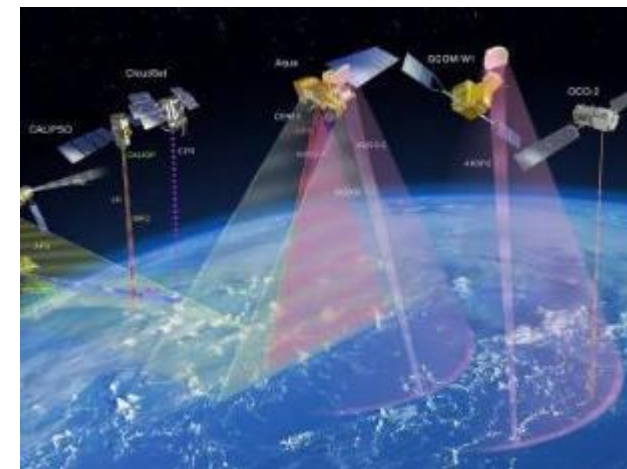


The role of mobile technologies in promoting sustainable delivery of livestock insurance in the East African Drylands

Toward Sustainable Index-Based Livestock Insurance (IBLI) for Pastoralists



Insurance as a Development Tool

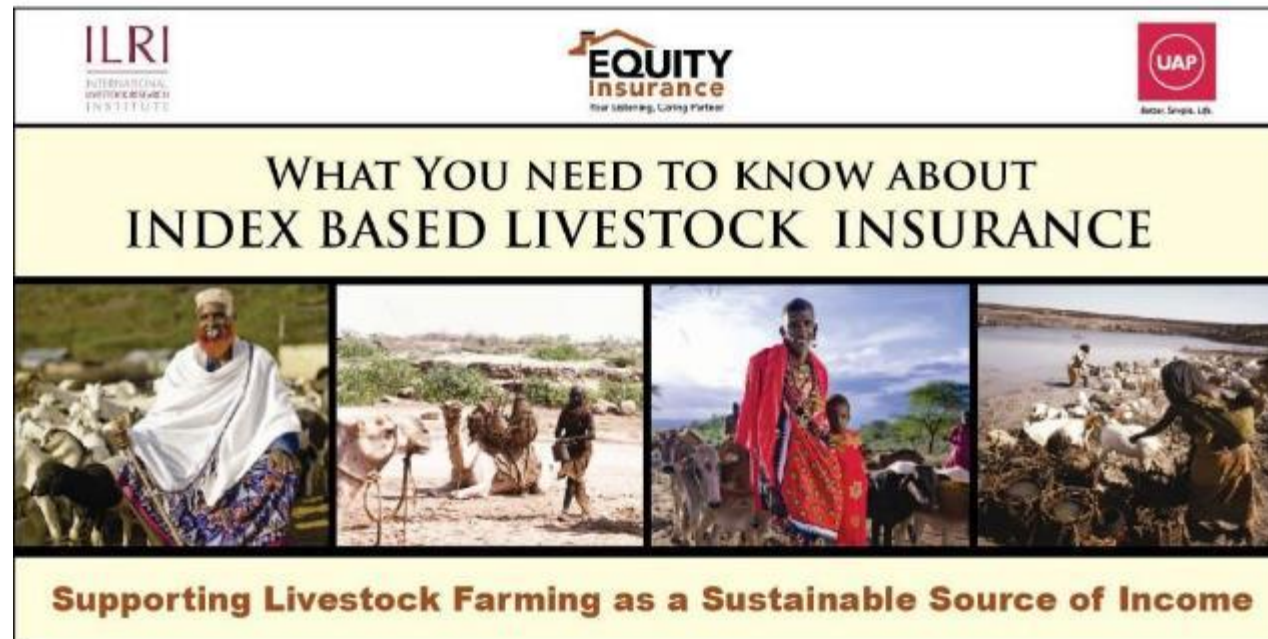
- **Decades of evidence exist that risk**
 - *Makes people poor* by reducing incomes & destroying assets: and,
 - *Keeps people poor* , by discouraging investment & distorting patterns of asset accumulation
- **The arid pastoral regions of Northern Kenya, and Southern Ethiopia are an archetype of risk & coping**
- **Development impacts of risk reduction technologies (insurance) should therefore be significant.**
- **Index-based livestock insurance (IBLI) – an innovative insurance product leveraging satellite data to estimate livestock losses – first deployed as a pilot in 2010.**



Insurance as a Development Tool

THE IBLI R&D CHALLENGE

Can index-based insurance make a significant and sustainable contribution to the challenge of helping pastoralists manage the considerable risk of drought-related livestock losses they face?



