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## ***A Digital Revolution in Agricultural Extension – CKW Initiative***

# *Agenda for Today:*

- I. Challenges facing Rural farmers in Uganda
- II. Our Solution
- III. Impact of the CKW initiative
- IV. Looking Forward

# *The Challenge – Information Poverty*

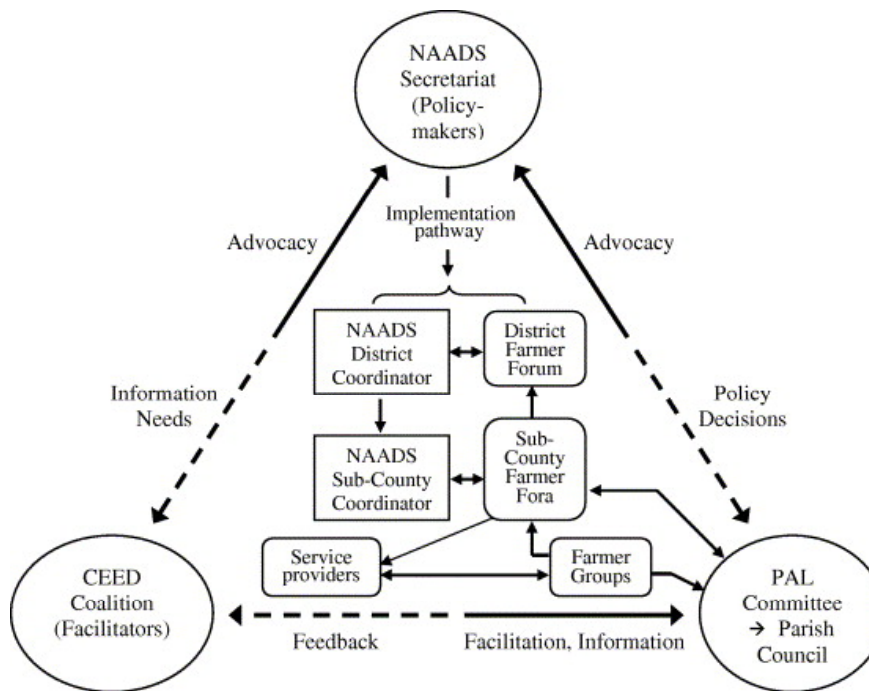
## *1. Rural farmers lack access to vital information and services like:*



- Knowledge of basic agriculture information  
e.g. crop rotation, terracing, etc.
- Best practices to increase yield
- Market prices & local knowledge
- Up to date information on weather, crops  
and animals
- Linkage to markets

# The Challenge

## 2. Government intervention through NAADS insufficient



- Coverage: NAADS extension agent serves 3,000-9,000 households in an average geographical area of 100-300 sq km radius
- Incentives and Training: The extension agents are hired directly by the NAADS and offered up to three year contracts with limited access to personal development
- Feedback loop: Local agents often do not speak the 50+ ethnic languages and dialects and are not strongly connect to the research community and emerging technologies
- Service delivery: Farmers report a lack of access to affordable ag finance and farm inputs
- Technology: Still using paper & pencil to observe, report and communicate in ag extension.

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# ***Our 3 Tier Solution***

## *1. One farmer reaching another*



# *Selection Criteria for CKW*

## A CKW MUST BE:

- ❖ **A trusted** and well known person in the community.
- ❖ **A permanent resident and farmer in a rural setting**
- ❖ **Exhibiting leadership skills**
- ❖ **An innovator and an enthusiastic individual excited** about taking on new initiatives.
- ❖ **Literate** with O-level certificate as the minimum education level. This was adopted after we noted that CKWs recruited without that level of education most especially from Northern Ugandan were having difficulties internalizing the content we taught them during training.

# *Selection Criteria for CKW*

- ❖ **Gender balanced** representation with at least 50% women. A sub county with 4 Parishes will have 2 women and 2 men serving farmers.
- ❖ **Different age brackets** e.g <25 years, 25-40 years,
- ❖ **Network connectivity** within area of operation.
- ❖ **Time** enough to commit to CKW activities e.g. full time employees, teachers etc. are not good candidates. The job is part-time
- ❖ **A member in an active farmers' producer group**
- ❖ Someone who has a history of servicing the community.



