealed certain limitations of using handheld GPS machines in remote areas. For example, there are issues with satellite connectivity, overlap in land measurement and lack of facilities to recharge GPS batteries in the field. GPS machines also have a limited storage capacity of twenty measurements, which forces the GPS men to return to the SDO office for transfer of images from the machine for subsequent use. Long lasting batteries can be supplied to make improve the efficiency of this process. A backup data card is randomly distributed to GPS men. This distribution can be carried out in a uniform manner by the SDO to ensure access to by all land surveyors. Capacity building efforts can be undertaken to brief GPS men about the common mistakes that occur during measurement in order for them to avoid and correct them. For this, feedback can be gathered from the GPS men on a regular basis. A feedback mechanism designed for regular updates on bottlenecks faced would be helpful in developing solutions to dealing with them.

The website is currently inaccessible by the claimants because they live in remote areas without computers and are largely illiterate. This can be addressed by providing website access in Community Service Centers (CSCs), which are being established in all villages across the country under the National e-Governance Plan (NeGP). The website can also be modified to include a text-to-voice module so that illiterate villagers can use it for accessing valuable information.

#### REFERENCE

Anand, Nicole. Geoinformatics for Forest Rights. Best Practice Documentation. Governance Knowledge Center. Department of Administrative Reforms and Public Grievances. November 2010. Web. 4 May. 2011. <a href="http://indiagovernance.gov.in/bestpractices.php?id=439/">http://indiagovernance.gov.in/bestpractices.php?id=439/</a>.

# ANNEXURE A Stakeholder Interviews

## TRIBAL RESEARCH AND TRAINING INSTITUTE

- 1. When did the Geoinformatics program replace the plane table survey method? Why was it necessary to leverage geo-technologies for the implementation of the Forest Rights Act?
- 2. Can you elaborate on TRTI's capacity building efforts through:
  - a) Advocacy
  - b) Training
- 3. There are a number of departments involved in the FRA. Can you please explain each of their roles, with specific reference to how they are involved in the geoinformatics project?
  - a) Revenue
  - b) Tribal
  - c) Forest
  - d) Land Records

#### **Technology**

- 1. Can you help us understand the various technological aspects of the initiative:
  - a) GPS measurement: Why were GRAMIN machines procured? How did this process take place?
  - b) Satellite imagery and Google Earth:
    - i. How was the imagery obtained?
    - ii. Why was it decided to use Google Earth for superimposition?
  - c) Website:
    - i. How was the website developed? What software was used? Was it open source or proprietary?
    - ii. The website exists for the public (citizens) and for 200 government entities (28 collectors, 110 SDOs, 31 Tribal Departments, and 40 Forest Offices). How was the website designed to cater to both of these user groups? How do each of these user groups access the website and for what purpose?
    - iii. How many people are accessing the website? Per day? To date?
  - d) Online bulk SMS service:
    - i. What software is used for this? Is it open source? Is the service provider BSNL or has it changed?
- 2. Both open source and proprietary technologies have been leveraged for the geoinformatics project. Can

- you explain why certain technologies were used for some and other technologies for other activities? What advantages and/or disadvantages come with using open source technologies for this project?
- 3. Do you think it is necessary to use technology for recognizing forest rights? If yes, why? If no, why not?
- 4. Considering the context, particularly the socioeconomic background of the district, do you think this is an appropriate use of technology? Why or why not?

#### Sustainability

- 5. Can you explain to us the financial model of the project? Initial capital expenses, incremental costs etc.
- 6. Who is responsible for monitoring of the project? How is monitoring carried out through:
  - a) Website
  - b) Bulk SMS
  - c) Other
- Can you provide us with data on: 1)Total claims in favor of the claimant / Not in favor of claimant 2) Measured by GPS / Not measured by GPS (plane table)

#### **Impact**

- 8. Is there a particular time frame for the claim verification process? How is timely verification of claims ensured?
- 9. Once the claim has been approved by the DLC, what are the next steps and how much time does it take for the forest rights patta to be handed over to the claimant?
- 10. How has geoinformatics been received by the various implementing departments? Has it created a transparent and accountable system of granting forest rights?
- 11. According to our research, more than 100 crore of public money has been saved from the implementation of the geoinformatics system. Can you explain how this savings has been produced?
- 12. How does geoinformatics compare to the process of implementing FRA act in other Indian states?
- 13. What do you think are the major reasons for the program's success?
- 14. Geoinformatics is being used for individual forest rights, but what about community rights, user rights and the right to conserve? How are these being implemented? Are there plans to leverage technologies for this?
- 15. There are plans to introduce Forest rights plus via which Geoinformatics will be integrated with MGNREGA. Why was this decided? How will it be done and by when can we expect it to start?

#### DISTRICT LEVEL COMMITTEE (DLC), SUB-DIVISIONAL COMMITTEE (SDLC) - BLOCK LEVEL & GRAM SABHA REPRESENTATIVE

#### Background

1. What is the DLC's/SDLC's/Gram Sabha's role in the geoinformatics system for tribal rights?

#### Information Technology

- 2. Considering the socio-economic background of the district, do you think that the use of technology is appropriate? Do you think it is necessary to use technology for recognizing forest rights? Why or why not? Are the technologies used in this project the best for the purpose? If so, why? If not, how do you recommend it change?
- 3. Do you think that the use of technology has helped in making the tribal rights allocation process more transparent and made officials in charge accountable? If yes, how?
- 4. Do you access the website for monitoring of caserelated data? What information is available on the portal? How do you use this?

#### **Impact**

- 5. Based on your experience, what would you say are the benefits of using the geoinformatics system for the recognition of tribal rights? How is it an improvement over the earlier system of plane table survey?
- 6. What challenges have there been in using the geoinformatics system? How were they overcome or plan to be tackled?
- 7. What are the major factors that have contributed to this project being a success?
- 8. Geoinformatics is being used for individual forest rights, what about community rights, user rights and the right to conserve? How are these being implemented? Can technologies be used for this? If so, how?
- 9. What changes would you like to see in the program in the future?

