



# AKROS

Improving Precision and Coverage

Global Digital Health Summit, 2018



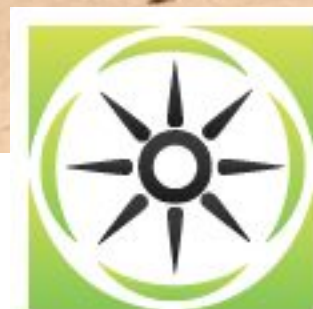
Akros is a Development  
Design Firm





# What do we do?

**Optimize Interventions  
Strengthen Surveillance  
Improve Speed and Accuracy  
Mentor Governments  
Train Implementers**





# Current Efforts

Epidemiologists  
Sociologists  
Engineers  
Political Managers  
IT Experts  
Process Engineers



Who we work with:



I.

# Uncovering Zambia Community Malaria







# Akros Model – RCD with DHIS2

**8.2%**

reduction of outpatient attendance at overburdened clinics  
(as patients are instead managed by CHWs)

**45.5%**

increase in the number of malaria cases identified and treated

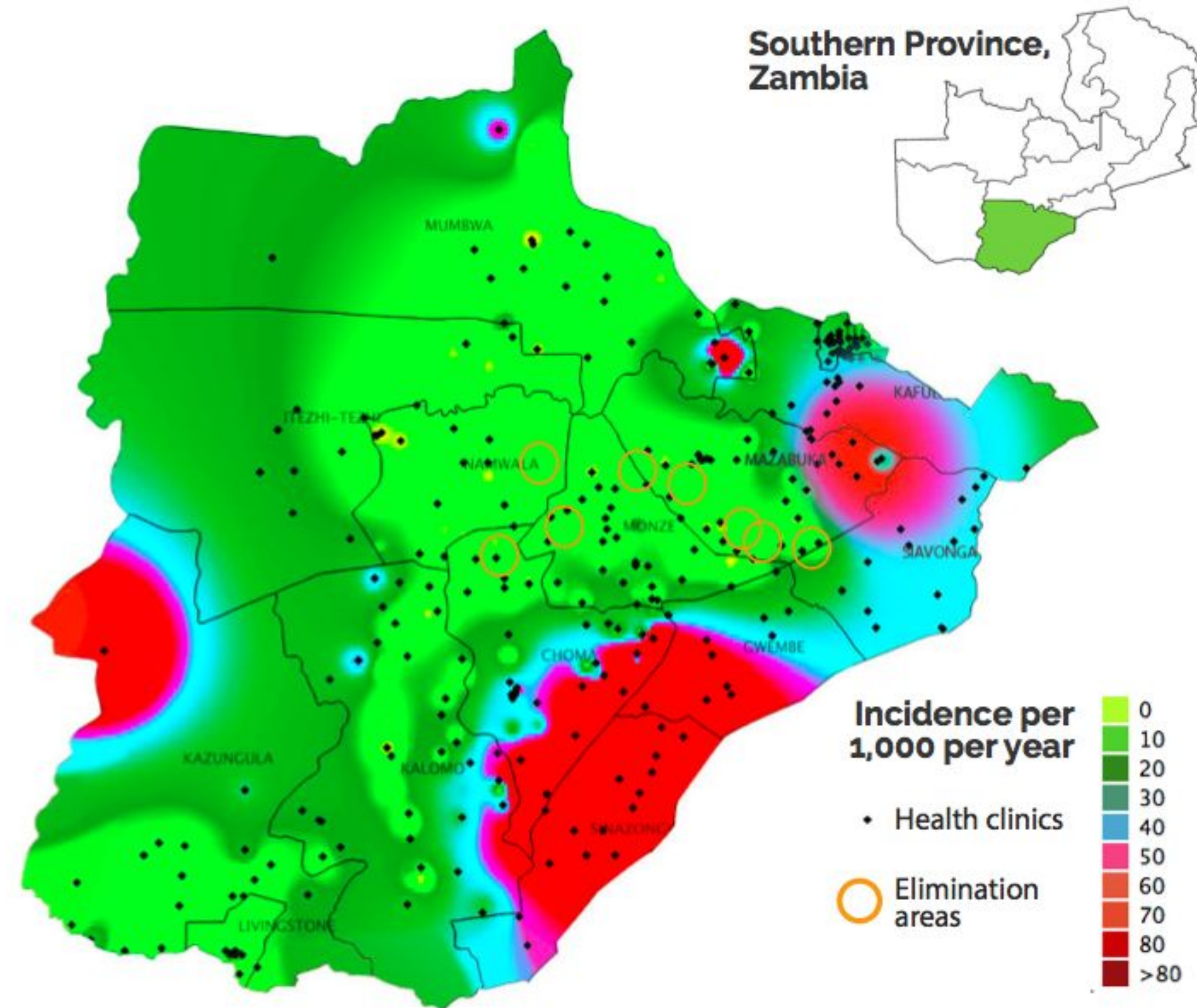
**1,500**

CHWs have been trained in the proper follow-up, treatment, and reporting protocols.

**11**

Step 3 has been implemented in 11 districts in Central and Southern Zambia

**MACEPA**  **PATH**  
Malaria Control and Elimination Partnership in Africa



2.