The image shows the cover of a report. At the top, there are three logos: ILRI (International Livestock Research Institute), EQUITY Insurance (with the tagline 'Your Livestock. Living Partner'), and UAP (United African Pastoralists). Below the logos is a yellow banner with the title 'WHAT YOU NEED TO KNOW ABOUT INDEX BASED LIVESTOCK INSURANCE' in black capital letters. Underneath the banner is a row of four photographs: a woman in a white shawl with a flock of sheep, a person with camels in a dry landscape, a woman in a red shawl with a child and a cow, and a person tending to a large group of sheep. At the bottom of the cover is a yellow banner with the text 'Supporting Livestock Farming as a Sustainable Source of Income' in brown capital letters.

Components of a Sustainable Index-Insurance Program

- 1. Precise contract design:**
- 2. Evidence of value and Impact:**
- 3. Establish informed effective demand,**
- 4. Low cost, efficient, delivery mechanisms**
- 5. Policy and institutional infrastructure.**

For more information refer to <https://ibli.ilri.org>



Remote clients, challenging terrain: the mFactor

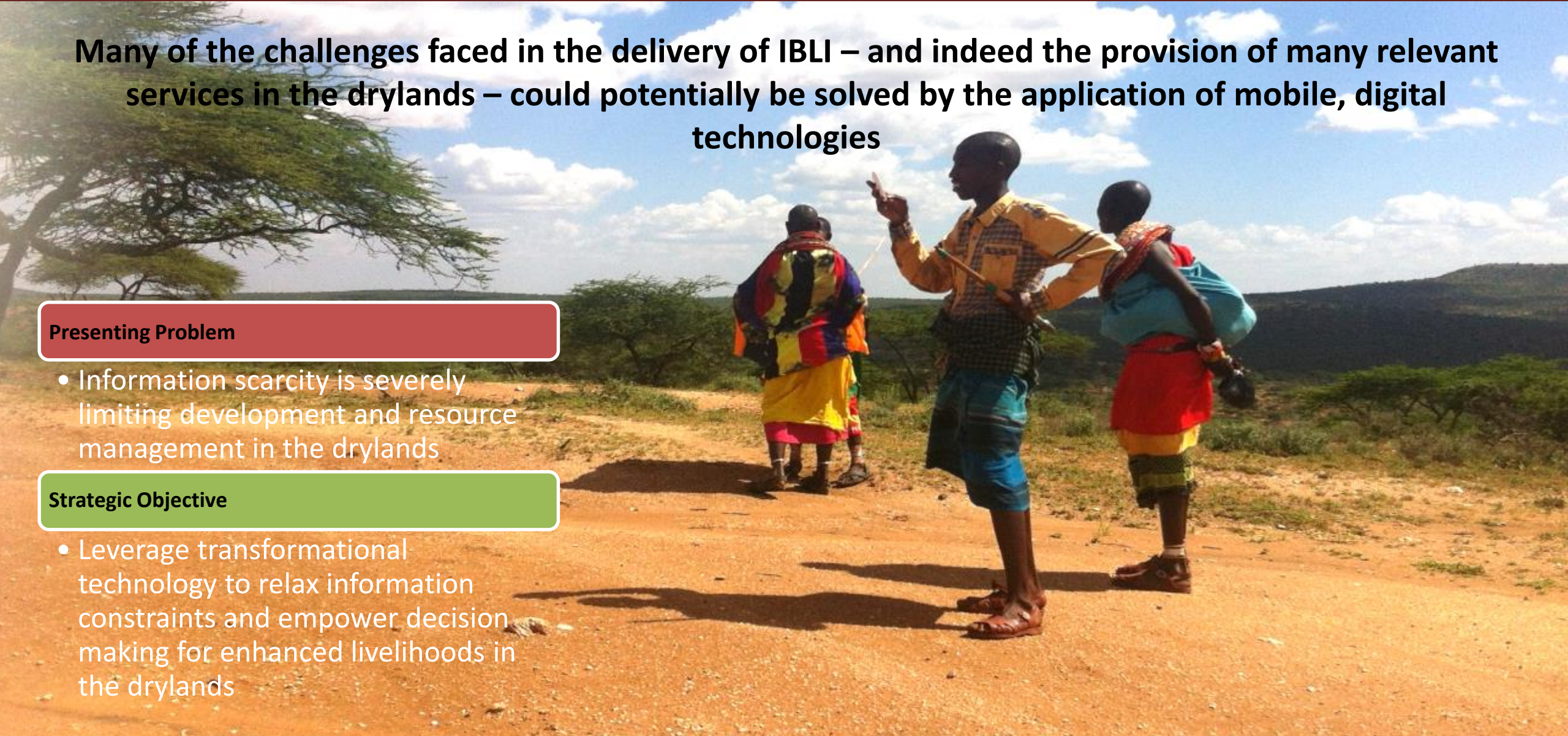
Many of the challenges faced in the delivery of IBLI – and indeed the provision of many relevant services in the drylands – could potentially be solved by the application of mobile, digital technologies

