ICT for Community Sanitation in Zambia

Moving from Pilot to Sustained National Program

ICT4D Conference
Hyderabad, India
May 2017
Akros establishes data-driven systems to improve the health and well-being of disadvantaged communities.

Driven by data. Inspired by people.
The Problem: Sanitation in Rural Areas

globally, 2.5 billion people still do not have access to a safe, CLEAN TOILET

that’s 37% of the global population

One third of the world’s population has intestinal worm infections.
Transmission of intestinal worms is entirely preventable by adequate sanitation and good hygiene.

1800 children under five die each day from DIARRHOEAL DISEASES, caused by lack of:

HYGIENE
SANITATION
SAFE WATER
Ideal Outcome: One Latrine Per Home

- Superstructure providing privacy
- Lid to cover hole and prevent flies in/out
- Hand washer with water and soap or ash
- Smooth, cleanable floor surface
Participating in Community Sanitation

Who initiates the system?
Who monitors progress?
Who sustains that system?
Who Initiates?

And what is CLTS?
Community Led Total Sanitation Process

- Definition of ODF
- Baseline
- Triggering
- Reporting
- ODF Verification
- ODF Certification
- Continued Monitoring
Evolution of CLTS and WASH policy in Zambia

2007
• 13% adequate rural sanitation nationally
• CLTS pilot: Increase from 23% to 88% in target area

2010
• National CLTS policy formulated

2010
• Evaluation of CLTS M&E System

2012
• Piloted and scaled DHIS2 M2W system for CLTS surveillance

2013
• Evaluation of CLTS M&E System

2015
• DHIS2 is official system for community sanitation monitoring

Superstructure providing privacy
Lid to cover hole and prevent flies in/out
Handwasher with water and soap or ash
Smooth, cleanable floor surface
Sanitation Action Groups
Sanitation Action Groups... And Their Data...

One monthly form...

For every Zambian village....

<table>
<thead>
<tr>
<th>No.</th>
<th>Head of Household Name</th>
<th>Total no. of people in household</th>
<th>Latrine (let with pit or septic tank)</th>
<th>Adequate Latrine Requirements</th>
<th>Qualifier Check</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mwembe Mwembe</td>
<td>5</td>
<td>Y</td>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Mwembe Mwembe</td>
<td>3</td>
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<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Mwembe Mwembe</td>
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<td>N</td>
<td>Y</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
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<td>5</td>
<td>Mwembe Mwembe</td>
<td>9</td>
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<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>Mwembe Mwembe</td>
<td>9</td>
<td>N</td>
<td>Y</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Diagram of SAG houses: [Diagram of SAG houses with houses labeled SAG]
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• DHIS2 is official system for community sanitation monitoring
Who Monitors?

And what is Mobile to Web?
Household Sanitation Surveillance

Old System: Paper-to-Excel

EHT reports would be delivered to districts, where they would be entered into Excel. 

...and then the central level would manually aggregate Excel worksheets into one master Excel file.
Issues with the Old Monitoring System

Data Transmission
Manual transmission, e.g., hand-delivering records to each reporting level, is extremely slow – program officers cannot promptly respond to conditions on the ground, because data are not promptly available.

Data Aggregation
Manual aggregation of data, e.g., hand-tabulating paper records or cut-and-pasting Excel sheets, is error prone and extremely slow. Because records are tied to a physical file, data sharing is problematic.

Data Analysis
Excel has basic analytic functions, but no mapping or user-friendly dashboard functionality.

Data Collection
Paper-based data collection at SAG level is actually appropriate due to capacity and volume.
Scale, Cost-Efficiency and Complexity: You can only pick **TWO**
Community Champions record these data directly into DHIS2 using feature phones.
New WASH Surveillance

...and the data is automatically transmitted to the EHT
Zambia WASH Surveillance

Cont’d

....and the district

...and provincial/national levels

Ministry of Local Government and Housing

District Rural Water Supply and Sanitation Focal Person

EHT

Community Champion

Community Champion

Community Champion

Community Champion

Community Champion

Community Champion

Community Champion

Community Champion

Community Champion

Community Champion
Why DHIS2 Mobile to Web?