#### FOREST RIGHTS COMMITTEE (FRC)

#### Background

1. What is the FRC's role in the geoinformatics system for tribal rights?

#### Information Technology

- 2. Considering the socio-economic background of the district, do you think that the use of technology is appropriate? Do you think it is necessary to use technology for recognizing forest rights? Why or why not? Are the technologies used in this project the best for the purpose? If so, why? If not, how do you recommend it change?
- 3. Do you think that the use of technology has helped in making the tribal rights allocation process more transparent and made officials in charge accountable? If yes, how?
- 4. Do you access the website for monitoring of caserelated data? What information is available on the portal? How do you use this?

#### **Impact**

- 5. Based on your experience, what would you say are the benefits of using the geoinformatics system for the recognition of tribal rights? How is it an improvement over the earlier system of plane table survey?
- 6. How have villagers responded to the use of technology and the entire process of the geoinformatics system?
- 7. Do you think that the technology has helped in making the tribal rights allocation process more transparent and made officials in charge accountable? If so, how?
- 8. What challenges have there been in using the geoinformatics system? How were they overcome or plan to be tackled?
- 9. What are the major factors that have contributed to this project being a success?
- 10. Geoinformatics is being used for individual forest rights, what about community rights, user rights and the right to conserve? How are these being implemented? Can technologies be used for this? If so, how?
- 11. What changes would you like to see in the program in the future?

#### **GPS MEN**

- 1. What is your role in the geoinformatics program?
- 2. What difficulties do you have in measuring the land and operating the gps machine, if any?
- 3. How do villagers respond to the process? Are they supportive?

### ANNEXURE B - Land Claimant Survey

Na	me:	8. Have you made a forest right claim?
	trict:	a. Yes
Ge	nder: M / F	b. No
1.	What is your age?	9. Has the land you are claiming been measured?
	a. < 18	a. Yes
	b. 18 - 25	b. No
	c. 26 - 40	10. How was your land measured?
	d. 41 - 60	a. GPS
	e. > 60	b. Plane Table
2.	Are you:	11. Did you receive your ownership for the land?
	a. Scheduled tribe	a. Yes
	b. Other traditional forest dweller (residing in forest	b. No
	for 75 years)	
	c. Others (please specify)	12. If yes, how many hectares? (maximum four hectares
3.	What's your level of literacy?	allowed under act)
	a. Illiterate	a. < 1
	b. Able to sign	b. 1 - 2
	c. Able to read or write	c. 3 - 4
	d. Able to read and write	13. Approximately how long did it take to get a response
4.	What is your level of education?	after measurement of your land?
	a. Primary education (up to 5th standard)	14. Are you aware of the Geoinformatics technology
	b. Elementary education (up to 10th standard)	used for forest rights implementation?
	c. Senior Secondary (up to 12th)	a. Yes
	d. Graduate	b. No
5.	What is your occupation?	15. How did you become aware of the technology based system?
	a. Farmer/Cultivator	a. Newspaper
	b. Agricultural laborer	b. Television (Somache Swapna)
	c. Dairy farmer	c. Radio
	d. Forest produce gatherers	d. Advertisements in buses and mobile vans
	e. Skilled worker	e. Government officials
	f. Others	f. Friends/Family
6.	Please choose the option that best describes your	
	economic status:	g. Others 16. Are you familiar with how the Geoinformatics
	a. BPL	system functions?
7	b. APL	a. Not much aware
7.	What is your average yearly household income?	b. Basic ability to describe the technology used
	a. <10,000	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

b. 10,000 - 30,000c. 30,000 - 50,000

d. >50,000

- c. Extensive knowledge of the technology used
- 17. Technology has made the process of receiving forest rights efficient and quicker.
  - a. Strongly disagree
  - b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly agree
- 18. Technology has reduced corruption/cheating in the process of getting forest rights
  - a. Strongly disagree
  - b. Disagree

- c. Neither agree nor disagree
- d. Agree
- e. Strongly agree
- 19. Geoinformatics is better than the plane table method
  - a. Strongly disagree
  - b. Disagree
  - c. Neither agree nor disagree
  - d. Agree
  - e. Strongly agree

#### Case Study 7

### I Paid a Bribe

#### **INDIA**

#### IN BRIEF

I Paid a Bribe (IPAB) aims to quantify petty corruption by understanding the role of bribery in public service delivery. The uniqueness of the program lies in transforming data into knowledge to inform the government about gaps in public transactions and in strengthening citizen engagement to improve the quality of service delivery.

The initiative was conceptualized and implemented in August 2010 by Janaagraha, a Bangalore based not-for-profit organization, to uncover 'the market price of corruption'. The portal, ipaidabribe.com, acts as an effective tool to collate actual bribe prices directly from citizens across the country and then use it to present a snapshot of bribe trends. Janaagraha acknowledges the role of government as well as citizens in anti-corruption efforts and thereby IPAB also educates people on resisting bribe through the informational content published on the portal.

In India, where many citizens consider it 'normal' to pay a bribe for obtaining public services, the data is valuable for identifying institutions that are highly engaged in corrupt practices. Bribe amounts submitted by citizens to the portal are aggregated and analyzed to understand who paid or did not pay a bribe, and did not have to pay a bribe. Based on this information, problem areas in public service delivery are diagnosed. This concrete information is used to advocate for good governance reforms. Furthermore, this information is disseminated to the general public to alert them about malpractices and to teach them how best to avoid paying bribes.

#### DESCRIPTION

Web portal designed to facilitate the collection of citizen reported data for quantifying corruption in India. Data collected is used to develop and disseminate information to push for systemic changes.

### LESSONS FOR THE FUTURE

- Expanding reach will require design of technological solutions accessible through multiple platforms.
- Building a network of organizations for supporting online activities with offline work will aid in pushing for large-scale institutional reform.

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#### List of Abbreviations

C2C: Citizen to Citizen

NGO: Non-governmental Organization

RTO: Regional Transport Office

RTI: Right to Information

FOSS: Free and Open Source Softwara

SQL: Structured Query Language

PHP: Preprocessor Hypertext Language

IVRS: Interactive Voice Response System

#### **BACKGROUND**

Janaagraha, a not-for-profit organization based in Bangalore, aims to improve the quality of urban governance in India. To achieve this goal, it has implemented several citizen-centric programs to strengthen democratic participation and to increase public accountability. Recently, with the aim of reducing corruption, Janaagraha initiated the I Paid a Bribe (IPAB) program to leverage the 'collective energy of citizens' to tackle the deep rooted problem.

