



Grameen Development Services

Early Warning System GDS Experience/Working Model

Scenario: Flood

Location: Maharajganj, Uttar Pradesh

Part of: April 2009-March 2012 – Women
Empowerment & DRR Project supported by:

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Member - Humanitarian Response Team
Grameen Development Services, Lucknow**



About GDS

- Founded in 1993. Primary focus on “sustainable livelihoods for the rural poor”
- GDS has been working in Eastern UP since 1995, as enabling organization with focus on livelihood promotion.
- Floods appeared to be a biggest threat to life, assets and livelihoods of people.
- GDS briefly responded with relief operations during the major floods in 1998, 2000 and 2001.
- GDS then decided to initiate a field intervention on Flood Preparedness and Mitigation in Eastern U.P., 2001 Floods and relief initiatives helped understanding various dimensions of floods, its causes and effects.

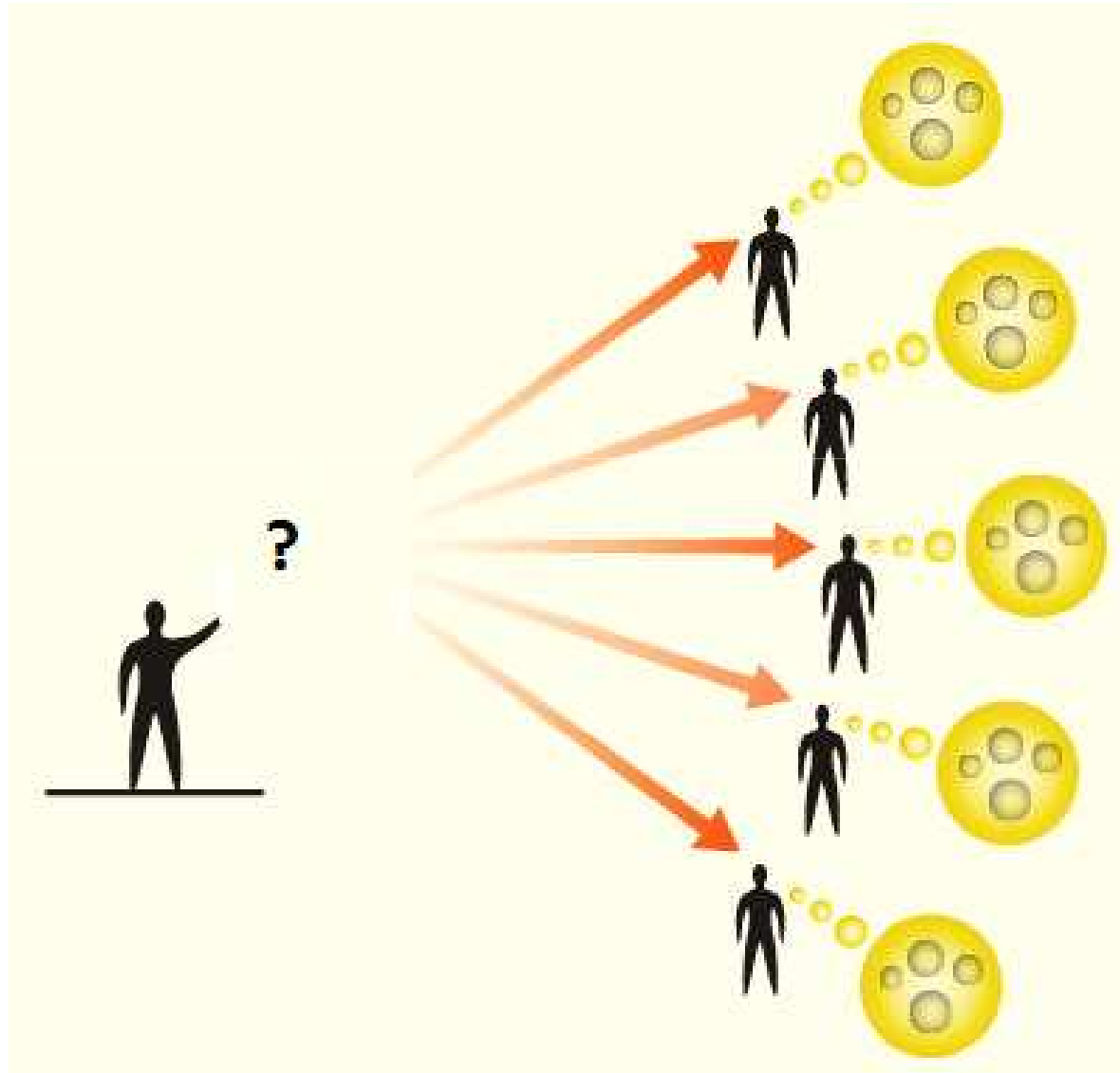
Target Community

- **DRR Project – Coverage of GDS Maharajganj**
- **District: 3 (Maharajganj, Gorakhpur and Sidharthnagar)**
- **Development Blocks: 7**
 - **Maharajganj 3**
 - **Gorakhpur 1**
 - **Sidharthnagar 3**
- **Villages: 135**
- **Population under coverage:**