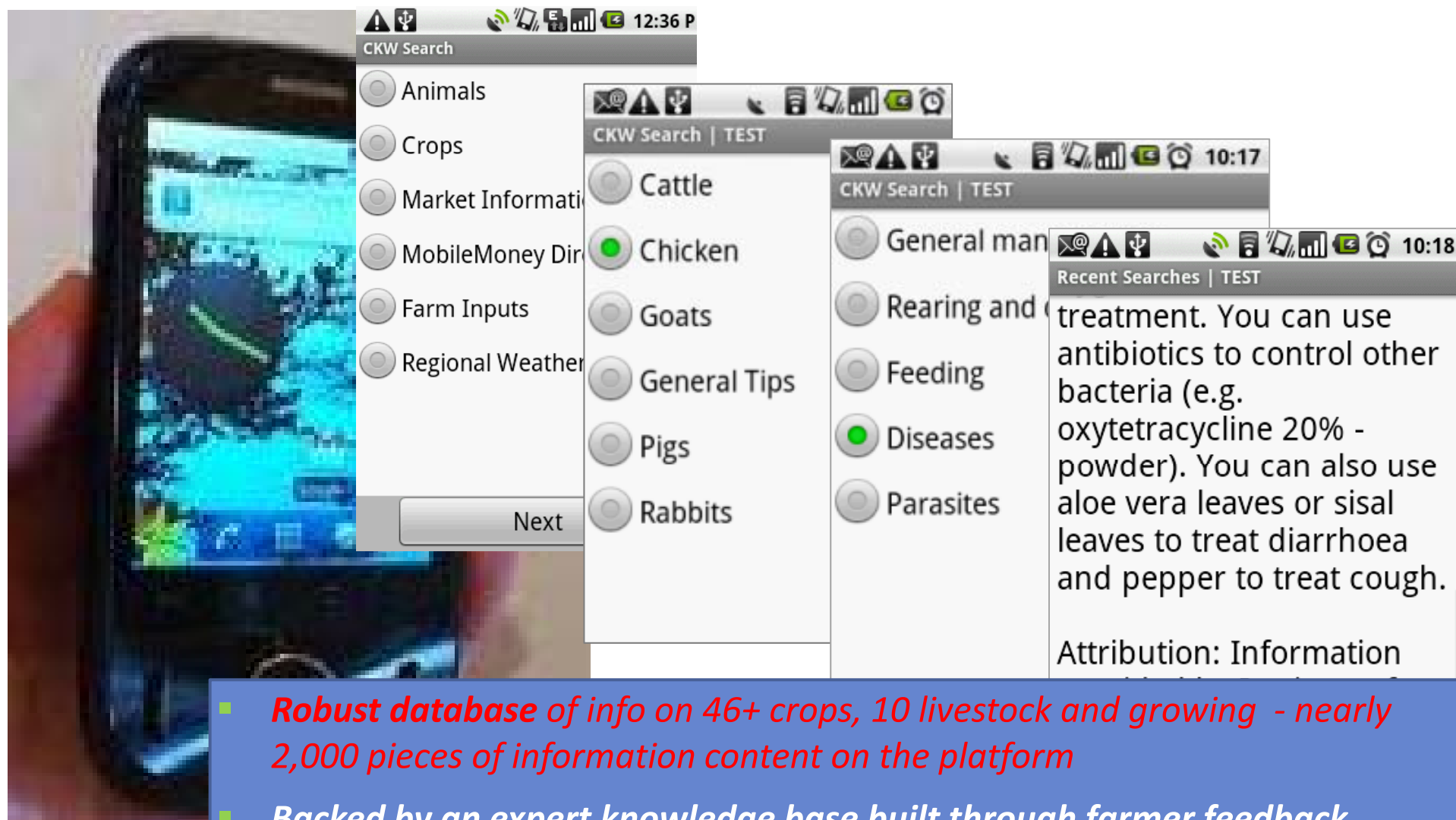
# The “Business in a Box” concept

## Whats in the box?

- ReadySet battery and Solar panel
- Mains/Grid Charger
- Energy Saver bulb
- Nokia charger/Universal charger
- Ideos phone
- User Manual
- 6 month warranty and MTN customer support access
- Micro-franchise marketing materials + training