Presenting Problem

- Information scarcity is severely limiting development and resource management in the drylands

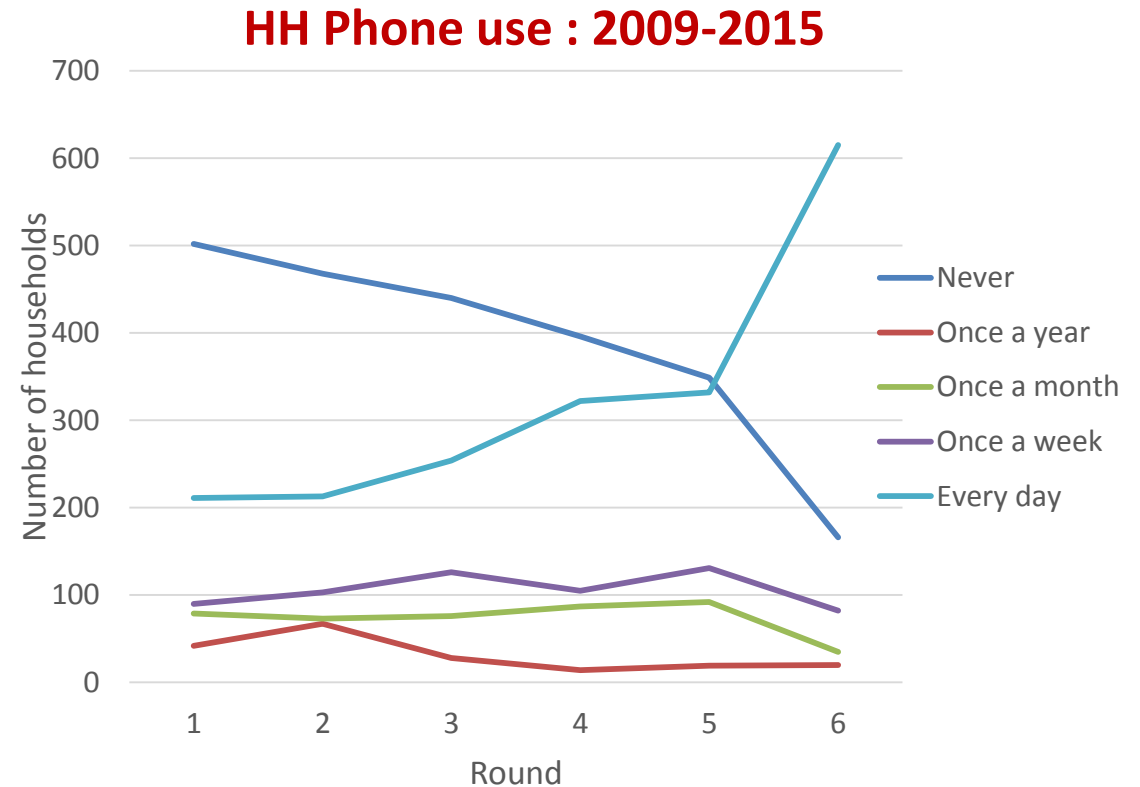
Strategic Objective

- Leverage transformational technology to relax information constraints and empower decision making for enhanced livelihoods in the drylands



Leveraging mobile technologies for IBLI and beyond

- **Mobile Phones as a Service Delivery Tool**
 - Delivering Sales
 - Delivering Premiums
 - Delivering Information
- **Mobile Phones as a Training and Performance Assessment Tool**
 - mLearning and Gamification