 - **Total families covered 9356 (Directly) and Population 58475 (Female-28121, Male-30354)**
 - **Institution (Community Org):**
 - » **No of DMGs – 110; with - 1856 members (Female- 731, Male-1125)**
 - » **No of SHGs - 401; with - 4982 members (all women)**

Problem Statement(s)



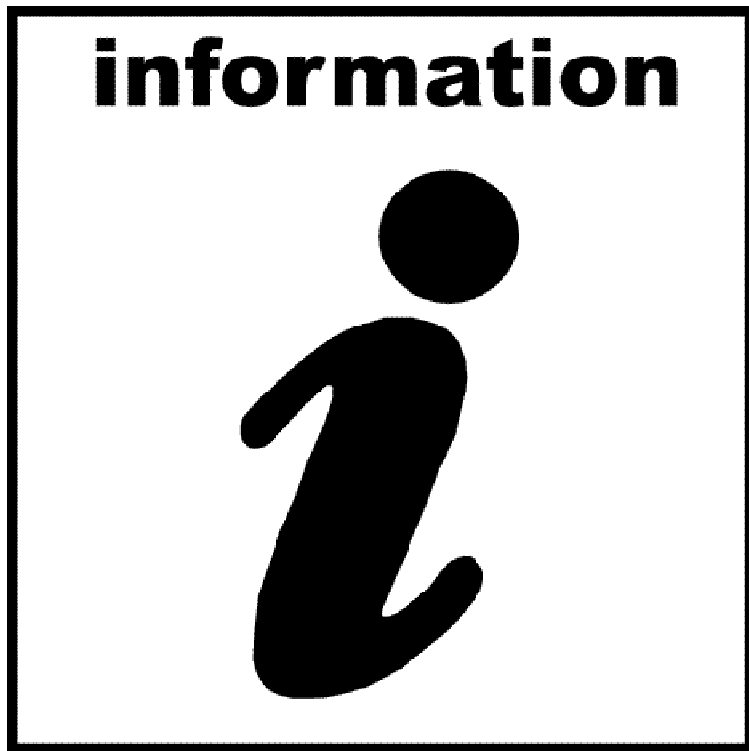
How to communicate to many-at-once?



Villagers – Can only make/receive Call
– Not Read/Write SMS



Preparedness



Communication
is key.

Information Source: Government



Flood Forecast
For level forecasting site : Gorakhpur (Birdghat)

District Name	Gorakhpur	Warning Level (WL)	73.98(m)
River Name	Rapti	Danger Level (DL)	74.98(m)
Basin Name	Ganga - Brahmaputra-Meghna	Highest Flood Level (HFL)	77.54(m)
Division Name	Middle Ganga Division-I Lucknow	HFL Attained date	23/08/1998

Present Water Level

Present Water Level is Less than Warning Level.

Cumulative Daily Rainfall

Date : 20/09/2011 8:30 AM Value : 0 (mm)

No Flood Forecast

Page Updated on 20/09/2011 11:04:30 AM

Information Source: Government



Weather Forecast of UP

Please click on District's Name for weather forecast of the district

INDIA METEOROLOGICAL DEPARTMENT
MULTIMODEL ENSEMBLE BASED DISTRICT LEVEL WEATHER FORECAST
ISSUED ON: 20-09-2011
VALID TILL 08:30 IST OF THE NEXT 5 DAYS