# *What we offer: Valuable Information for Farmers*



- **Robust database** of info on 46+ crops, 10 livestock and growing - nearly 2,000 pieces of information content on the platform
- **Backed by an expert knowledge base built through farmer feedback, partnership, our call center experts and expert review board.**

# *Our 3 Tier Solution*

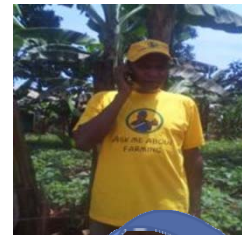
## *2. Supporting CKWs and reaching out directly to farmers*

### *Farmer Call Centre*



*Services are delivered through a dedicated team of Ag Experts with 9 Language capabilities*

### *Farmer Voice Radio*



*A CKW reaches out to a model farmer for information and acts as their link to the radio station*



*A model farmer shares this information with the CKW with the need to broadcast*



*The radio station then broadcasts all the information provided by the CKW*

*The CKW surveys the farmers and results go to an automated dashboard at the community radio station*

# *Our 3 Tier Solution*

## *3. Expert Review Board & Content Partners*

### **Expert review Board:**

A selection of subject matter specialists, from development organizations, Community based journalists , researchers and extension workers

- Review existing information on the different platforms
- Act as an escalation point for the unresolved queries from tier 2
- Act as a Source of new technologies and information
- Bridge the gap between research and extension
- Complete the quality assurance cycle.

### **Content Partners:**

Act as a source of reliable, accurate and timely information.