The issue of corruption is well-known but the lack of indicators to quantify corruption often prevents the translation of solutions from policy to practice. Many believe that concrete data on corruption trends can help in developing meaningful solutions to improving governance. However, this will depend on the extent to which citizens can access information to help them make informed choices and resist bribery. I Paid a Bribe, a citizen-to-citizen (C2C) initiative, is a tool for uncovering 'the market price of corruption' and facilitating valuable information exchange to bring about positive systemic changes in governance.

Launched on August 15, 2010, India's Independence Day, the portal became fully functional in September 2010. Since its inception, the web portal has gained popularity because of its innovativeness in collecting actionable data to guide decision-making. The data collected through the website submitting from all over the country is studied in a structured manner to perform trend analyses. The narrative presented by users allows for an intelligent and objective understanding of corruption in its empirical form.

The program aims is to measure 'why', 'how' and 'when' bribe is paid or demanded.

Specifically, the program hopes to shed light on:

- Whether bribery is collusive
- Whether people are being harassed to pay bribe

The program also recognizes that there are two sides to corruption: a supply side where citizens are willing to pay bribe, and a demand side where public officials ask for bribe. Hence, reforms are advocated at both ends by

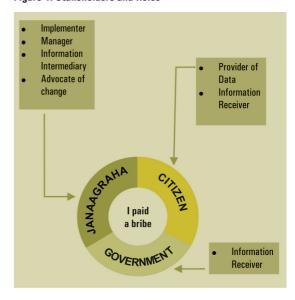
disseminating targeted information to stakeholders.

In nine months of operation, the portal has received more than 460,000 visits from 197 countries/territories.

#### **METHODOLOGY**

#### STAKEHOLDER ANALYSIS

Figure 1: Stakeholders and Roles



#### **SWOT ANALYSIS**

#### Strengths

- Aggregates real information on bribe prices
- Acts as a catalyst in creating systemic change
- Empowers citizens by informing them about their rights
- Exploits social network sites for promotion amongst youth

#### Weaknesses

- Limited reach of website due to low internet penetration in India
- Website is only available in English
- Program targets only urban areas, specifically Bangalore
- Absence of verification process to ensure authenticity of data/ anonymous reporting
- Number of actual reports submitted is significantly lower when compared to the total number of hits

#### **Opportunities**

- Make it inclusive by using more accessible/ affordable technology
- Create interface in other languages
- Increase the credibility of data
- Involve government/other NGOs to increase usage
- Expand ground level work all across India

#### **Threats**

- Resistance from the government in implementing reforms
- Citizens using the portal to defame a(n) official or department

# LINKING ACCESS TO PUBLIC INFORMATION TO GOVERNANCE REFORMS

Information is essential in identifying problem areas to pursue appropriate institutional reforms. Access to relevant data helps in objectively presenting issues of concern to the government, and to monitor and evaluate the quality of governance from the perspective of the citizen users.

By collecting and publishing information, I paid a bribe is trying to facilitate a citizen-centric approach to:

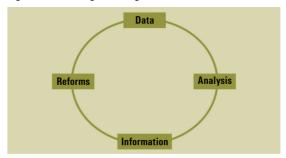
- Improving service delivery in a systematic, evidence based manner.
- Strengthening democratic participation by engaging citizens.

The information collected from citizens helps in identifying weaknesses in institutional mechanisms, making it easier to advocate for reforms with government agencies. By making information available to the people, IPAB is also helping to mitigate the supply side of corruption.

#### **WORKING DESIGN**

A cyclical process best represents the IPAB program design. The continuous collection, analysis, and reporting of corruption related information is essential to achieving program objectives.

Figure 2: IPAB Program Design



The IPAB team utilizes the bribe data collected through the portal at two levels:

- First, to generate relevant information (including citizen charters) to citizens in order to help them avoid bribery.
- Second, to provide the government with information about bribe prone areas.

The content presented on the website works as a single point of reference for obtaining public services without paying a bribe.

#### PROCESS FLOW

Figure 3: Process Flow

- Step 1 Crowdsource/collect bribe data through the website.
- Step 2 Analyze the data to understand the pattern of corruption. Identify why, how and how much bribe money is asked by public officials.
- Step 3 Prepare reports for citizens and government to objectively present the statistical data. Advise citizens on ways to avoid bribes. Recommend corrective measures to the government.
- Step 4 Disseminate information by arranging meetings with key service providing agencies. Publish advisories for citizens on the website and post advertisements.

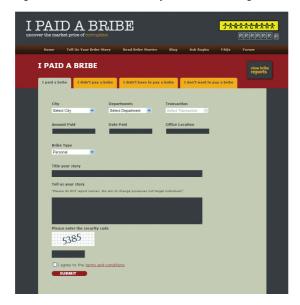
#### **Data Collection**

The website is organized so that relevant details are captured to offer detailed analysis of bribe patterns in the country. First, a user has the option of registering any recent or old experience of:

- paying a bribe,
- not paying a bribe,
- getting a service without having to pay a bribe.

While the first two categories inform readers about the occurrence of corruption, the third category is used to celebrate honest officers in the government.

Figure 4: Screenshot of Bribe Report Submission Page



In addition to writing about their experience, a user has to indicate the city, department, transaction type and bribe type using a drop down menu. The transaction type depends on the government department. For example, under the Registration Department, the options are related to the registration of property, whereas under Police the transactions include passport verification, First Information Report (FIR) filing<sup>58</sup> and traffic violations. The list of departments includes the most important agencies responsible for delivering public services.

#### **Data Moderation**

The data moderation process is fully automated to comply with the country's legal framework. The Indian Information Technology Act, 2008 differentiates between a Platform Provider and Publisher based on the origin of the information and storing process. A platform provider is not liable for offensive information on the website if the content is published without any editing by humans. IPAB chose to function as a platform provider, and hence it does not edit the stories

that visitors report. This not only reduces legal liabilities for Janaagraha, but also gains the user's trust from a belief that their reports will not be manipulated or misrepresented.