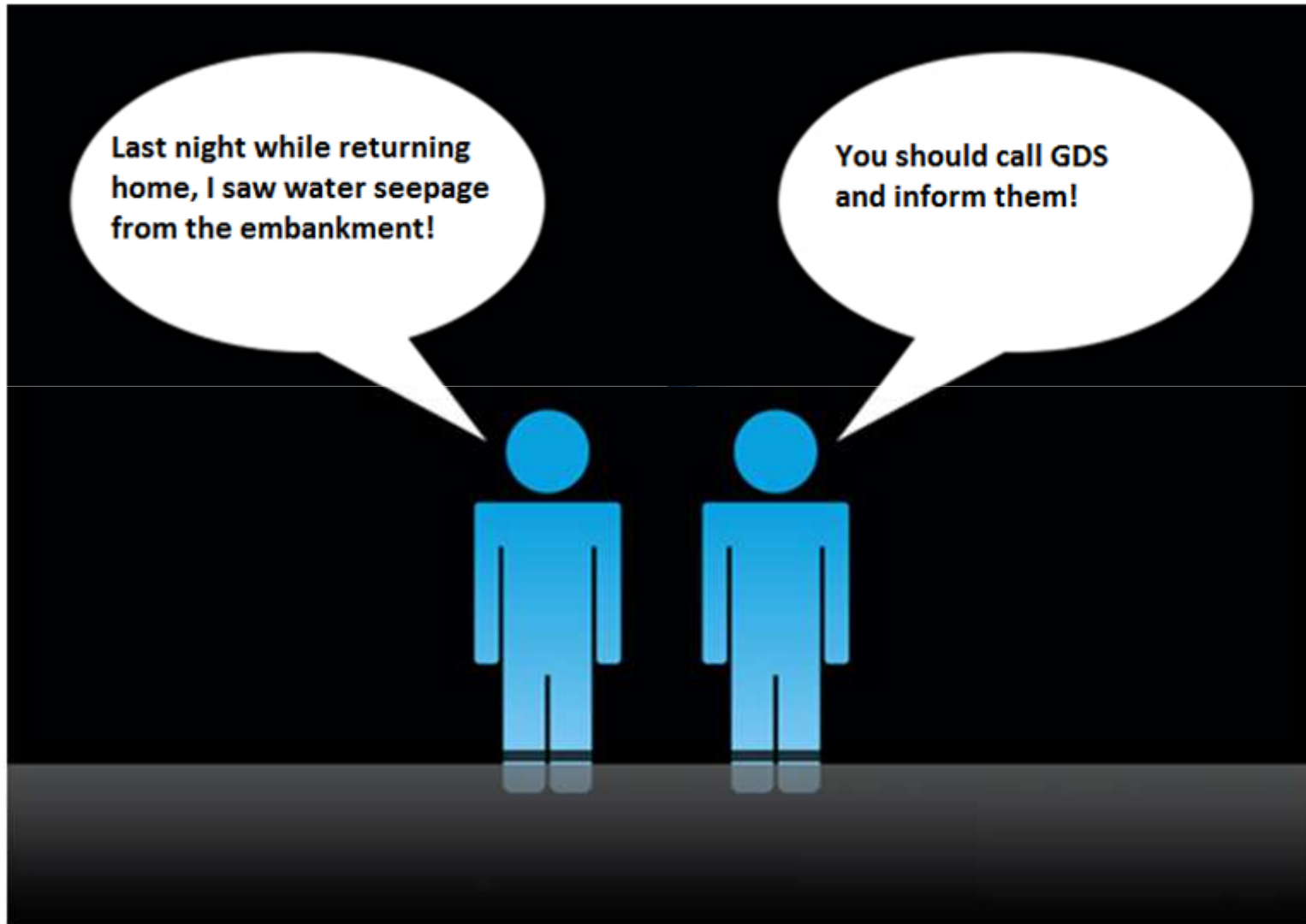
DISTRICT : MAHARAJGANJ

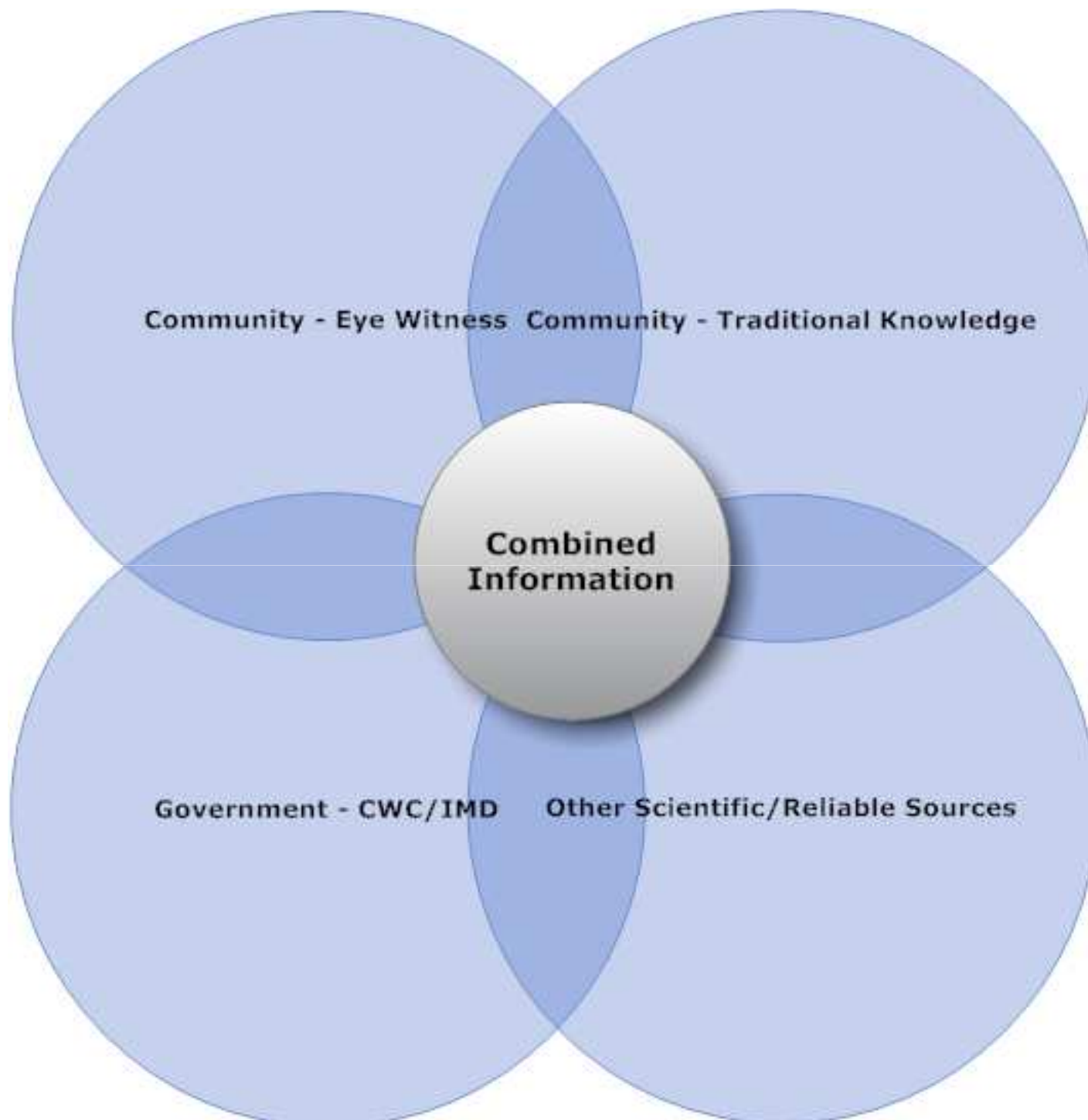
STATE : UTTAR PRADESH

PARAMETERS	ENSEMBLE FCST				
	DAY-1 21/09	DAY-2 22/09	DAY-3 23/09	DAY-4 24/09	DAY-5 25/09
Rainfall (mm)	5	12	17	19	24
Max Temperature (deg C)	29	28	28	28	29
Min Temperature (deg C)	24	25	24	24	25
Total cloud cover (octa)	8	8	8	8	8
Max Relative Humidity (%)	99	98	97	94	93
Min Relative Humidity (%)	86	89	92	90	85
Wind speed (kmph)	3	2	4	5	14
Wind direction (deg)	180	100	100	50	80

NOTE: -99.0 NO DATA

Information Source: Community





Information Work Flow





Water Level + Rainfall Data Display at Office

How the “technology” works?



Computer System with Multiple GSM Modems attached

How the “technology” works?