Provide in-routes to their farmers increasing; access and touch with end users

Fit Uganda, Naro, NAADs, PELUM, IITA, NOGAMU , EADD, WFP, FAO, BROSDI, FHI 360

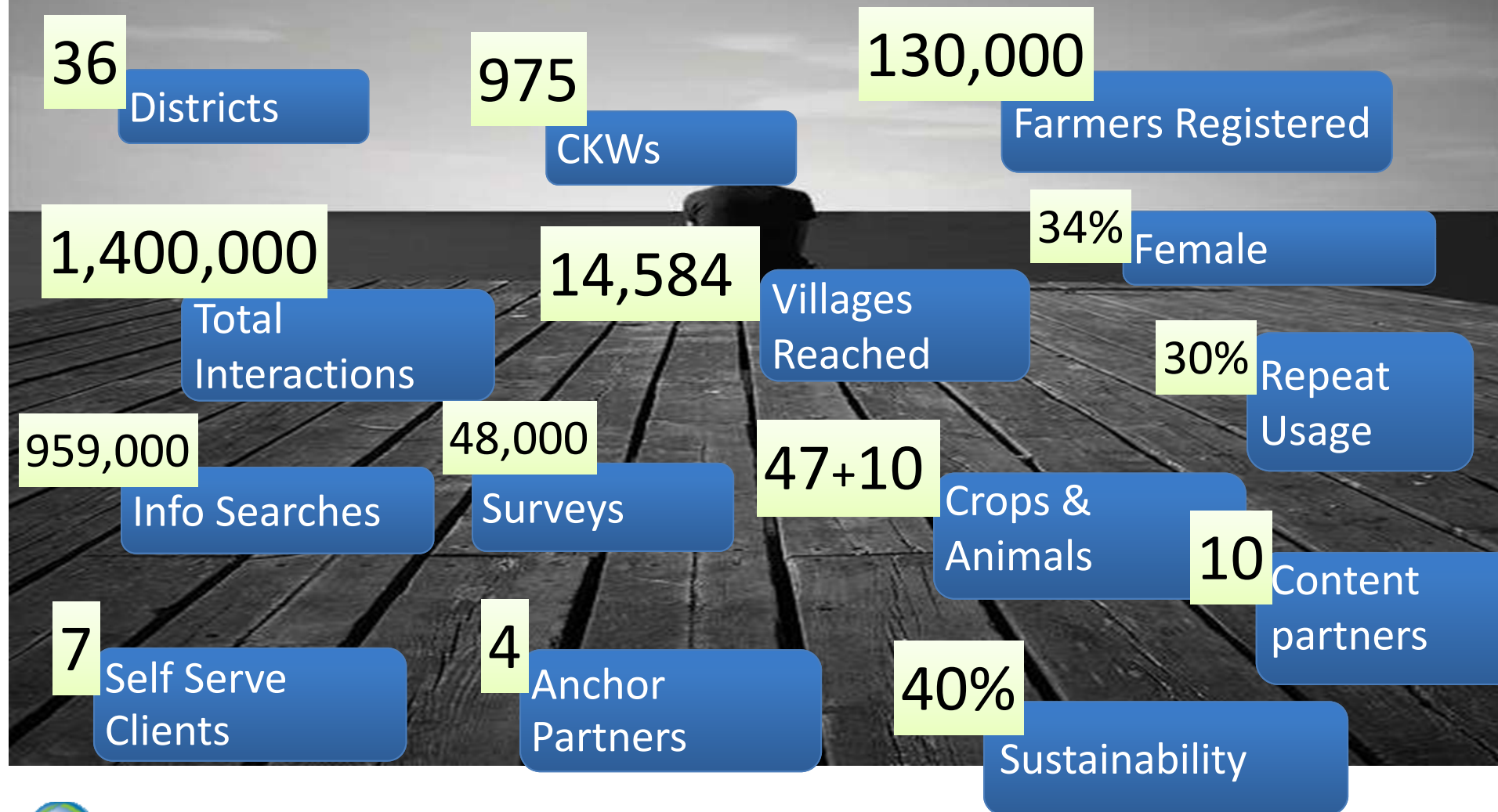


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# Achievement So Far . . .

*Sustainably improving the lives of small-holder farmers through access to information and services*





# Impact Findings

*What are the farmers' information needs?*

Topic	No. of Farmers for Whom this is First Topic of Interest	No. of Farmers for Whom this is Second Topic of Interest
Agricultural Financing	6	52
Cattle	343	0
Chickens	15	95
Donkeys	54	161
Education	11	200
Farming as a Business	222	2,033
Harvesting/PHH	71	78
Health	49	468
Livestock Rearing	112	488
Market Opportunities	4,477	1,183
Market Prices	26,364	6,188
Other	1	16
Pest and Disease Management	3,076	13,599
Planting/Garden Prep	2,510	4,990
Rabbits	7	15
Sheep	8	46
Soil Management	341	2,452
Turkeys	25	26
Weather	3,018	8,242



- Access to **market prices** is a critical variable in increasing farm gate prices for SHF
- Market prices are **easily actionable**, and require **low bandwidth**
- Demand for market price data is driven by **substantial variability in pricing** offered by **local traders**
- Following closely behind market prices is **Pest and Disease Management** and **Weather**



# *Difference in Differences Impact Study*



**Knowledge:** CKWs increase farmers' knowledge by ~17%

**Attitude:** 51% difference in access to extension services compared to non-CKW served areas

**Outcome:** Populations with access to a CKW are selling at prices 37% higher than areas without a CKW

**Practices:** After CKWs introduced, farmers sell slightly less to brokers, and more to traders.

# ***Fee for Service Partnerships***

## *Product development through the program*

- We have built a suite of products and services that can be integrated into third party organisations to enable us raise revenue. Some of these include:
  - CKW Extension – support to 3<sup>rd</sup> party organizations
  - Data collection/Research services for NGOs, private sector organizations and the Government
  - Intermediated information applications; such as the CKW Search application which carries expert agronomy information
  - Field Force Productivity tools for field based activities. These help to monitor staff as well as provide real-time data visible on a dashboard
  - We have a well established farmer call center

### **Strong uptake by Agri organizations**

- WFP, NAADS, MAIFF, WB, MercyCorps, EADD, Plan Int'l, Brac
- Diversifying customer base to private sector – Coffee Producer + Bank
- New partnership with KIVA