Since the purpose of IPAB is to promote systemic reforms and not to put the blame on particular individuals or departments, IPAB places immense value on anonymity while collecting data. To ensure anonymous reporting, a software application is installed that automatically detects and deletes the names from the bribe stories. The software recognizes these names from an evolving list stored in an external database. However, this application is not applied to the reports submitted to highlight honest government officials.

A second level of moderation is performed to assure the public that the data is credible. There are automatic alerts set to warn any bribe payment report of more than INR 10 million (~ USD 222). The alert system gives the IPAB team the option of publishing or not publishing the report - making changes to the entry is not allowed. The team does retain the ability to delete any report found to be abusive.

#### Data Analysis

An infographics application developed with Adobe is embedded in the website and creates graphs to reflect bribe patterns based on city, departments and official ranks. The flash based graphics work in real-time and are fully automated. This information is presented under the 'Bribe Analytics' section of the website, which is accessible from the homepage.

When a significant amount of data has been gathered, it is examined to publish reports specific to corresponding government departments. This is done on a needs basis, as determined through quantity of reports per department.

#### INFORMATIONAL CONTENT

Information related to public service delivery is available on the website in two main sections:

#### Ask Raghu

The 'Ask Raghu' section functions as an advice

<sup>58</sup> The First Information Report is the first written document prepared by the police upon receiving details of an offense.

column where readers can submit any query related to public services, and receive an educated response on how to obtain the service. At present, the queries are answered by a former Indian bureaucrat, Mr. T.R. Raghunanda. While most of the queries are responded to based on the experience of Mr. Raghunandan, some of them require thorough research on the part of the team. In these cases, the IPAB team approaches the government to receive relevant information or uses the Right to Information Act to get important information regarding the particular public service.

#### Frequently Asked Questions/ Discussion Forum

The FAQ section publishes regulatory and administrative information about government services under various categories including land, electricity, registration etc. The discussion forum also allows citizens to interact with each other and share their experiences.

#### Miscellaneous

Blog: The portal has a blog where opinions and articles related to corruption are publicized to generate awareness.

Videos: There are two types of videos posted on the portal: inspirational and informational. The inspirational videos present stories of people who have received public services without paying bribes. Informational videos inform users about anti-corruption efforts.

#### PUBLISHING REPORTS

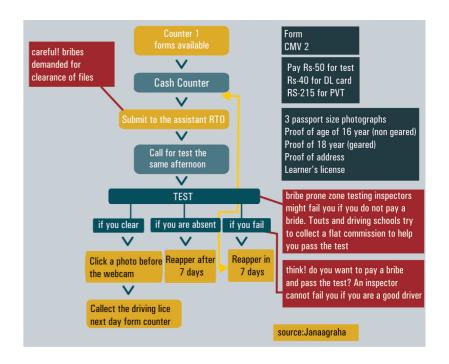
The portal is used to motivate real change through the publication analytical reports based on bribe data collected through the portal. This is an important aspect of the program as it is through these reports that Janaagraha envisions objective advocacy and recommendation of good governance practices. Two types of reports exist:

- A Janamahati Report meant for the government,
- A Citizen Advisory, in form of a brochure, to raise public awareness.

#### Janamahiti Report (People's Information)

The purpose of the Janamahiti report is to identify problem areas in service delivery and inform government and citizens accordingly. To do so, it includes details of bribe amounts paid for services as per individual government departments. One section of the report describes the bribe process - specifically, how and who (official's position) asks for the bribe. This information is presented to the government in the form of a workflow diagram that shows all steps involved in offering a public service and highlights those that are particularly vulnerable to bribe activity. For example, Figure 5 illustrates the issuance of a driver's license at Regional Transport Office (RTO) in Karnataka. The rightside of the flowchart lists the required form, application fees, and supporting documents to apply for the license. The hexagons inform the viewer that bribes are likely to be elicited with the clearance of a file by the Assistant RTO and/or by the Testing Inspector during the driving test. Based on this analysis, recommendations for improving service delivery are developed and documented in this report. Jana House, an online group of individuals interested in Janaagraha's work, actively participate in these discussions. Additionally, IPAB asks for citizen inputs on recommendations via Facebook and Twitter.

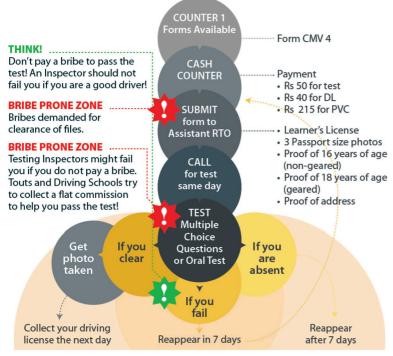
Figure 5: Bribe Prone Areas for Government



#### Citizen Advisory

Report data is presented to the citizens in the form of an advisory. As illustrated in Figure 6 bribe prone zones and reasons for bribe demand are marked on a driving license transaction flow chart. The advisory warns citizens about potential harassment and guides them on how to avoid paying bribes. For this purpose, it also lists the Ten Commandments that are required for communicating with the government with confidence and using the Right to Information Act appropriately. Citizen advisories are published on the website and produced as fliers for distribution to citizens.

Figure 6: Bribe Prone Areas for Citizens



Source: Janaagraha

## MEETING GOVERNMENT AGENCIES

Once the reports for the government departments are published, meetings are arranged with senior officials to present the report. Currently, the selection criteria for identifying departments are subjective since only honest officers would encourage such an initiative. Therefore, Mr. Raghunandan's and Janaagraha's past experience in working with

the government is used to select appropriate agencies.

The successful meeting arranged so far was in Bangalore with the Department of Transport, Government of Karnataka. One such successful meeting arranged thus far was with Department of Transport, Government of Karnataka. As a part of the meeting, Janaagraha presented the bribe data pertaining to the department and recommended streamlining delivery processes and making services available online to reduce human interaction. The report also illustrated the data on amount of money paid and total number of bribe cases from various Regional Transport Offices (RTO) in Bangalore. Based on the information contained in the report, 20 senior officers were issued warnings.

Interviews with the Department of Transport revealed that the report has helped them in indentifying loopholes in the system. The recommendations made by Janaagraha are being incorporated to enhance the existing anti-corruption efforts in the Department. This includes using technologies to minimize the inperson interactions between citizens and public officials. The Department has also agreed to display IPAB posters in the RTOs to encourage citizens to report cases of petty corruption.