 - Tracking impact of training on sales
- **Mobile Phones as Data Provisioning Tools**
 - Crowd Sourcing for Rangeland Conditions
 - Livestock Market Information Systems
 - ...and more



Source: IBLI project data

Mobile Phones as a Service Delivery tool

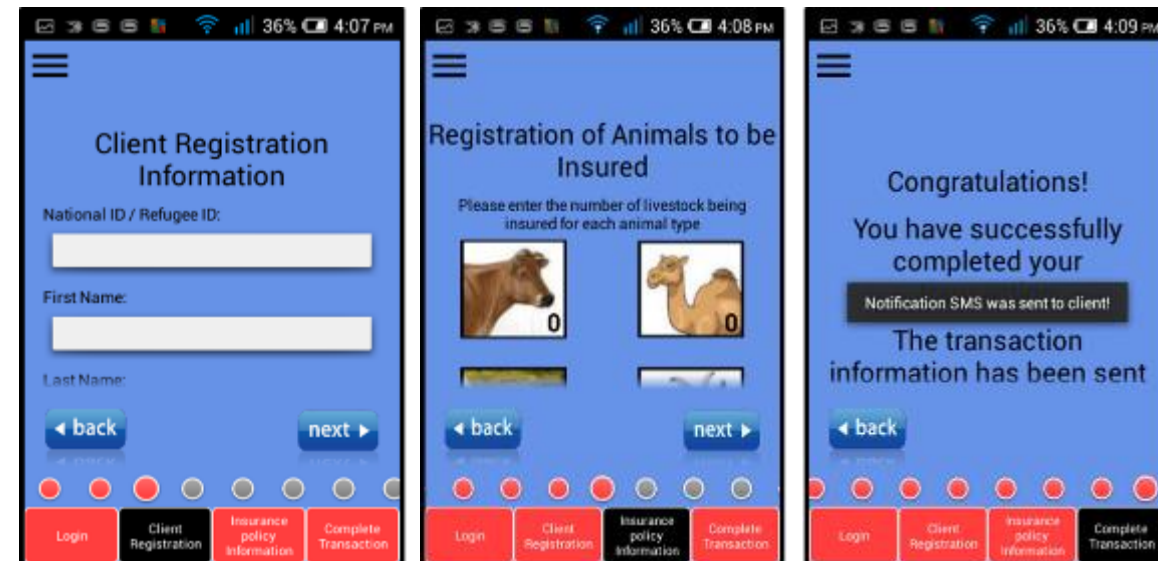
- **Sales Transactions Application**

- Cost of Agency among the most limiting constraints.
- Mobile sales transactions applications resulted in rapid increase of agent distribution
- Allowed for better data management and a range of useful analytics on agent behavior