Benefits of the Tool

• Appropriate Technology
• Cost Efficient
• Cutting paper trail

Technical Features

• Offline data capture
• Incentivized Reporting
• Feedback loops
More Technical Details

• J2ME Applet
• 10 Core Data Elements in Monthly SAG Form
  – Plus water access (2014) and F&E Data Elements (2016)
• Other extensions: School Led Sanitation, ODF Verification, CC/SAG Meeting, Sanitation Marketing
• $0.20 talk time pushed for each on time report
Chief Report Widget

Mukobela Chiefdom village reports by ward

<table>
<thead>
<tr>
<th>% ODF</th>
<th>Organisation unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Mukashampumba</td>
</tr>
<tr>
<td>100</td>
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<tr>
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<tr>
<td>75</td>
<td>Mulangw</td>
</tr>
<tr>
<td>100</td>
<td>Mulimbwe</td>
</tr>
</tbody>
</table>

Chiefs oriented on CLTS program

- Progress towards ODF
- Chiefs place social pressure on village headmen.
- Village headmen and chiefs then engage community to become ODF
Community Engagement Pay-Off

Zambia Ministry of Local Government and Housing
Coverage: Adequate Latrines (ODF)

End 2014
Results to Date
Access to Sanitation: Total in Districts Over Baseline in Districts

- Access to Sanitation: Total
- Access to Sanitation: Baseline

4 Million new people with sanitation access
Results to Date

• Africa’s First Open Defecation Free District

A Toilet In Every Home: Zambians Celebrate Sanitation Milestone

May 21, 2015 - 3:14 PM ET

LINDA POON

The daylong event celebrated a milestone in Zambia, where the practice of defecating in the open is all too common. In April, Chienge, in the northernmost province of Luapula, became the first district in Zambia to be declared free of open defecation by the government. According to UNICEF, it’s also the first district in southern Africa to fully abandon the practice. That means every household has at least one private latrine and a place to wash your hands.
3,800 Volunteers
40,000 Villages
100% of Rural Districts
Still Work To Do...
Who Sustains the System?
Transition Timeline for CLTS Ownership

### 2015 Transition Timeline
- **Q1**: Ministry Meetings
- **Q2**: Stakeholder visits to Luapula
- **Q3**: Technical and Partner Meetings
- **Q4**: DHIS2 Mobile to Web Protocol is Government Policy

### 2016 Transition Timeline
- **Q1**: Luapula
- **Q2**: Eastern and Central Province
- **Q3**: All remaining provinces with Akros support
CLTS Reporting - Ideal
CLTS Reporting - Reality

Community Mobilization → Mobile Surveillance Training → SAG Data Collection

CC Data Collection → EHT Feedback → District Monitoring

Quarterly Ward Meetings, Quarterly District WASHE Meetings → ODF Verification
CLTS Reporting - Reality
Strategies for Government transition

**Government Leadership and Capacity**
- Senior leadership engagement and buy-in at Ministry
- Sustained support from UNICEF for transition budgets
- Detailed oversight of Ministry M&E staff with clearly tasked activities, timelines, and support.
- Routine, rigorous internal review of pending deadlines and challenges for timely troubleshooting.

**Implementation strategy**
- District Level Sign Off
- Reporting Rates Benchmark
- Need all “triggerings” in place
- Remote Supervision Visits
Capacity Building at Multiple Levels

Village

Community

District, Province, Central

[Images of data collection forms and graphs related to WASH (Water, Sanitation, and Hygiene) initiatives by AKROS]
Funding the Transition - Ideal

Donor Funds → Government Funds
Funding the Transition - Reality

- Donor Funds
- Bridge Funds
- Government Funds

(AKROS logo)
Success Stories in the Transition

- System Standardization
- Akros “light touch” support
- Targets on track for improved sanitation users
- Government expansion into Western Province
Learning from Experience

- Central buy-in from start
- Build contingency plans
- Continued, structured engagement at local and central level
- Locally appropriate tools
- Make data locally useful and deliver back to community
Questions?

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