# MEASURING USAGE AND IMPACT

As of May 12, 2011, the website had received a total of 450,180 visits. Eighty-two percent of the total hits are from new users, suggesting a strong upwards trend in website reach. The portal analytics indicate that traffic comes from all across the globe – 197 countries/territories have visited the website and 61.3 percent of the total visits are from India. The other countries with the most users accessing the site are the United States, United Kingdom, Canada and United Arab Emirates. Higher level of Indian migrants in these countries may be one of the reasons for the popularity of IPAB.

Within India, the website receives hits from all over the country. Data indicates that users from 86 cities that are geographically spread out have visited the site. However, the most active

cities are the metropolitan areas of Bangalore, Mumbai, Chennai, New Delhi and Hyderabad.

**Table 1: Top Five Countries Accessing the Portal** 

Countries	Visits
India	61.23%
United States	18.49%
United Kingdom	3.98%
Canada	1.62%
UAE	1.49%

**Table 2: Top Five Indian Cities Accessing the Portal** 

Cities	Visits
Bangalore	31.43 %
Mumbai	12.35 %
Chennai	10.06 %
New Delhi	8.55 %
Hyderabad	7.91 %

Figure 7: Portal Access across India

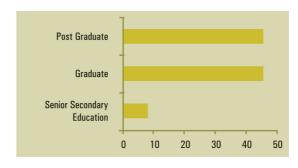


The high level of traffic may be attributed to Janaagraha's extensive promotional activities on social networking sites such as Twitter and Facebook. Social network and online visibility on corruption related blogs are the primary methods of generating awareness amongst potential users.

Figure 8: Age Profile of Users



Figure 9: Education Level of Users



#### **PORTAL USAGE**

To understand the usage pattern and impact of IPAB, a online user survey was conducted. An online, self-selection survey was determined to be the best method for reaching out to the geographically diverse portal users. The survey was hosted on IPAB's Twitter and Facebook page for one week. 108 users responded to the survey and 100 surveys were considered for analysis due to issues of data accessibility.

Janaagraha emphasizes ensuring the anonymity of users, hence does not store any user data. However, the online survey attempted to understand the average profile of users. Results suggested that portal visitors are almost all between the ages of 18 to 40, with slightly more 18 to 15 year olds than 26 to 40. Most users have either a graduate or a post graduate degree. It seems likely that the availability of information being limited to English restricts a certain section of the population from accessing or benefitting from the portal. Even when examining the presence of IPAB on the Internet, it is evident that the portal is more popular among a literate, English speaking crowd.

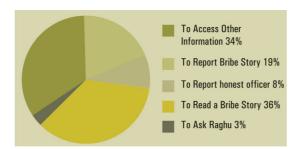
The statistics published on the portal indicates that it mostly functions as an informational source for its users; as of May 2011, approximately two percent of total hits translated into report submissions.

Table 3: Total Bribe Reports as of Early May 2011

Type of Report	Total
I paid a bribe	7853
I didn't pay a Bribe	711
I didn't have to pay a bribe	262
	8826

Thirty-six percent of surveyed users acknowledged visiting the portal to read bribe stories, while 27 percent said they had reported their experience of paying or not paying bribe. The informational content published on accessing public services and resisting bribe is also popular as 34 percent of surveyed users specified this type of usage. Apart from the bribe reports, information in the FAQs and the Ask Raghu section were found most useful.

Figure 10: Purpose for Visiting Portal



However, when asked if the information on I Paid a Bribe has helped them obtain a service without paying a bribe, 59 percent of the respondents neither agreed nor disagreed. For one, the project is relatively new and continuously evolving. The portal started out as a tool to uncover the market price of corruption and has aradually grown to include information about resisting bribery. Further, the information provided to people seems to be based on their experience reflected in the bribe narratives, so it is still too early to evaluate if users are encouraged to refuse demands for bribe because of the information provided on the portal. There is evidence to suggest that the program has a positive influence as 21 percent of the surveyed users agreed to have avoided paying bribe because of the knowledge gained through the portal. Overall, the general trend was positive, only five percent of the respondents strongly disagreed with the information aiding in avoiding bribery.

These findings complement the perception of respondents in assessing the usefulness of the website. When asked about the value of the information provided on the portal, 65 percent of surveyed users either agreed or strongly agreed that information disseminated through the portal can help in reducing corruption in India.

Figure 11: Perception of Users on Potential Impact of IPAB



### ANALYZING TECHNOLOGY

Technologies leveraged for this project are minimal yet appropriate, and require limited financial resources. Given the nation-wide scope of the program, a web portal is effectively employed to interact with users to gather stories and diffuse information anywhere, anytime. Forty-nine percent of the surveyed users specified that it was easy to navigate through the portal, while 38 percent agreed that it was not very difficult to use.

The website is designed and maintained using Free and Open Source Software (FOSS) to keep it consistent with Janaagraha's standard practice. Drupal content management system is used with a Linux, Apache, My SQL and PHP (LAMP) software bundle to build the web server. These software choices were made to accommodate Janaagraha's plan to centralize the databases of all their projects/programs. The Technology Coordinator at Janaagraha also mentioned that Drupal was the best choice because it has been in use for a longer duration then its alternatives, hence is more refined and stable. The data is stored in two dedicated servers - one for the web and the other for the database. These servers are hosted at NetMagic Solutions in Bangalore.

- L Linux for server
- A Apache HTTP for web server
- M My SQL Database
- P PHP for scripting language

The website is fully developed and maintained in-house by the technology team at Janagraaha, and it is regularly updated. Regular portal updates include publishing blogs, videos and answering queries posted on the Ask Raghu section.

Initially, IPAB had also introduced a telephone line in Bangalore for citizens to call and share their experiences. However, this feature did not operate as it intended; instead of people sharing bribe paying instances, they wanted to be counseled on obtaining public services. Resource limitations spurred the discontinuation of this option.

There are plans to introduce a mobile based query submission system in order to reach out to more people. However, it was mentioned that designing a system that ensures anonymity of the user is a major hindrance in realizing this plan.