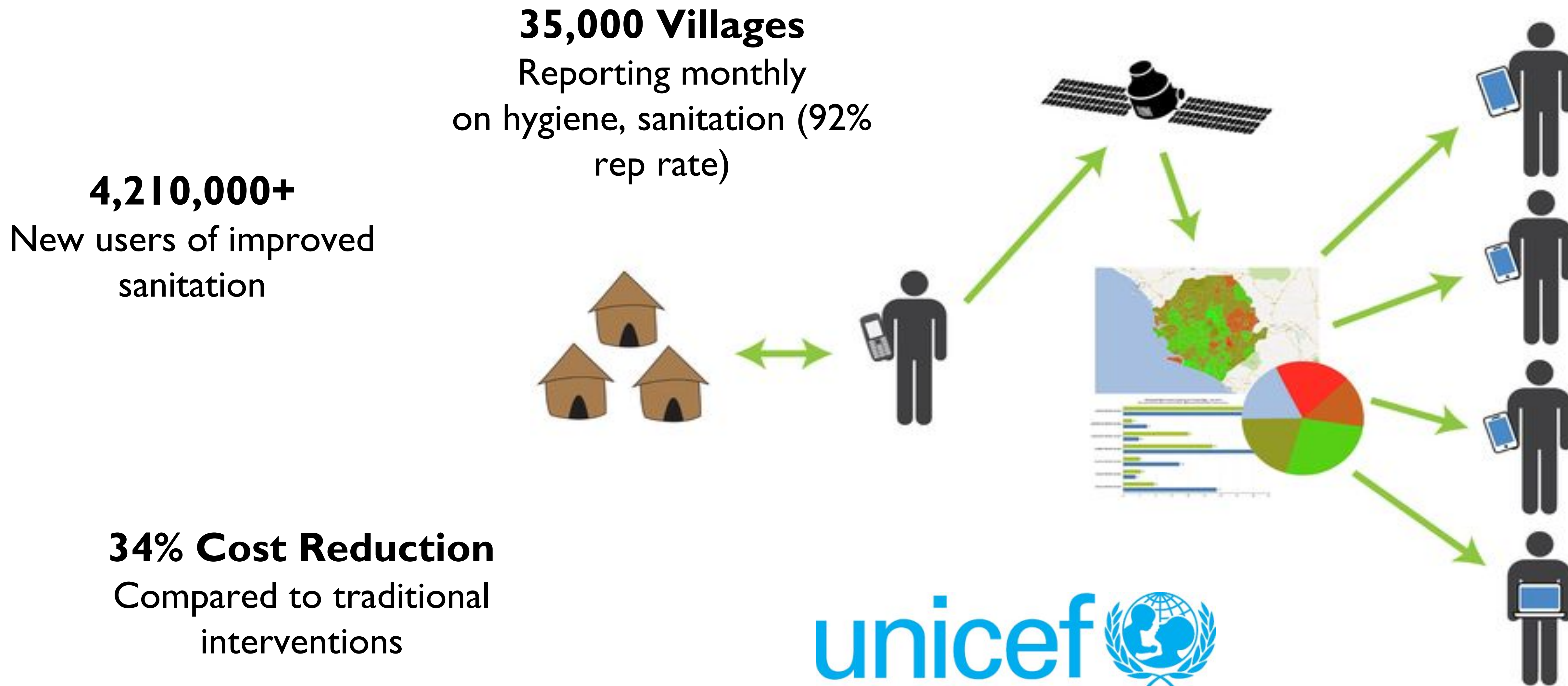
# Rural Open-Defecation







# Akros Model – National Real-Time Surveillance





Today's Topic:

**Evolutions in Tech and Process  
Management  
for  
Campaigns**





# Indoor Residual Spraying

**Goal: High Coverage (WHO rec 85%)**

Coverage = % of eligible structures sprayed





# Delivery Process: 2005-present

**Field Teams Visit Community**

**Paper Record: Number of Structures Found**

**Paper Record: Record Number of Structures Sprayed**

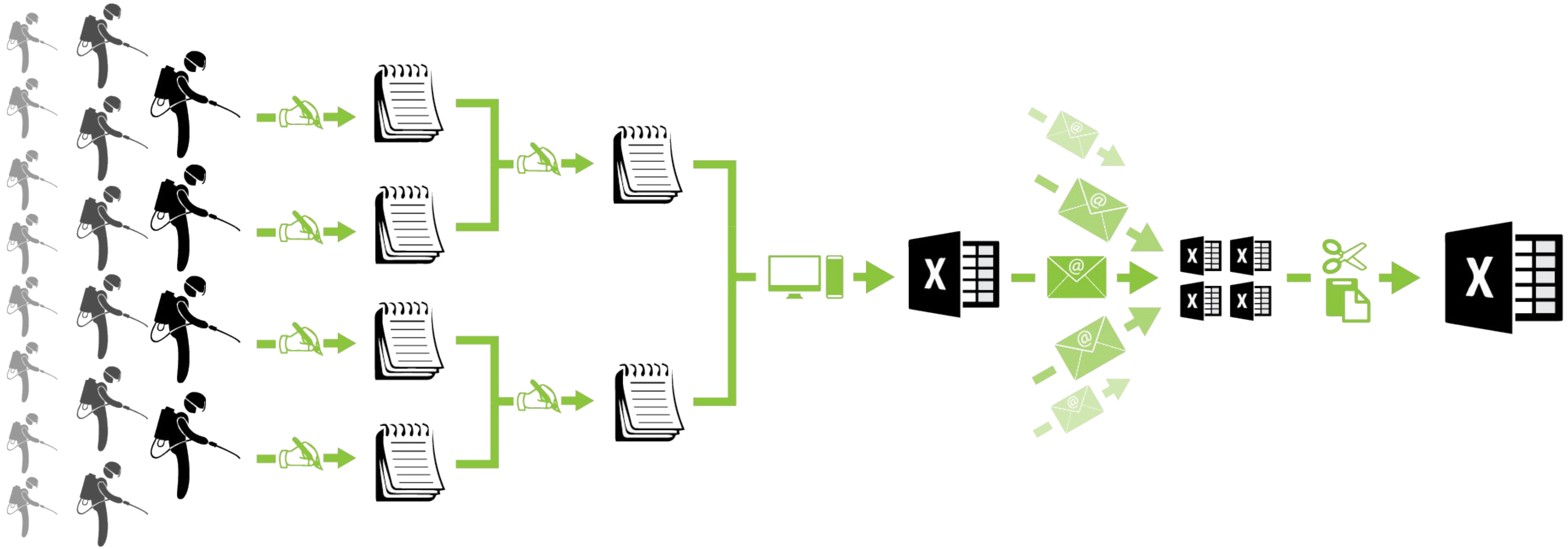
**Reporting**

**Spray Coverage = (Structures Sprayed / Structures Found) \* 100**





# Delivery M&E: 2005-present





# Until recently, few M&E alternatives to this model

- Pre-campaign enumeration cost-prohibitive
- Digital platforms (remember PDAs?) subpar
- Cellular coverage in IRS countries subpar
- Host-country aversion to tech leaps





In 2011, Akros began experimenting...





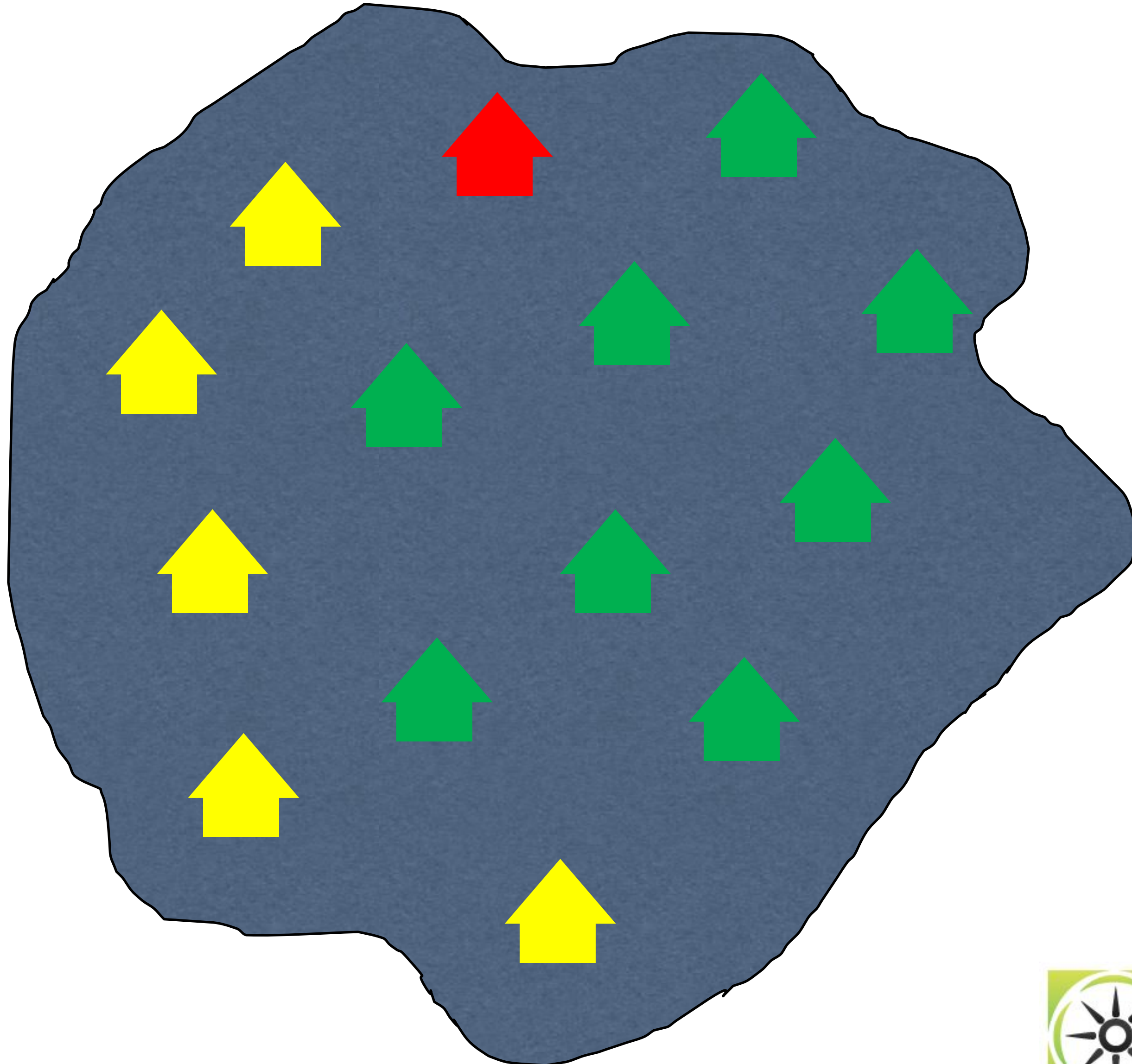
# Can we improve?