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# Going Forward

## 1. Content development strategy shift

- Shifting focus from demand driven to proactive content dissemination
- Providing key adoption information that farmers need to know but may not be aware of, i.e. first aid kits for 7 key commodities
- Strengthening multiple dissemination channels: i.e. call center, USSD channel, FVR, village fora and videos, voice messages, CKW training, image libraries
- Deepening local technologies and widening the MIS systems

# ***Going Forward***

## ***2. Bringing research and extension closer***

- 
- Work with research and extension teams for key commodity value chains
  - Develop public private partnership to backstop CKW with the national ag advisory system
  - Deploy our platforms, processes into more ag related research / extension actors to improve information flows along value chains.
  - Pilot of Banana Bacteria Wilt World Bank consortium



# *Going Forward*

## *3. Continue capturing Key learning*



- Continue data mining and developing real-time analytics of our DBs
- On going mini-RCT with East African Dairy Development
- Planning a full RCT with NAADS
- International publication of our findings and impact of the program

# ***Going Forward***

## ***4. Continuous innovation - new farmer support applications***

### **Soil Health Fertility Tool**

GF will work with renowned research organizations and in particular CABI, AFISIS and NARO to develop, test and put to use a digitalized soil fertility tool which will help farmers make decisions about which components to add, which particular crops to grow best suited to the types of soil available. The tool will incorporate best practices and recommendations geared towards the needs of the smallholder farmers

### **Acreage Mapper**

CKWs will be able to serve the farmers better with the ability to measure farm sizes accurately. Most rural farmers have no idea how big their farms are.