#### SUSTAINABILITY

In most Information and Communication Technologies and Development (ICTD) projects,

Table 4: Marketing Strategies Adopted by Janaagraha

a weak financial model is cited as a principal reason for failure, and hence the focus is usually on revenue generating projects that are self-sustainable.<sup>59</sup> However, when looking at C2C initiatives, the need for continued input from the user becomes more critical for the program than the financial sustainability. The supply and not just the demand for the information will determine its long-term usefulness.

#### CONTENT

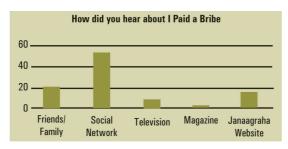
IPAB recognizes that the project continuously needs to collect information from the target group and to ensure continuous user inputs Janaagraha is focused on marketing to make people aware of the program. Most of the marketing techniques adopted by the team harness the potential of social networking. IPAB's Twitter and Facebook page are integrated with the IPAB portal, and at least 13 percent of the traffic on IPAB comes through the Facebook page. Using these platforms has given IPAB greater visibility, helping it in reaching out to a crucial section of the population – the youth. Table 4 summarizes the marketing strategies adopted by Janaagraha.

Step Taken	Activities Involved
Creating online visibility	<ul> <li>Circulating IPAB cartoons online</li> <li>Posting and emailing regular blogs on corruption</li> <li>Leveraging Janaagraha's existing network of partnerships</li> <li>Bribe Bandh campaign to get signatures in support of the UN convention against corruption</li> <li>Pilot to publish certain content on the website in five regional languages</li> </ul>
Utilizing social networking	<ul> <li>Creating pages and accounts on popular social networking sites like Facebook, Twitter and Orkut. IPAB has about 9000 followers on Facebook.</li> <li>Using these spaces for interactive discussions, disseminating its philosophy against corruption and receiving valuable feedback</li> </ul>
Substantiating online publicity with offline promotions	<ul> <li>Hold press conferences for media coverage</li> <li>Conduct media promotions and road shows across cities in India</li> <li>Posters in government departments</li> </ul>

<sup>59</sup> Ali, M. and S. Bailur. Challenge of Sustainability in ICT4D - Is Bricolage the answer? Proceedings of the 9th International Conference on Social Implications of Computers in Developing Countries. Sao Paulo. 2007

Survey results indicate that the Internet has been an important medium for spreading awareness about the program. 55 percent of the respondents indicated that they came to know about IPAB through social network and 14 percent were informed through Janaagraha website. Although IPAB has regularly been covered by the media, only 11 percent of the users surveyed heard about the program through television or magazine.<sup>60</sup>

Figure 12: Source of Awareness



The uniqueness of the program has helped to capture media attention, which has further increased the traffic to the website. The rate of submission of stories has increased overtime, and on average, the site receives about a 1,000 stories per month.

#### **FINANCIAL**

IPAB is a Janaagraha project so the funding team of the organization is responsible for ensuring continuous financial support. The major expenses for the program include maintaining the website, creating informational videos, arranging press conferences and employee salaries. The total operating costs for a financial year is estimated to be around INR 3.5 million (~77,777 USD). Table 5 presents the expenditure for January to March 2011.

**SUCCESS FACTORS** 

## INNOVATIVENESS IN 'MEASURING' CORRUPTION

While it is understood that measuring corruption will help in identifying the most affected areas of service delivery, there are rarely household surveys conducted to quantify corruption.

Corruption Indices referred to by policy practitioners are mostly perception based. Even in the Indian context, where petty corruption is rampant, government agencies have never tried to investigate the pattern of bribes. It is this innovativeness of IPAB that makes it unique and potentially successful.

## CREATIVE USE OF C2C PLATFORM

By utilizing a C2C web platform as an enabler to give citizens a voice, IPAB has strengthened democratic participation. The data collected through the website fosters an understanding of the problems in governance mechanisms and this information is used to make the government aware of the need to improve the quality of public service delivery. The fact that this information is coming directly from citizens has a greater impact in a democratic institutional setting and also helps in gaining the confidence of citizens that their input is being used to push for reforms.

#### **ANONYMOUS REPORTING**

The anonymity feature of IPAB is important in the context of India as the law holds both bribe giver and receiver as offenders. Anonymous submission of personal experiences serves two

**Table 5: Major Costs Incurred for the Project** 

Major Expenses	Amount in INR	Amount in USD (1 USD = 45 INR)
Technology - Website Development Expenses	4,03,901	8,975
Offsite Events and Advertising & Display	1,45,958	3243
Printing and Stationary	1,32,123	2936
Salaries	2,18,025	4845
Professional Fees	3,48,649	7747

<sup>60</sup> I Paid a Bribe News Coverage, Web. 27 May. 2011. <a href="http://www.ipaidabribe.com/sforms/ipab">http://www.ipaidabribe.com/sforms/ipab</a> in the press/>.

purposes: first, the information provider is encouraged to give honest information without the fear of being caught, and second, it discourages using the platform to defame public servants.

#### **USE OF SOCIAL NETWORK**

Using social networks to promote the program has ensured considerable success in a short period of time. The IPAB team at Janaagraha dedicates a lot of effort to promote IPAB on Facebook and Twitter. There are close of 9,000 people on IPAB's facebook page. Janaagraha recognizes that this sort of marketing is important to create visibility and to sustain information flows.

#### RECOMMENDATIONS

#### EXPANDING TECHNOLOGY PLATFORMS FOR INCREASING REACH

The appropriateness of the technological choices made in the program when contextualized within the socio-economic conditions of the country raises doubts about the potential reach of the program. At present, IPAB information can only be accessed through the Internet which, until 2009, had a penetration level in India of around 5.3 percent.<sup>61</sup> Since the teledensity<sup>62</sup> in the country is much higher than Internet usage, the use of telephone/mobile can be considered a viable option for support. In the case of IPAB, expanding the available technology platform to include other mediums for seeking and receiving corruption information will not only make the program more inclusive, it will also ensure that data collected is more representative.

Since the collection of bribe data can be simplified into a series of interactions, phone solutions based on Interactive Voice Response System (IVRS) can be integrated into the program design. A toll free number can be used whereby callers are guided through an automated dialog to gather specific information. Similar to a survey, each category can be given the multiple options that are currently listed in the drop-down menu of the website. In case a caller wants to give further inputs, they can choose to speak to a representative, which can be recorded for later reference.