1. Denominator challenges
2. Field Management – real-time feedback
3. Mop-up guesswork
4. Integration with HMIS





# Denominator Challenges



IRS Operators visit Luchinga

9 structures found

8 structures sprayed

1 structure refused

5 structures not found

Normal IRS reporting:  $8 / 9 = 89\%$

Actual coverage:  $8 / 14 = 57\%$

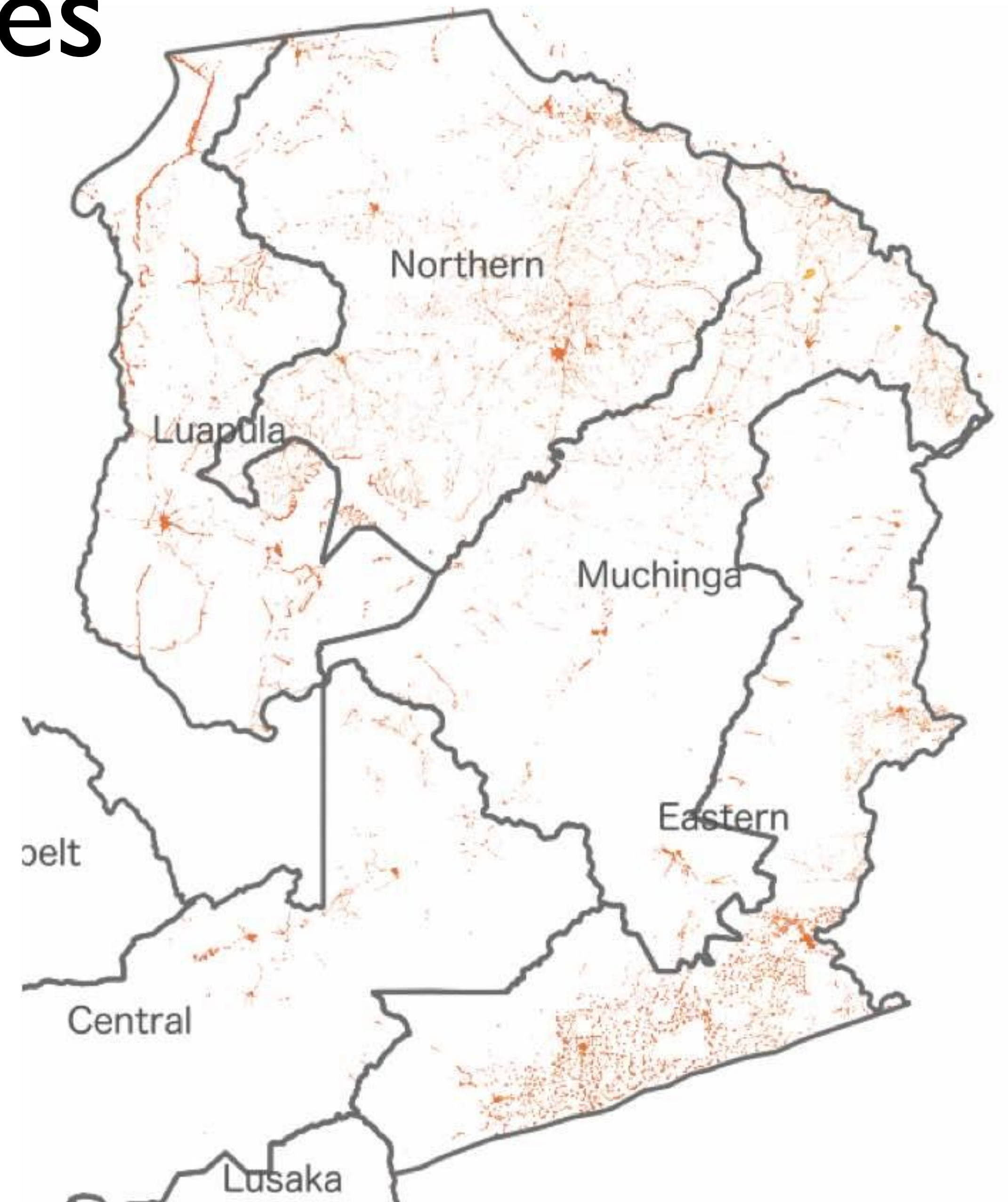


\*The inadequacy of field-team enumeration has been documented in Namibia, South Africa, Zambia, Zimbabwe, Iran, Madagascar and other countries.



# Denominator Challenges

**2011:** Akros designed an enumeration protocol using freely available satellite imagery.



Problem solved?