- **Mobile Delivery of Indemnities**

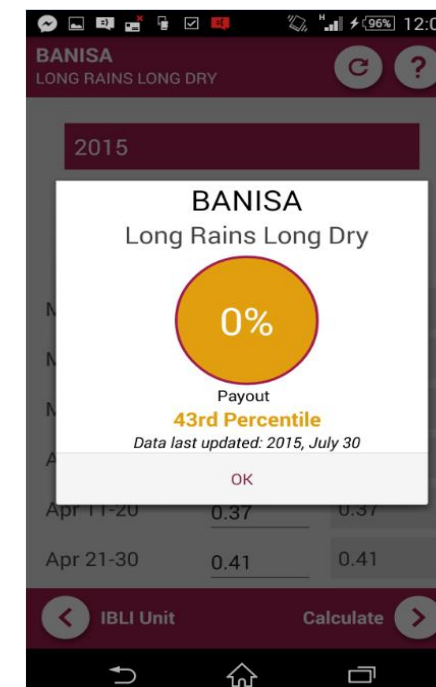
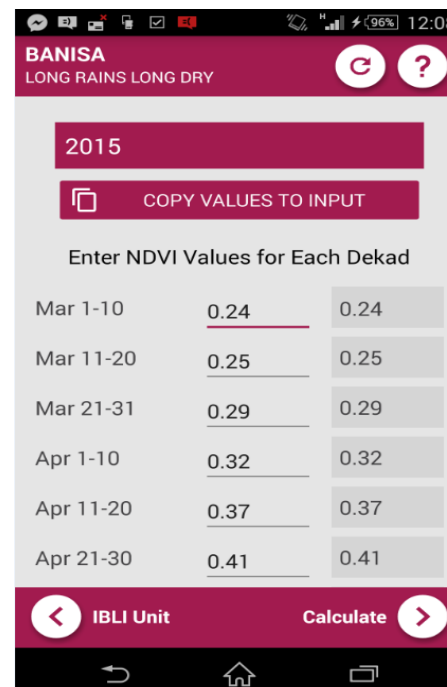
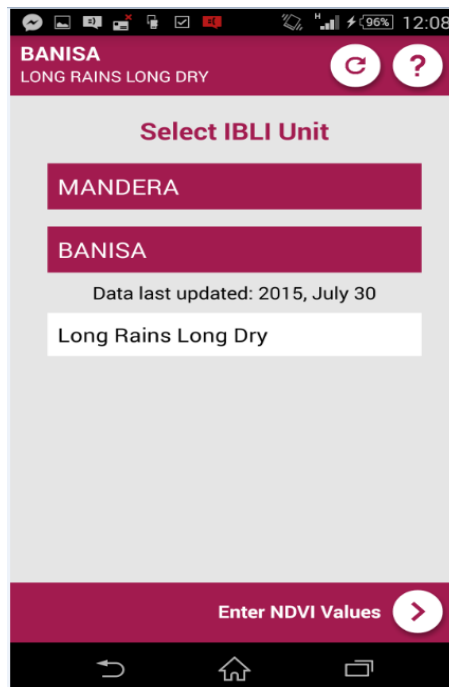
- Indemnity payments initially conducted manually
- Increasingly paid through MPESA (in Kenya).



Mobile Phones as a Service Delivery tool

- **IBLI INDEX Calculator**

- Delivering critical information on performance of IBLI contract
- Agent can now show active or potential client the current or historical state of the index.
- Can show historical payout of hypothetical contract
- Building awareness, trust and salience



