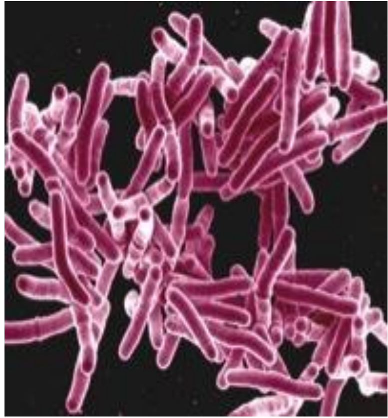
Operation **ASHA**

Last-mile delivery to the BoP

A Game-changer that can scale TB care internationally & prevent MDR

- **Kevin Desharnais**

TB: The only disease declared a Global Emergency (WHO 1993)

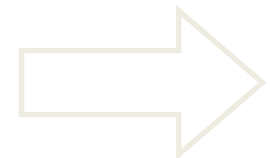


Tuberculosis (TB) is a Global pandemic

- *fully* curable infectious disease
- 9 million new TB patients worldwide every year
- 1.3 million people die of TB every year
- TB has caused 10 million orphans
- Drug resistant TB – a new epidemic (MDR, XDR, TDR/ XXDR)

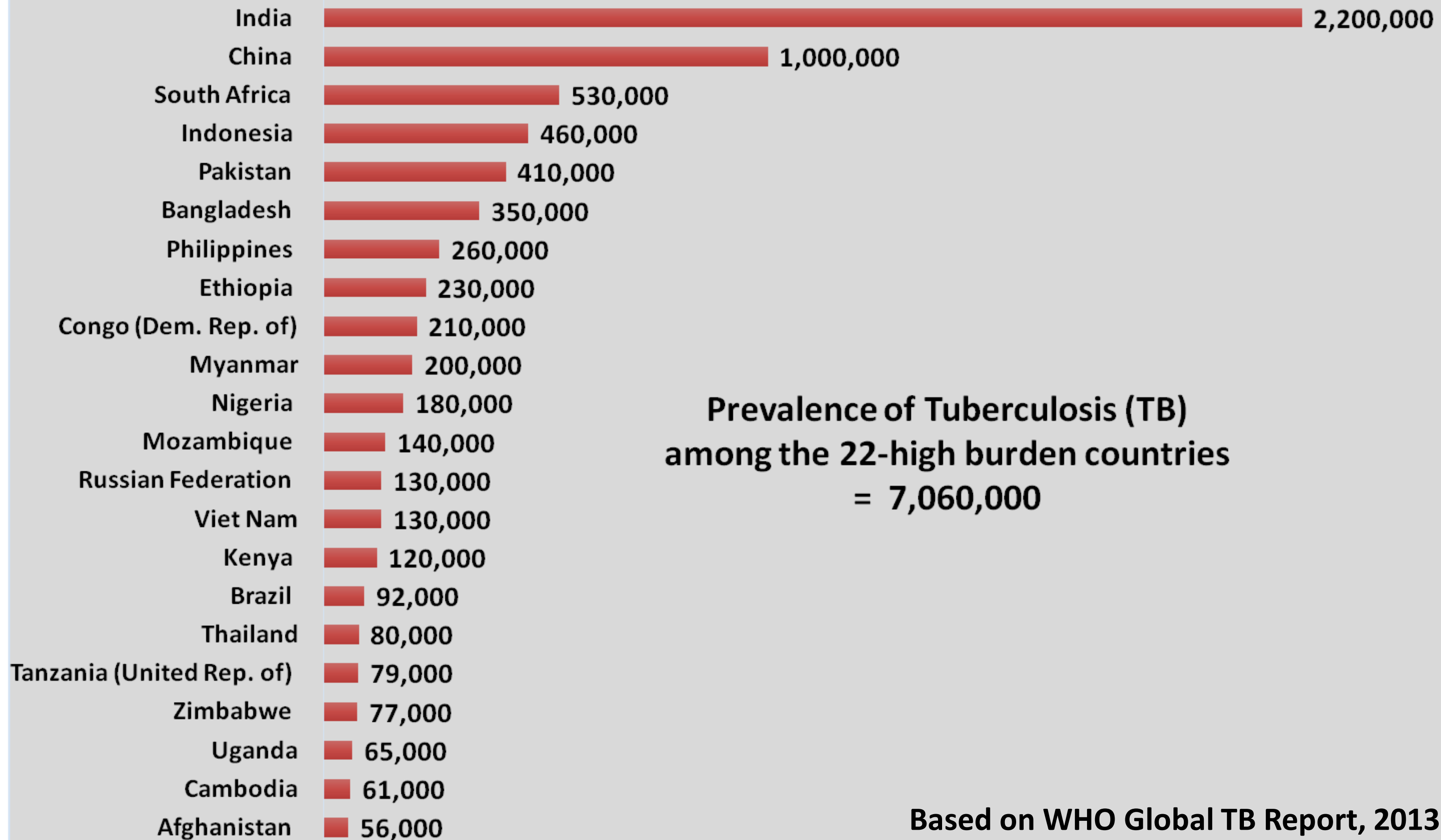
Horrifying Predictions:

- "We are on the brink of another epidemic and it has no treatment. If Totally Drug Resistant spreads, we will go back to the dark ages". – *TIME* Magazine, March 4, 2013
- By 2015: 1.3 million drug resistant cases, **needing $16 billion to treat**
- "The total economic burden of TB between 2006 and 2015 for the twenty-two high burden countries is estimated to be about $3.4 trillion."- GBC Health



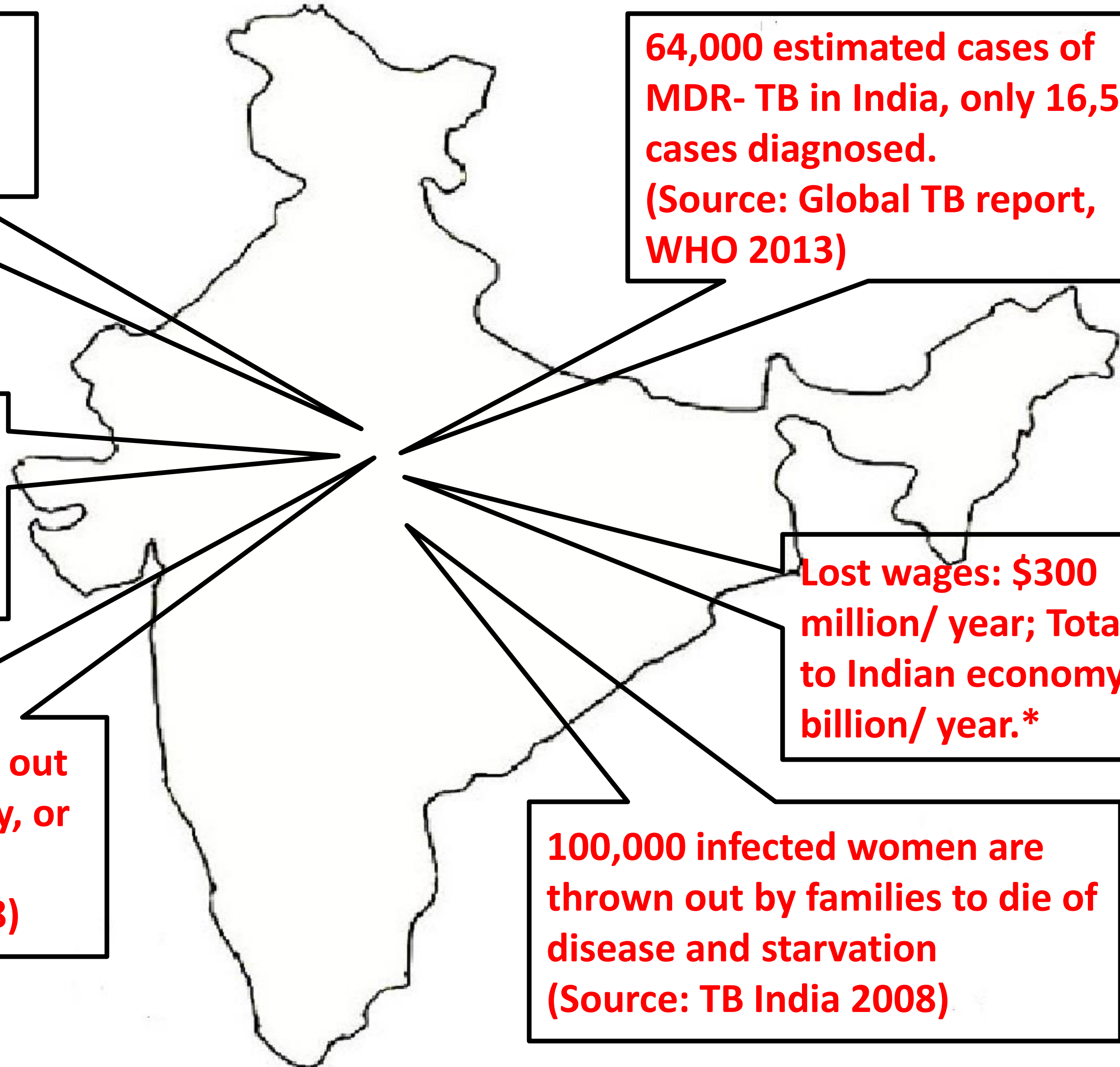
Op ASHA Operation **ASHA**
Last-mile delivery to the BoP