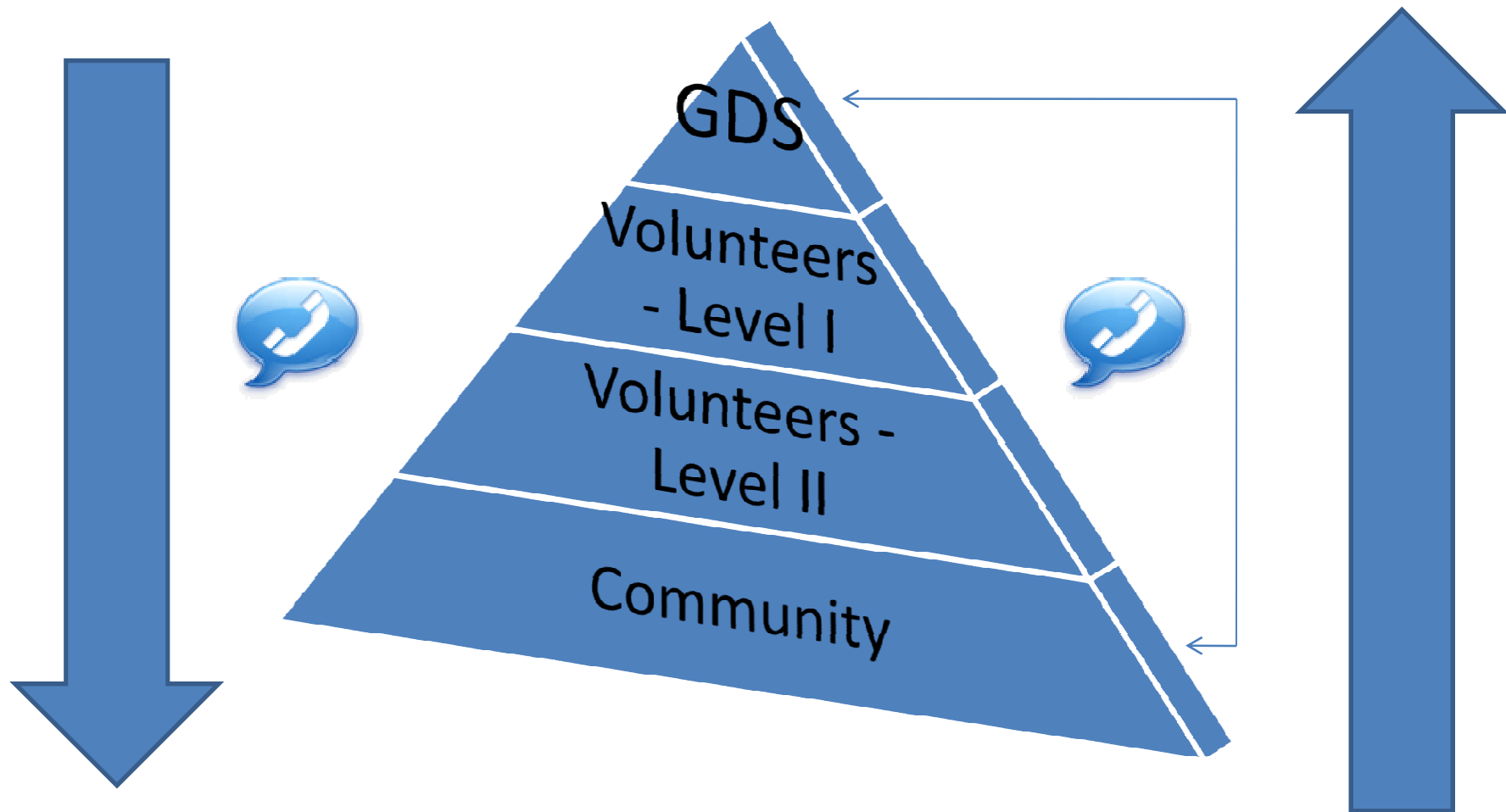


1. Authorised GDS HRT member calls the computer from anywhere.
2. Enters Password through Phone Keypad to authenticate.
3. Presses “2” to Record a New Voice Message.
4. Listens & Confirms the Recorded Message.
5. Chooses a group number 0-9 (10 Groups with unlimited Phone numbers) to send Voice Call to.
6. Hangs up. Computer auto dials in batch of 4 to all in group.