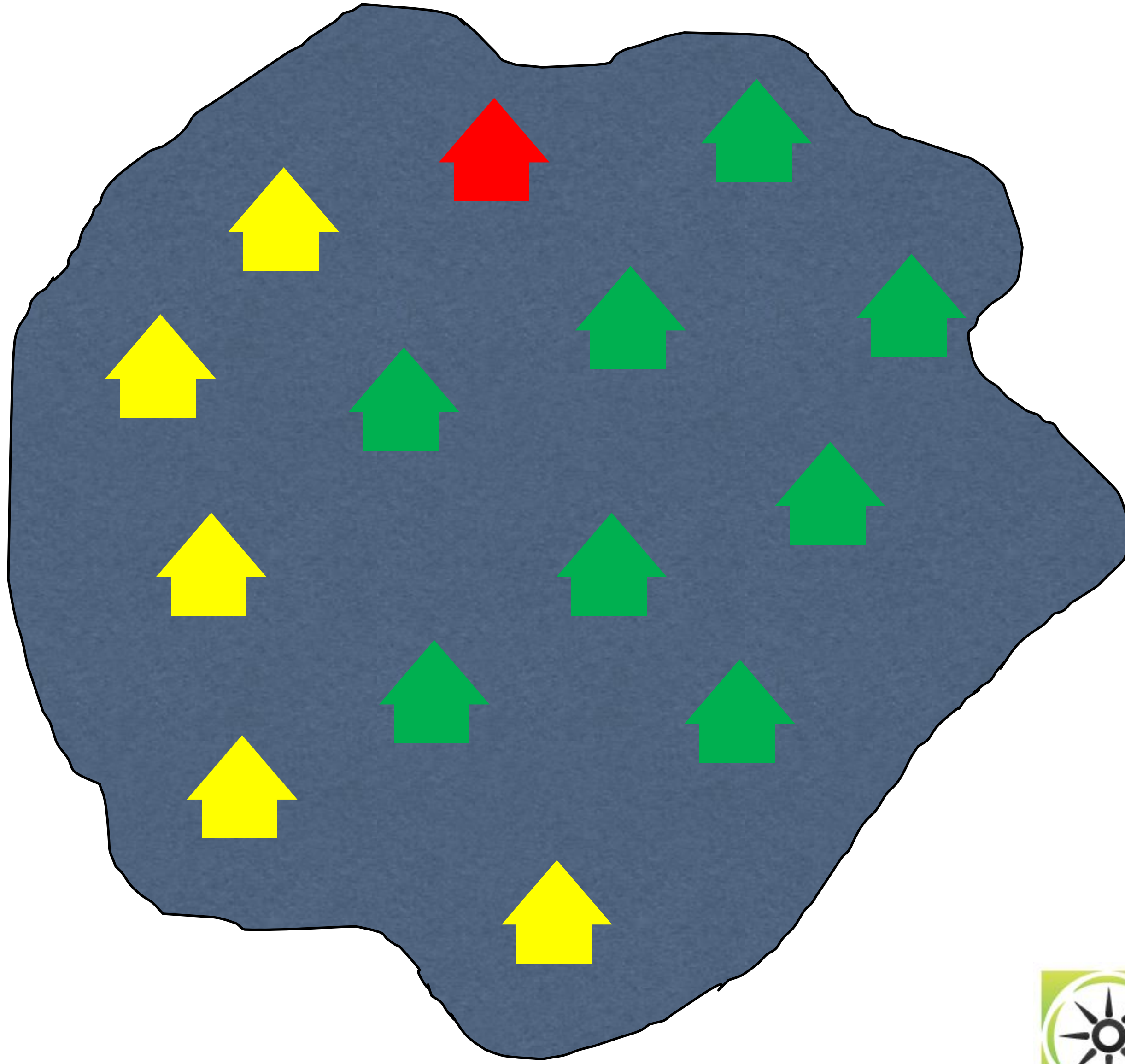


Not really.





# Denominator Challenges



Half of the problem is **quantifying** the denominator.

The other half of the problem is **spray teams finding** structures

If we can't *guide* the teams, we're not helping very much.





# 2013: Akros teams with Ona Labs



Can we operationalize the denominator?





# mSpray

Real-time  
Dashboards

Live maps

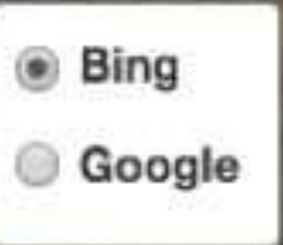
Data  
Capture



Feedback promotes calibration







AFTER 'MOP-UP'

1047.27

Spray Effectiveness



Sprayed  
(137/145)





# Problem Solved?



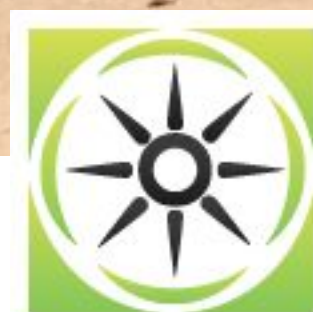


Not really.