India's TB burden is more than double that of second-ranked China



Op ASHA Operation ASHA
Last-mile delivery to the BoP

Tuberculosis in India: The biggest public health crisis



India has 2.8 Million TB patients, 31% of world's total burden

64,000 estimated cases of MDR- TB in India, only 16,588 cases diagnosed.
(Source: Global TB report, WHO 2013)

TB kills one 1 person in every 2 minutes in India & 750 people every day

Lost wages: $300 million/ year; Total loss to Indian economy: $23 billion/ year.*

300,000 children drop out of school because they, or a parent, have TB.
(Source: TB India 2008)

100,000 infected women are thrown out by families to die of disease and starvation
(Source: TB India 2008)

Op ASHA Operation ASHA
Last-mile delivery to the BoP

Challenges in TB Treatment: 60 visits to a center over 6 months for normal/DST TB; 790 visits over 2 years for MDR-TB; life-long treatment for XDR and TDR

1. **Inaccessible Centers**: Existing public infrastructure lacks the last mile connectivity

- Wages or TB medication? where is the bus fare coming from?

2. **Social Stigma:** patients go into denial or hide symptoms

- Loss of jobs
- Loss of families/ isolation
- TB Patients thrown out of homes

NO EFFECTIVE VACCINE!

3. **Limited/ Ineffective Education or Counseling**

4. **Informal Providers**: incomplete, irregular, inadequate treatment

5. **Negligible Follow-up** of defaulting patients

6. **High Cost of Implementation** for most other NGOs: PSI spent $567 per patient in Karnataka, India in 2010-11

7. **Program Level** – lack of electronic data, inaccuracy, human errors, data-fudging to meet targets

RESULT= High default rate- leading to drug resistance

Operation ASHA's Solution: Fill the Gaps in the Government Program: local, deep and highly cost-effective model with community empowerment

Our Solution:

- Integration of informal providers and local micro-entrepreneurs within OpASHA's program by making them Community partners
- Establish DOTS centers in their premises/ clinics
- Upgrading their knowledge and skills
- Camouflage DOTS centers by providing free OTC medicines
- Ensure that informal providers do not 'lose' patients and Livelihood
- Increased respect from the community

Strategically located TB Centers :

- Partner with local micro-entrepreneurs, priests, home-makers based in convenient, high-traffic areas
- Centers open at convenient hours, up to 18 hours a day
- No patient needs to miss work/wages or pay for bus fare to access treatment

Operation ASHA's Solution: Fill the Gaps in the Government Program: Specialized training