Mobile Phones as a Training and Performance Assessment Tool

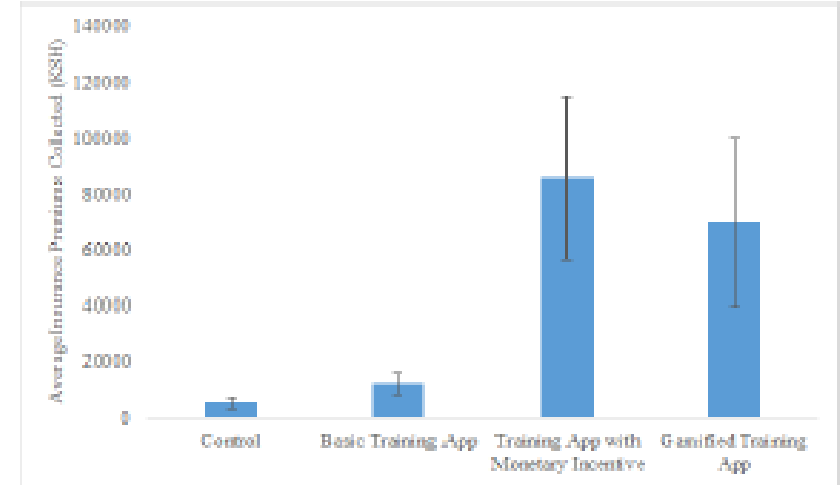
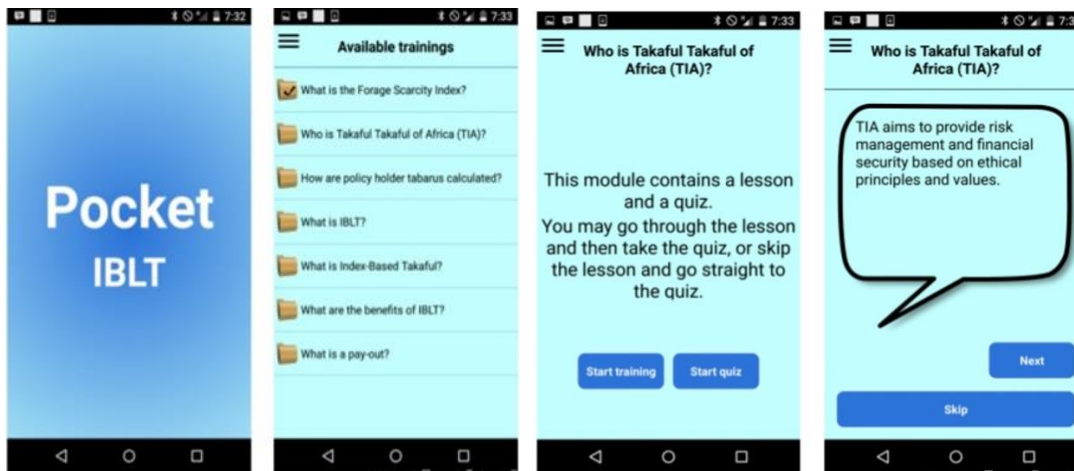
- Currently over 500 insurance sales agents who need to be trained on IBLI. Agents widely spread and constant churning.
- Standard approached to training, even those intended to minimize costs (e.g, cascades – TOT) still extremely expensive.
- Literature on adult pedagogy highlights inefficiencies of one-of training.
- Mobile phones offer low-cost option for training, which opens the door for improved methods:



Mobile Phones as a Training and Performance Assessment Tool

IBLI mLearning Application

- Developed a basic mobile application with standard IBLI training curricula
- Tested the impact of mobile training plus a range of learning incentives in an RCT:
 - Control: Standard F2F Training.
 - Base mobile application (no incentives)
 - Mobile application with cash (MPESA incentives)
 - Mobile application with gamification (leaderboards)