# Downstream Context





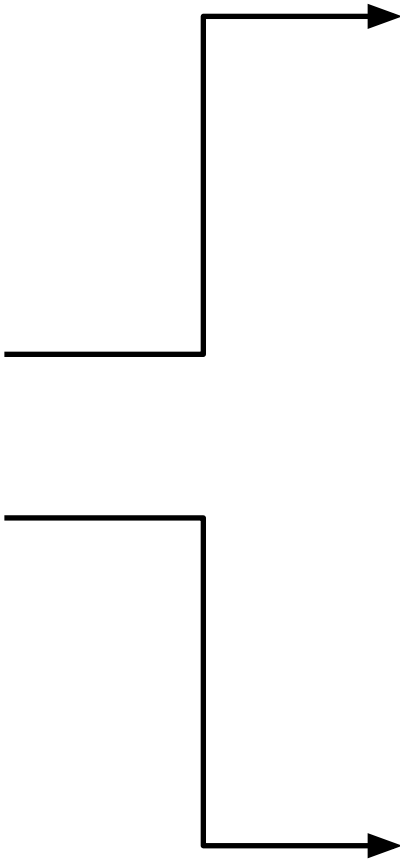
# Super Rough Schematic (SRS)

Interactive effects of data, management and consumer demand

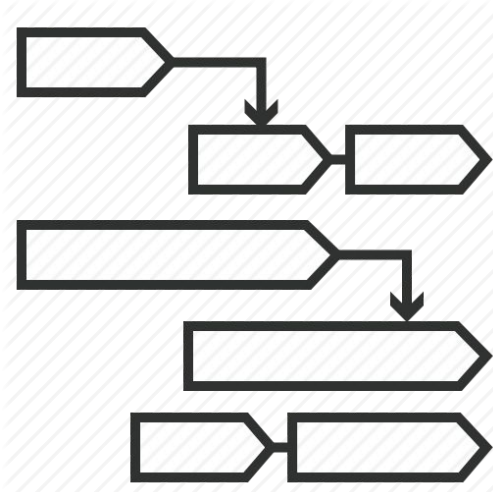
Data Culture



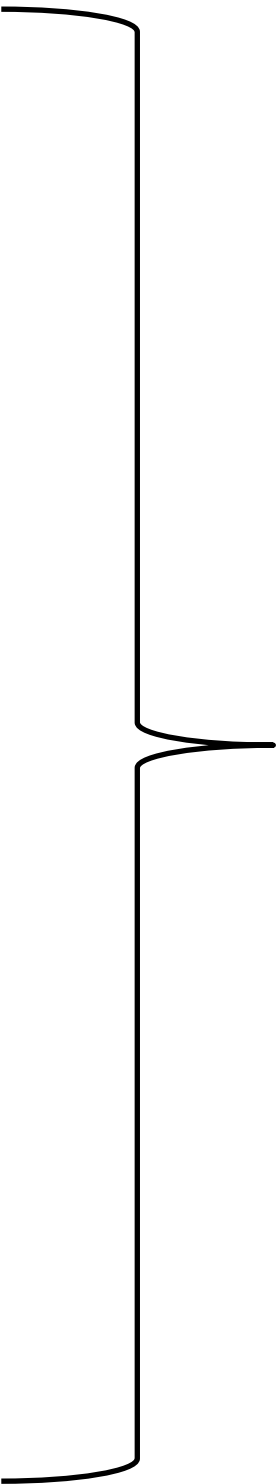
Consumer Demand



Precise Data



Management Systems



Impact





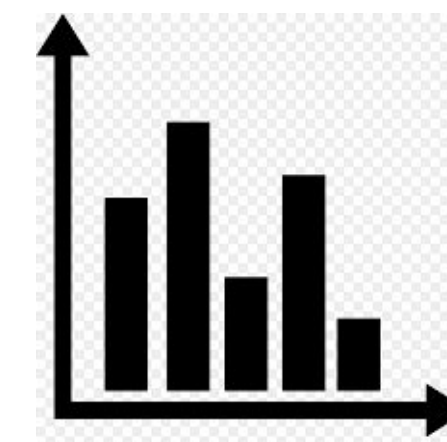
# Super Rough Schematic (SRS)

Management Systems have no inherent value: value rises or falls in *context*

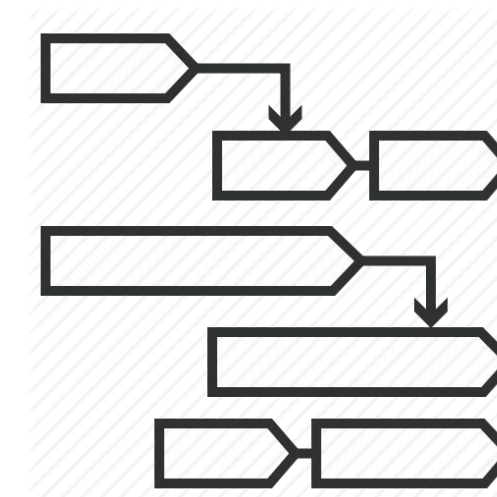
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Consumer Demand



Precise Data



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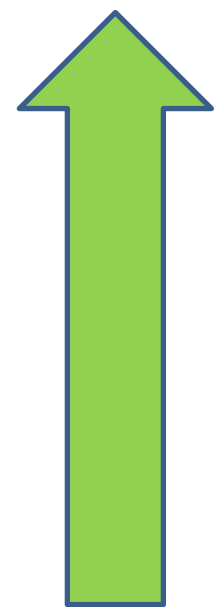