Local Community Members Hired as Providers & Facilitators:

- Work to detect new patients, provide treatment, track patients who miss doses
- Familiarity with local customs, geography, and informal address systems
- Performance-based salaries for field workers & supervisors
- Much more cost efficient than MD doctors

Specialized Training

- For active case finding
- Conduct health awareness programs
- Provide counseling to ensure adherence and prevent MDR
- To destigmatize TB

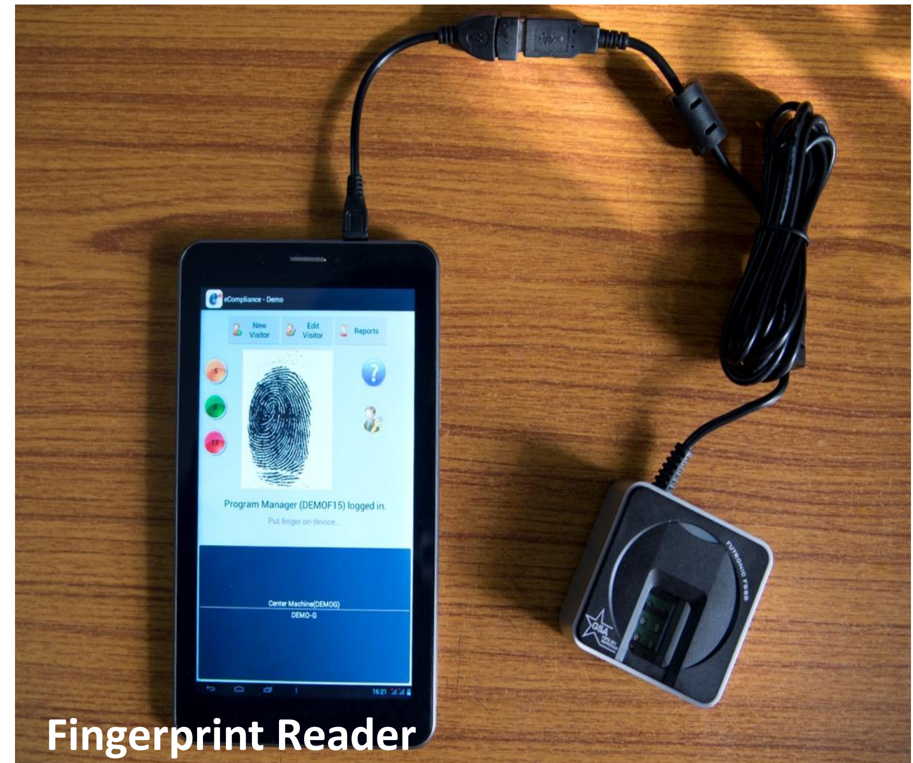
eCompliance: Innovative, low cost technology

- *Aim- to* track and ensure each dose taken
- Runs on commercially available, 'off-the-shelf' components
- Minimal initial and operating costs

•**PRIMARY OBJECTIVE - To ensure accuracy and adherence**

1. **1.** Taking fingerprint every time **confirms** a TB patient's presence
   - This creates indisputable evidence
   - One cannot 'fudge' a fingerprint!

2. The entire DOTS regimen including reminders for follow up tests are **built in eCompliance**



eCompliance: Key Benefits

PATIENT AND COMMUNITY LEVEL

- Positive impact on the psyche, seen as dedication towards quality treatment.

AT LEVEL OF PROVIDERS AND COMMUNITY PARTNERS

- Ensures integrity of DOTS: eliminates frequent unsupervised doses
- Eliminates human error
- Improves skill set
- Enhances prestige in community
- Accurate reporting and up-to-date intelligence

MANAGEMENT LEVEL

- Comprehensive Electronic Medical Record System.
- Transparent treatment supervision
- Ensures accuracy of incentive payment