An IVRS based phone interface is a resource efficient solution as 1) it does not require speaking to a person and reduces the cost of operations and 2) it also allows for customization into regional languages.

One of the concerns shared by Janaagraha is the need to ensure anonymity to protect users from any legal action. For a phone based interaction, the system can be implemented in such a way that the caller ID is not saved in the database. Similar to the current mechanism of deleting the IP address, the caller IDs can be discarded or not stored at all.

For a quick partial solution, online information can be made available in regional Indian languages. Janaagraha has already started work on this, and the first step in this direction is to include multi-lingual videos on the IPAB portal.

# IMPROVING CREDIBILITY OF DATA

Empirically measuring corruption from definitive sources is challenging; in this light, the information generated through IPAB website is admirable. However, the validity of data needs to be checked for it to be considered a trusted measurement tool. At present, the entire moderation process is automated and the alerts are only applied to reported bribe amounts of 10 million or higher, an unlikely scenario when tracking petty corruption.

Increasing the credibility of data becomes imperative when considering the fact that one of the biggest challenges faced by IPAB is to push for reforms with sometimes uninterested and unwilling bureaucracy. More often than not, the government officials will question the credibility of the statistics if they are aware that the moderation process is very limited. .

While the legal framework restricts IPAB from manually editing each entry, more alert mechanisms can be put in place. Since the majority of the stories are related to petty corruption, warnings can be set for smaller amounts. Considering that IPAB has already collected a significant amount of data to reflect bribe trends for particular transactions, they can easily identify appropriate amounts for differentiating types of transactions.

<sup>61</sup> World Bank, World Development Indicators. 2011

<sup>&</sup>lt;sup>62</sup> Teledensity, as defined by the Telecom Regulatory Authority of India, includes total number of wireless and landline subscribers per 100 individuals.

# FORMING A COALITION OF ACTORS FOR INCREASING USAGE

Although a national program, most of the offline IPAB activities are currently limited to Bangalore. As information is collected online, the utilization of it for creating an impact will depend on offline work. Today, information is aggregated and displayed to illustrate levels of city corruption; however, this leaves scope for extended strategic use of the data gathered.

During interactions with Janaagraha, it was observed that a limited human resource network might be a reason for minimal amounts of offline support work. To overcome resource shortages, Janaagraha should build a coalition of partners in other cities to support its engagement with the government across the country.

To achieve this, appropriate partnerships can be sought with:

- NGOs: Organizations with similar objectives can be delegated the task of interacting with government agencies. Since regional NGOs build a rapport with local officials over time, they can leverage their position to campaign for change locally.
- Citizens: Groups of citizens can use their democratic right to meet with public officials and advocate for governance reforms.
   These groups can be formed and trained by Janaagraha. They should target meeting with one government department every quarter.
- Government Officers/Political Leaders:
   Public servants in favor of institutional reforms

can act as informal ambassadors of IPAB in government agencies. For this, Janaagraha can utilize its past experience in working with government and identify officers who would be willing to promote the cause.

#### USING POWER OF 'MARKET PRICE OF CORRUPTION' TO SEEK INSTITUTIONAL SUPPORT

In a country where economic development is crucial and the government is constantly looking for methods to increase transparency and strengthen accountability, this innovative database is valuable in identifying the concentration of corrupt practices in various government departments. While not statistically rigorous, this database at present is the closest quantitative indicator of petty corruption in India. Not only does it provide the actual amount paid to the officials, it also allows for the aggregation of amounts according to cities, departments, and transactional categories.

To achieve the objective of positive systemic reforms, Janaagraha can seek support from government institutions involved in anticorruption efforts. The Central Vigilance Commission and Comptroller and Auditor General of India are two such agencies working on mitigating corruption in public service. Support can also be sought out to promote the initiative amongst citizens or sharing the information with these agencies to inform them directly about the level of corruption. This will increase the credibility of the program and generate support from local institutions.

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# ANNEXURE A Stakeholder Interviews

#### PROGRAMME COORDINATOR

 I Paid a Bribe is a platform aimed at collecting bribe information to determine the market price of corruption. In order to achieve this, what are the short term objectives? Can you tell us the long term objectives of IPAB?

#### **Portal Content**

- Citizens can submit queries on the 'Ask Raghu' space with the goal of obtaining advice on how to 'avoid, resist and eliminate' corruption. To date there have been 749 submissions.
  - a. How do you determine the appropriate response to these queries?
  - b. How do you propose to further engage citizens in using this space?
  - c. Do you have aggregated data on the submission levels as per department and transaction? Can you approximate what department(s) and transaction(s) are most commonly asked about? Why do you think this is?
- 3. What is moderation process post citizen query?
  - a. How do you ensure that the website is not used for defamatory purposes/ that officials' names are not included?
- 4. There are specific but limited government departments listed in the drop down menu when submitting a bribe story. How were these departments determined?

#### Technology

- 5. Do you consider a website the most appropriate medium for collecting and disseminating information about corruption? If yes, why? If no, then what are the alternatives? Do you think that integrating other technologies for query submission would be beneficial? E.g. SMS, phone etc.
- 6. The IPAB website is only in English. Do you think it would be beneficial to localize it to other regional Indian languages? Why?

#### Impact

- 7. After the collection of sufficient bribe data, what role will you play in engaging with the government to create a change in the state of corruption?
  - a. During this 2nd and 3rd phase of the IPAB, how will you determine which government departments to approach?

- b. Will the 'Bribe Bandh' be used in this effort? What is the purpose of the 'Bribe Bandh'?
- c. What role will citizens play in this stage? Can you explain the role of citizen journalists in this regard?
- 8. Can you explain the relationship between Karnataka Lokayukta and IPaB?
- 9. Recently, a Jan Mahiti report was presented to the transport department in Bangalore. What was the result of this action? It seems that some senior officials were issued warnings?
- 10. What are the key challenges in achieving the objectives of IPaB?
- 11. How have the citizens responded to the initiative thus far?
- 12. Considering that IPAB is a fight against corruption, are government authorities supportive of the initiative? What has been their reaction so far?

#### PRODUCT MANAGER

 I Paid a Bribe is a platform aimed at collecting bribe information to determine the market price of corruption. In order to achieve this, what are the short term objectives? Can you tell us the long term objectives of IPAB?