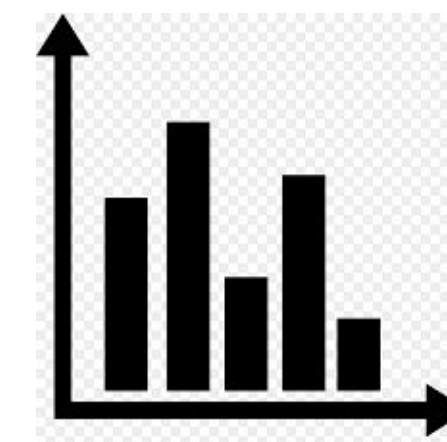
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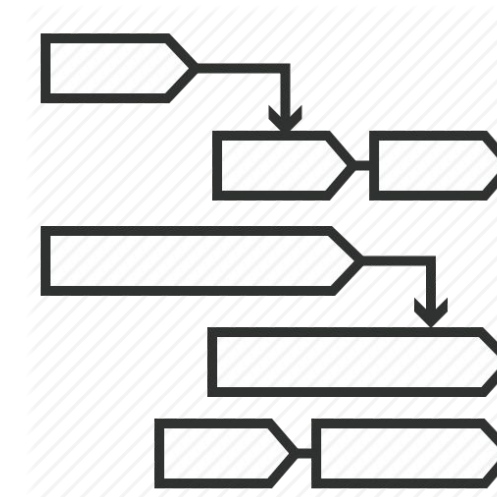
Data Culture



Consumer Demand



Precise Data



Management Systems

Impact



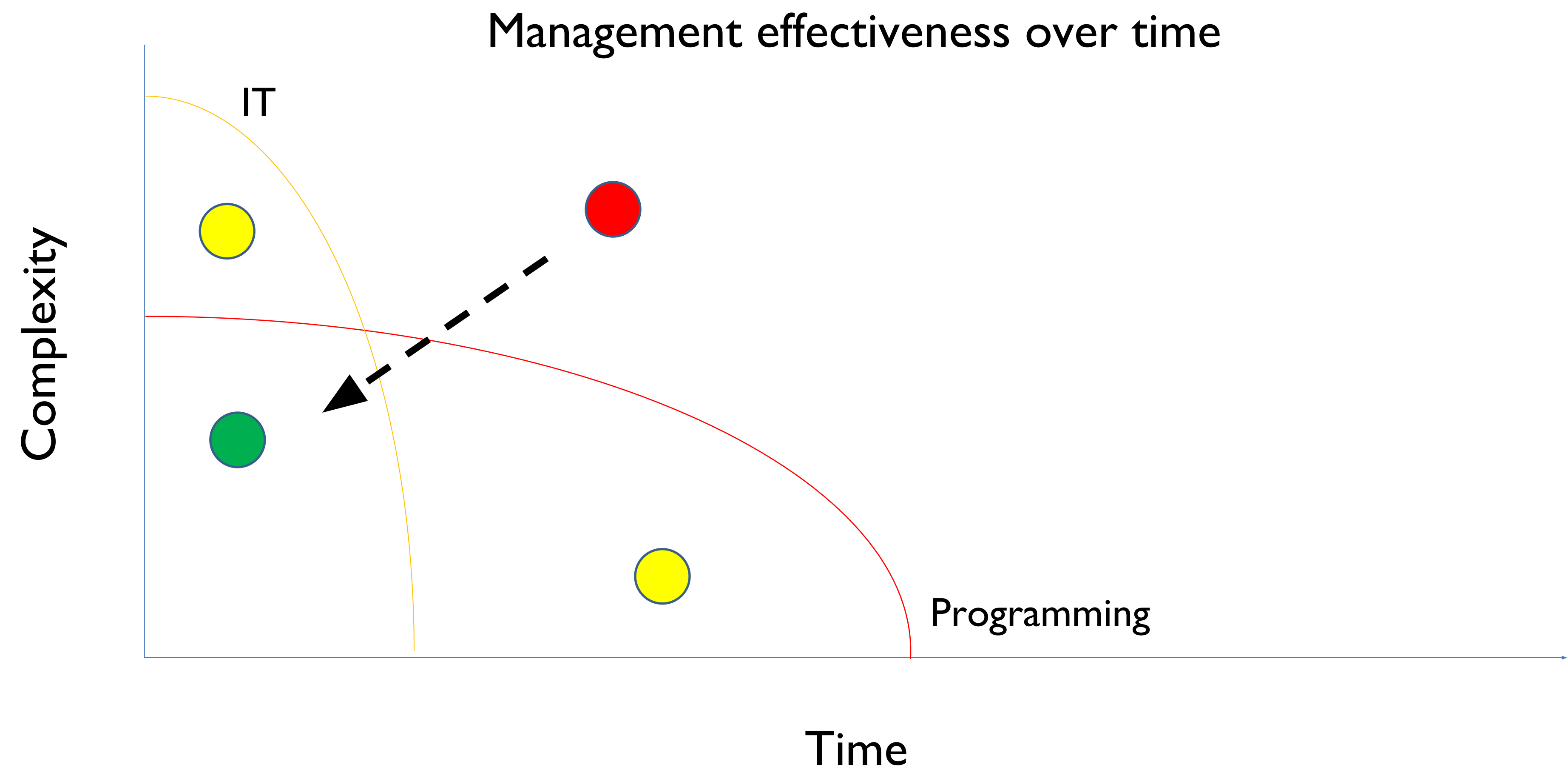


If we fail to build the culture,  
our solutions will fail.