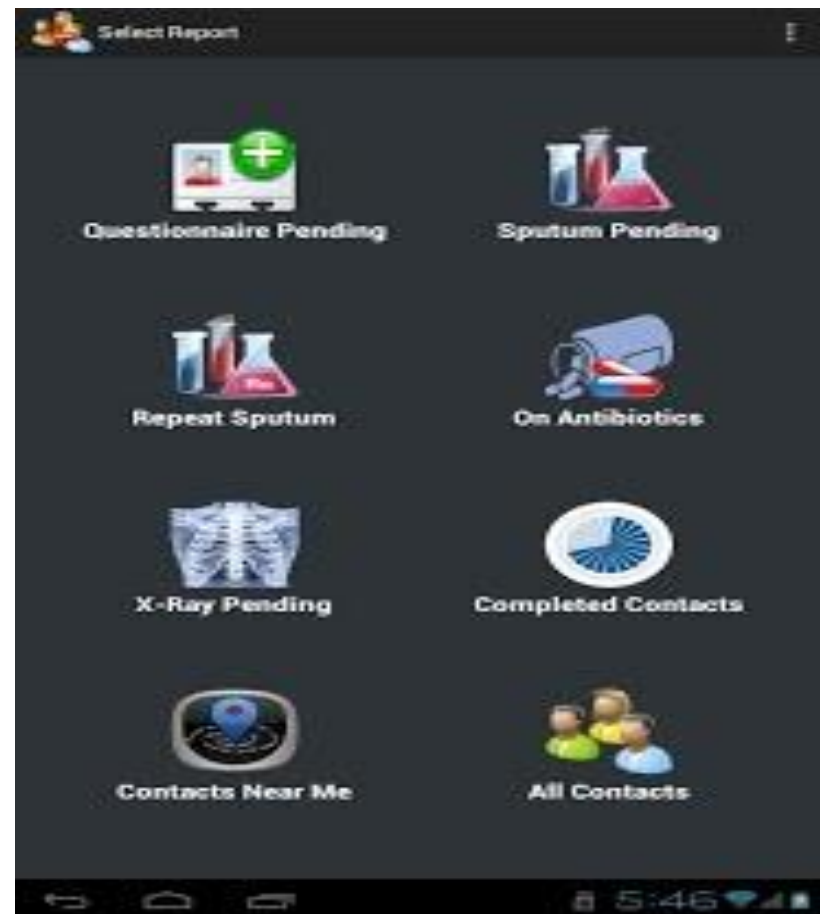
Technology : Contact Tracing

Methodology to look for symptomatic of TB by scientifically tracking contacts of existing patients.

Objectives:
Identifying patients early, enrolling them in treatment and reducing chances of infection to other individuals.

- A list of contacts of patient is made.
- Health worker asks a set of questions (related to symptoms) to the contact.
- If contact says "Yes" then he/she is sent for Sputum test and further necessary action.

Currently being used in: Gwalior & Dharavi; will be expanded soon to other areas.



Op ASHA Operation ASHA
Last-mile delivery to the BoP

Technology: Lab Alert system

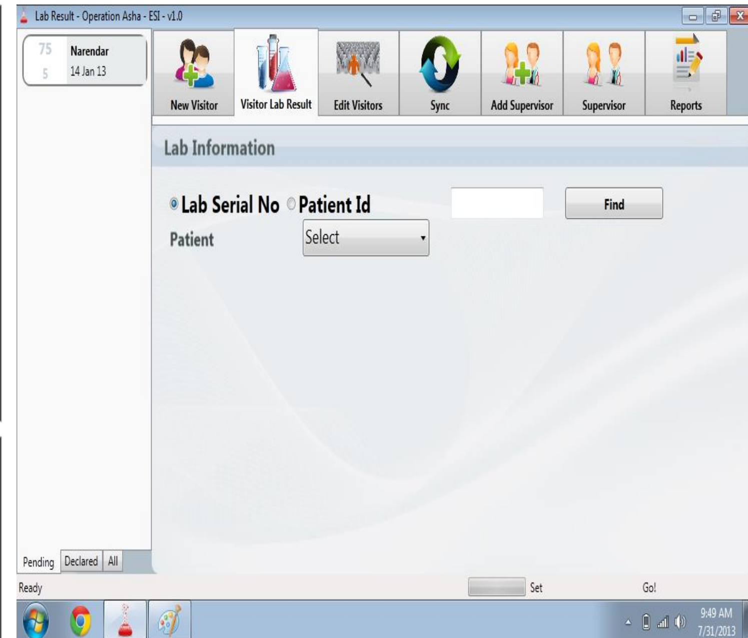
Manual Lab register is replaced with an electronic version on a computer.