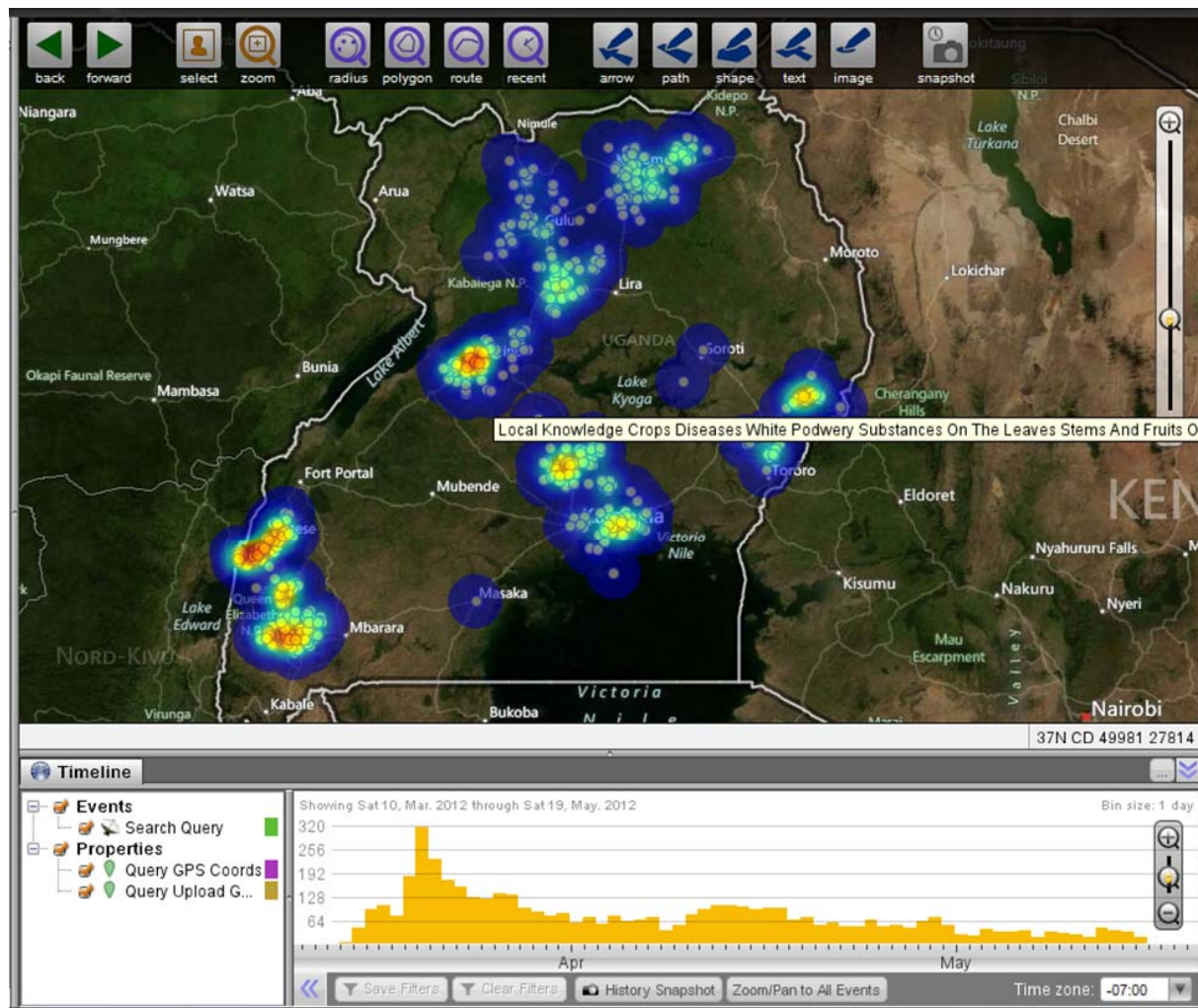
### **Market Linkage app**

Through this application, the CKW would be able to link farmers selling their produce to buyers and in the same way link sellers to the farmers

### **Early Warning systems**

This planned product will capture market intelligence, macro-level changes in the sector across representative areas, incorporate early warning data and customizable tools for custom insights, leveraging existing CKW tools and assets.

# Early Warning



- Sudden increase of queries on “White Powdery” disease in March
- Heat maps change over time, showing how outbreak moves across Uganda



# *Going Forward*

## *5. Ag- Finance – pilot study with MFI*



*The CKW program reaches over 120,000 farmer households currently and has detailed information on each regarding income level (PPI), crops planted, planting area, inputs used, assets held, and historical yields.*

# *Opportunities for CKW as a Channel*

***Product discovery point***

***CKW as a MM & MF  
Agent***

***Airtime reseller***

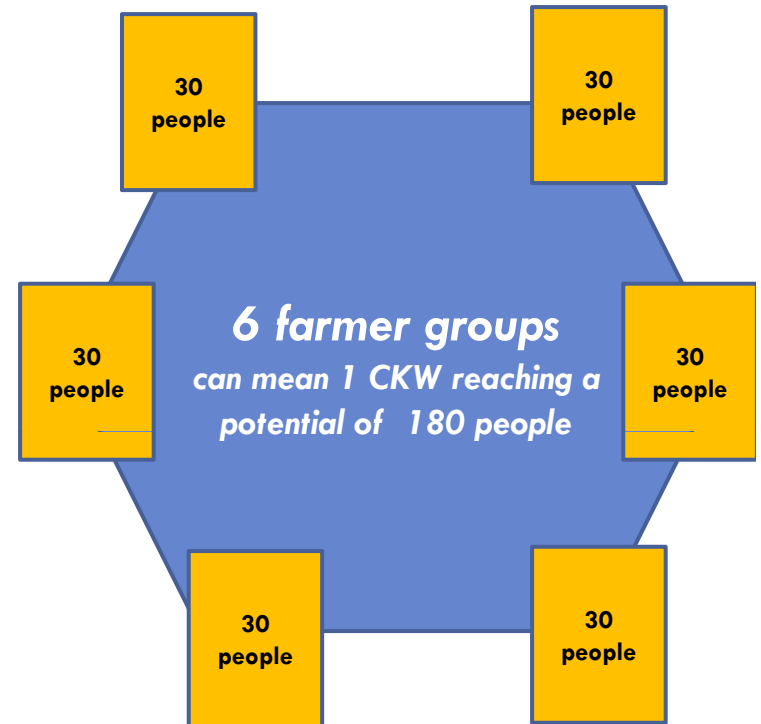
***Customer Service in remote  
areas***

***SIM pack sales***

## MM & MFI Pilot



**CKW as a MM & MFI Agent**







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*Empowering people. Changing lives. Investing for the world's poor.*

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