Current Capacity

- 4 Phone Lines – Call 4 People at once.
- Call Recording takes 2-5 Minutes
- Call Initiation Starts after 3 minute pause.
- 32 Call delivery time range 35-60 Minutes.
- Retry/Redial on Fail
- Call Status Report for Administrator
- Coverage – 100 Villages through 50+50
Volunteers – Grapevine Model

Information Work Flow

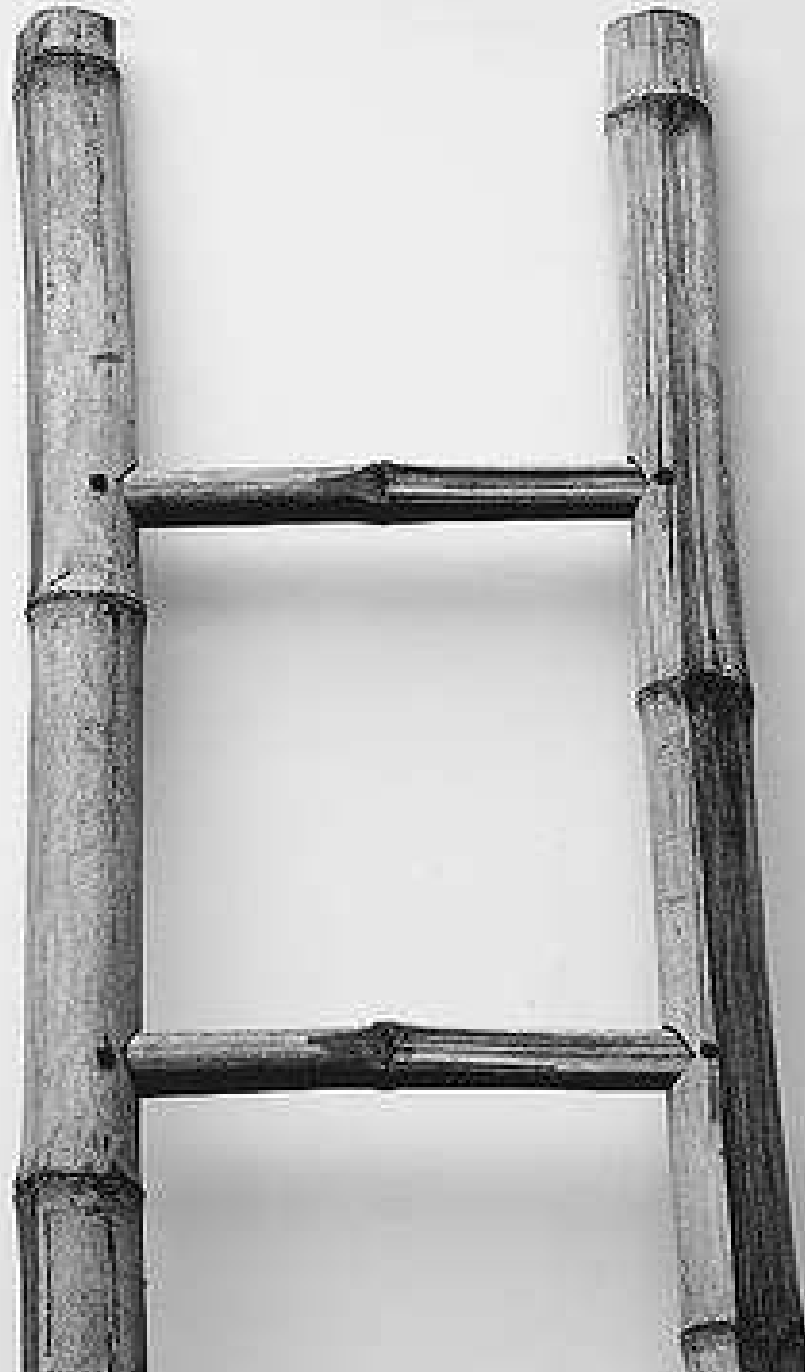


ICT Solution's USP

- Input and Output Device is the Mobile Phone
- End User/Team does not need to operate computer – Just turn it ON.
- Ubiquitous – Use from Anywhere/Anytime – 24x7
- Voice Component – Ensures Trust
- Voice allows for Regional Language Use
- SMS can be ignored, Phone Call Ring Can NOT.

Scaling Up

- Multiple Lines (30) or Hosted
- Better Hardware Setup
- In around a little over than
DOUBLE the implementation
cost, we can scale up 8 TIMES.
- Faster Call Delivery
- State level – Shared use model
by multiple agencies/partners







Thank you!

Ajay Kumar

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Member – Humanitarian Response Team

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