Automatic SMS Alert facility: When 'Lab Technician' enter all details of patient's Lab result, automatically, a SMS send to the contact no. of the patient, concerned OpASHA worker and Government Supervisor. Message can be sent simultaneously to any number of persons.

Advantages:

- Reduces time lag between availability of lab results and enrolment by 60% (from an average of 17 to 7 days).
- Eliminates loss to follow up: All patients are enrolled; none are lost

Currently being used in 1 Government lab in Gwalior, India & 1 Government lab in Daunkeo, Cambodia



Operation ASHA
Last-mile delivery to the BoP

OpASHA: Results

	All India average	Op ASHA
Detection Rate (# of patients/ 100,000 population (All India Averages from TB India 2013)	119	174
Detection as % of prevalence rate (All India Averages from TB India 2013)	52%	76%
Treatment Success Rate (RNTCP: From a triangulation study by a RNTCP Consultant, 2011)	32%	86.9%

Operation **ASHA**
Last-mile delivery to the BoP

Impact – to date

38,118

Total enrollments

2,28,708

Infections averted

$4,000

Cost of creating a job

86.9%

Treatment success rate

103

Jobs created for Semi-literate youth

161

Micro-entrepreneurs/ community partners who earn additional income in disadvantaged communities that serve as locations for Operation ASHA treatment centers

SROI 3,217%

<3%

Default rate

Operation **ASHA**
Last-mile delivery to the BoP

OpASHA: a game-changer: Cost Benefit Analysis

Our cost to detect & treat one TB patient = $80

"Operation ASHA's cost for treating each patient in India is approximately **19 times lower** than the nearest other provider" - Joan Yao, of LGT Venture Philanthropy, Switzerland

Our cost of detection alone = $27 per patient

32x lower than programs funded by TB-REACH (average cost per detection = $852)

Will lead to **$2.5 billion Saving** in cost of detecting 3 million undetected patient

Our **SROI (Social Return on Investment): 3217%**

$100 invested by a donor provides benefits worth $3217 to disadvantaged communities

Cost of preventing 1 MDR case by using Operation ASHA's methodology = $200:

14-50x lower than the cost of treating 1 MDR patient, which is $2,800-10,000.

OpASHA : Awards, Partners and Media Coverage

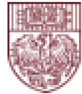
AP

THE UNIVERSITY OF CHICAGO

Partner of the Stop TB Partnership

Microsoft Research

The Boston Globe



THE HARRIS SCHOOL
PUBLIC POLICY | THE UNIVERSITY OF CHICAGO

BBC horizon

University College London UCL

National Center for Tuberculosis and Leprosy Control (CENAT)

THE LANCET

TIME

The Washington Post

THE WALL STREET JOURNAL. WSJ

AmeriCares

ABDUL LATIF JAMEEL Poverty Action Lab
TRANSLATING RESEARCH INTO ACTION

The New York Times

ASHOKA changemakers

THE HUFFINGTON POST

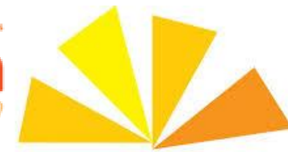
BBC WORLD NEWS

CHICAGO PUBLIC RADIO

The manthan Award
South Asia & Asia Pacific 2012
DIGITAL INCLUSION FOR DEVELOPMENT

abc NEWS

Recognising Innovations in Telecom & Mobile Content & Application for Masses
mBillionth award south asia



SCHWAB FOUNDATION FOR SOCIAL ENTREPRENEURSHIP

theguardian

Discovery News

Voice of America

and many more…