# Political Economy





# Next Steps



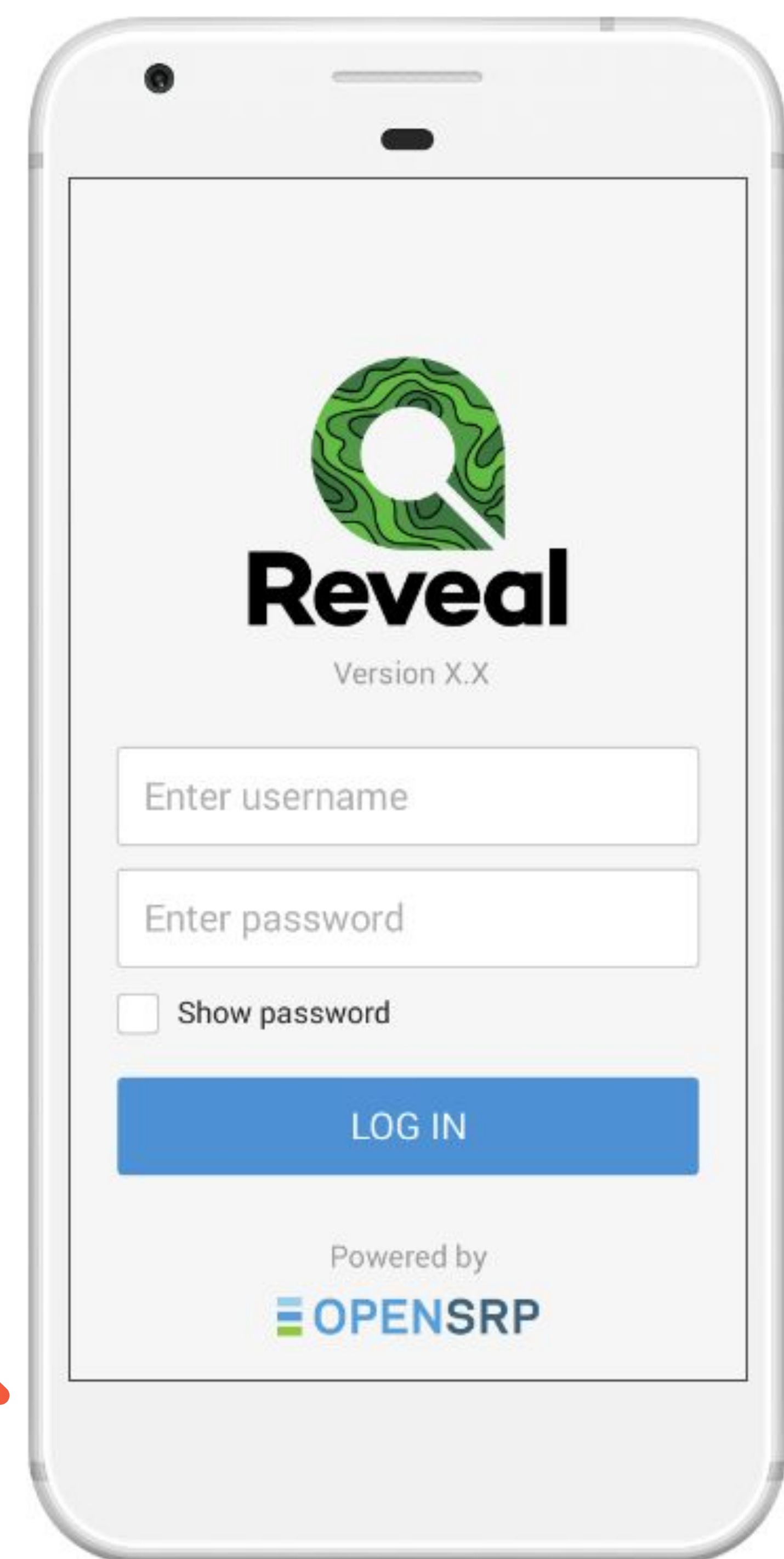
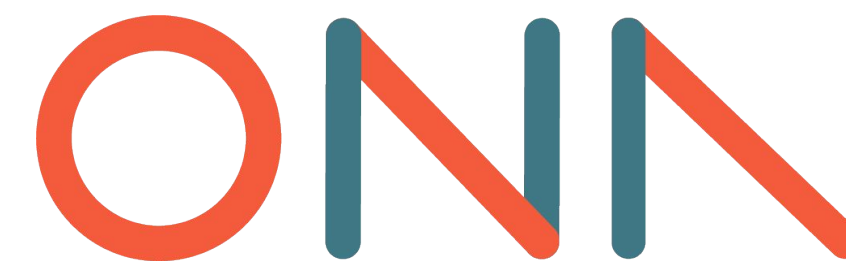




# Reveal

## REDEFINING PRECISION

- Gates funding under Digital Solutions for Malaria Elimination grant to expand mSpray into Reveal
- Malaria elimination spatial MIS for Malaria prevention interventions
  - Spatial planning and risk mapping support, precise data collection, dashboarding, protocol guidance, multiple data set spatial analysis
  - Open source and self configurable for ease of access
  - IRS, ITN distribution and tracking, larval source management, MDA, RACD, foci Investigations, community engagement, focal IRS response
- Timeline: Complete by mid 2019
- Implementation support in 10 CHAI countries





# Thank you!

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# AKROS

[akros.com](http://akros.com)