#### Portal Content

- 2. Please expand on how portal content is developed in each of the following areas?
  - a. Bribe Reporting
  - b. Ask Raghu
  - c. Informational spaces Ten Commandments, FAQs etc.

#### **Technology**

- 3. Can you elaborate on the technologies used in the project? Please provide us with a complete list of software & hardware used. How was open source technologies leveraged? Why was open source used and/or not used?
  - a. (If Ushahidi is not mentioned) Ushahidi seems to be a popular choice for crowdsourcing information. Is there any reason why it is not used for IPAB?
- 4. Do you consider a website the most appropriate medium for collecting and disseminating information about corruption? If yes, why?
  - a. Report submission can also be completed over phone in Bangalore. Why was this implemented? How is it advantageous?
  - b. The second quarterly report for FY 2010-11 mentions introducing mobile/SMS based

- reporting soon. Can you provide us with details of the initiative and an update on the status of implementation?
- 5. Can you explain how the automated info-graphics system works?
  - a. Is there any data cleaning and/or customization being done prior to generating graphs?
- 6. An article published in The Independent mentioned the plan to localize the IPaB website into other regional Indian languages, as it is currently only in English. Can you provide us with details? Do you think this would be beneficial? Why?

#### Portal Usage

- 7. The article also mentioned that ipaidabribe.com receives hits from 160 countries. Typically, what percentage of total hits on the website is from India?
  - a. Which are the major cities accessing the website?
  - b. Do you have any data to indicate the penetration level of the website at the national, state or local level?
- 8. Looking at the performance indicators of ipaidabribe. com, it seems that the actual hits have decreased from Q2 to Q3. Do you think there is any specific reason for that? Is this a concern? Why or why not?
- 9. Has monitoring of user profile been pursued? User satisfaction? If so, can you expand on this process? If not, do you think it would be beneficial to provide a space for user feedback to assess these elements?
- 10. Portal usage and bribe levels are correlated; therefore Bangalore comes out on top. This may be misleading in terms of highest concentration of corruption - do you see this as a problem? If not, why not? If so, how do you propose to deal with this?

#### **Impact & Sustainability**

- 11. Can you explain the financial model of this project? What were the start-up expenses, and what have been the incremental costs? Who is funding this and how?
- 12. What kind of promotional strategies have you adopted to inform people about this initiative? What are plans for promoting it in the future?
- 13. After the collection of sufficient bribe data, what role will citizens play in engaging with the government to create a change in the state of corruption? Can you explain the role of citizen journalists in this regard?
  - a. Will the 'Bribe Bandh' be used in this effort? What is the purpose of the 'Bribe Bandh'?
- 14. Does IPaB work with other NGOs? If yes, can you provide us with details? If no, then why not?
- 15. One of the goals of IPAB is to improve the 'ecosystem' by working with private sector/media/ academia. Can you elaborate on how this is being pursued?
- 16. IPAB has a good presence on social network sites. How do these sites help in achieving goals of IPAB?
  - b. What is the nature of participation on Facebook/Twitter?
- 17. Considering that IPAB is a fight against corruption, are government authorities supportive of the initiative? What has been their reaction so far?
- 18. How have the citizens responded to the initiative so far?
- 19. What are the key challenges in achieving the objectives of IPaB?
- 20. IPaB is currently concentrated in Bangalore. Are there any plans of expanding operations in other cities? If yes, when and how? And if no, then why not?

# ANNEXURE B - Feedback Form

Name: \_\_\_\_\_ City:

Gender: Male / Female 1. What is your age?

- a. < 18
- b. 18 25
- c. 26 40
- d. 41 60
- e. > 60

- 2. What is your level of education?
  - a. No formal education
  - b. Primary education (upto 5th standard)
  - c. Secondary education (upto 10th standard)
  - d. Senior Secondary (upto 12th)
  - e. Graduate
  - f. Post graduate
- 3. What is your average monthly household income (from all sources)? (OPTIONAL)
  - a. < 10,000
  - b. 10,000 30,000
  - c. 30,000 50,000

- d. 50,000 70,000
- e. 70,000 90,000
- f. > 90,000
- 4. How did you hear about I Paid a Bribe?
  - a. Friends/Family
  - b. Social Network (Facebook/Twitter)
  - c. Magazine/Newspapers
  - d. Television
  - e. Janaagraha website
  - f. Other
- 5. How do generally access I Paid a Bribe?
  - a. Website
  - b. Telephone
  - c. Both
- 6. Why do you use I Paid a Bribe? (Please choose one or more)
  - a. To report a bribe story
  - b. To report an honest officer
  - c. To read a bribe story
  - d. To Ask Raghu
  - e. To access informational sources Ten Commandments, FAQs, etc.
- 7. What information do you find most useful on IPAB? (Please choose only one)
  - a. Bribe reporting
  - b. Ask Raghu
  - c. Ten commandments
  - d. FAQs
- 8. How often do you visit IPAB website in a month?
  - a. 1-2 times
  - b. 2-4 times
  - c. 4-6 times
  - d. >6 times
- 9. Did you find the IPAB website:
  - a. Very difficult to use
  - b. Not very difficult to use
  - c. Easy to use
  - d. Very easy to use

- 10. IPAB is an effective medium to access information on bribery/corruption
  - a. Strongly Disagree
  - b. Disagree
  - c. Neither Agree nor Disagree
  - d. Agree
  - e. Strongly Agree
- 11. Information published on IPAB has helped you to get services without paying bribe
  - a. Strongly Disagree
  - b. Disagree
  - c. Neither Agree no Disagree
  - d. Agree
  - e. Strongly Agree
- 12. To what extent do you agree that information collected through IPAB can help in reducing corruption in India?
  - a. Strongly Disagree
  - b. Disagree
  - c. Neither Agree no Disagree
  - d. Agree
  - e. Strongly Agree
- 13. Are you aware of the JanMahiti Report that IPAB publishes after analysing the bribe stories?
  - a. Yes
  - b. No
- 14. Are you aware of any other medium of reporting bribe prices?
  - a. Yes
  - b. No
- 15. If yes, then please mention the initiative \_\_\_\_\_