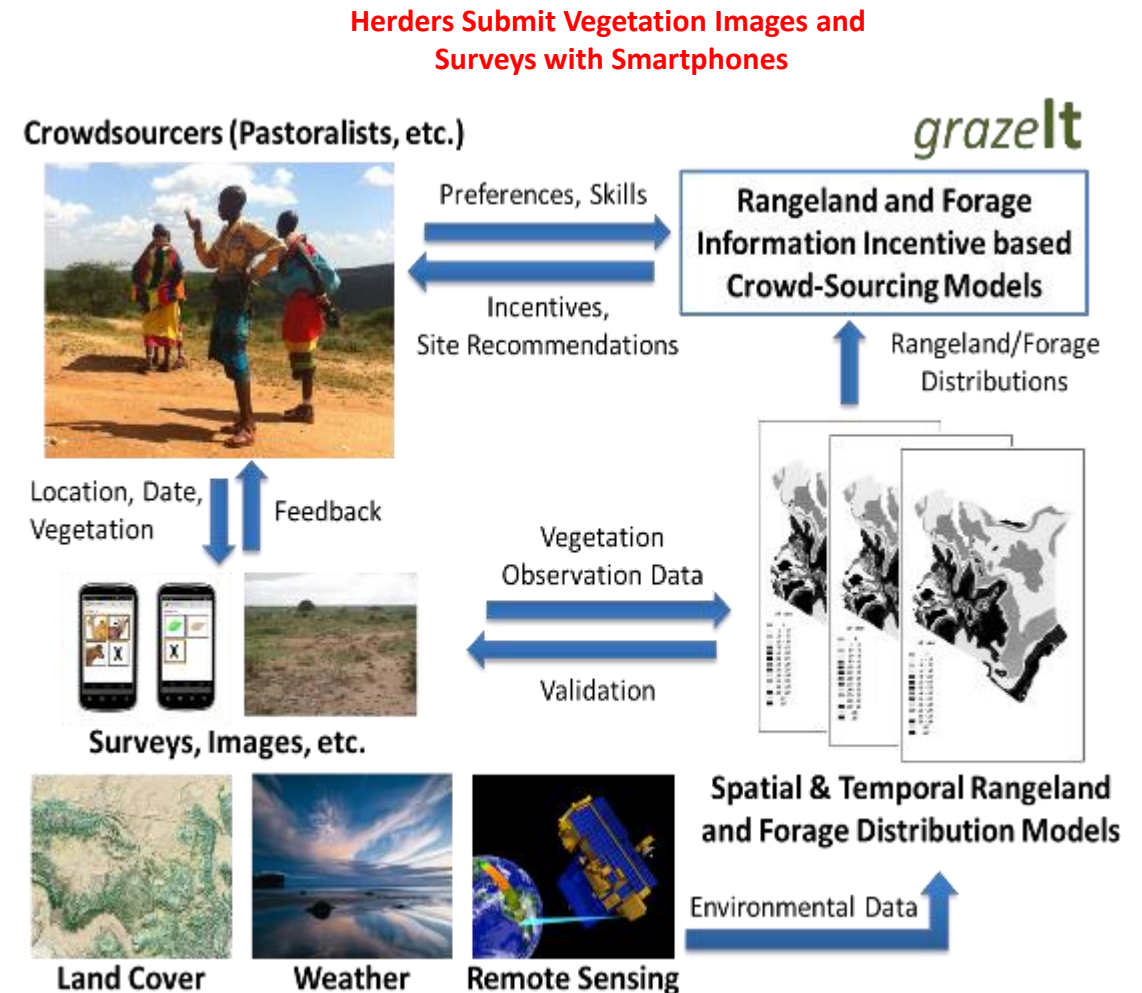
- Access to the application increased sales dramatically for incentivized agents.
- Incentives can be used to help increase investments in learning, which leads to higher sales.

(Lyons, 2016)

Mobile Phones as a Data Provisioning Tools

Crowdsourcing Rangeland Conditions:

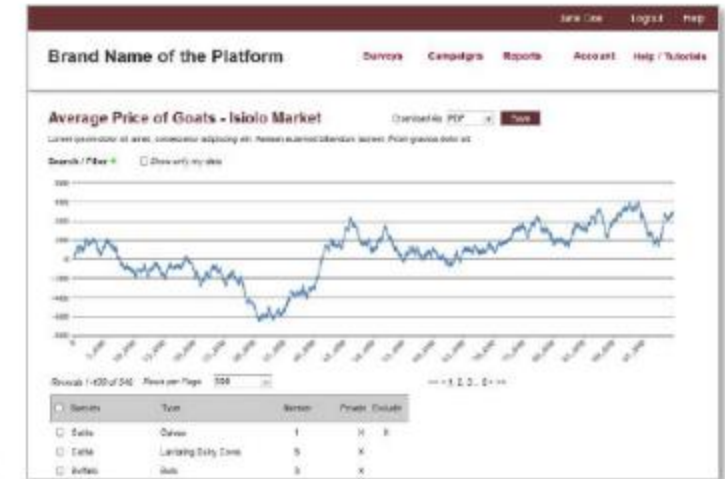
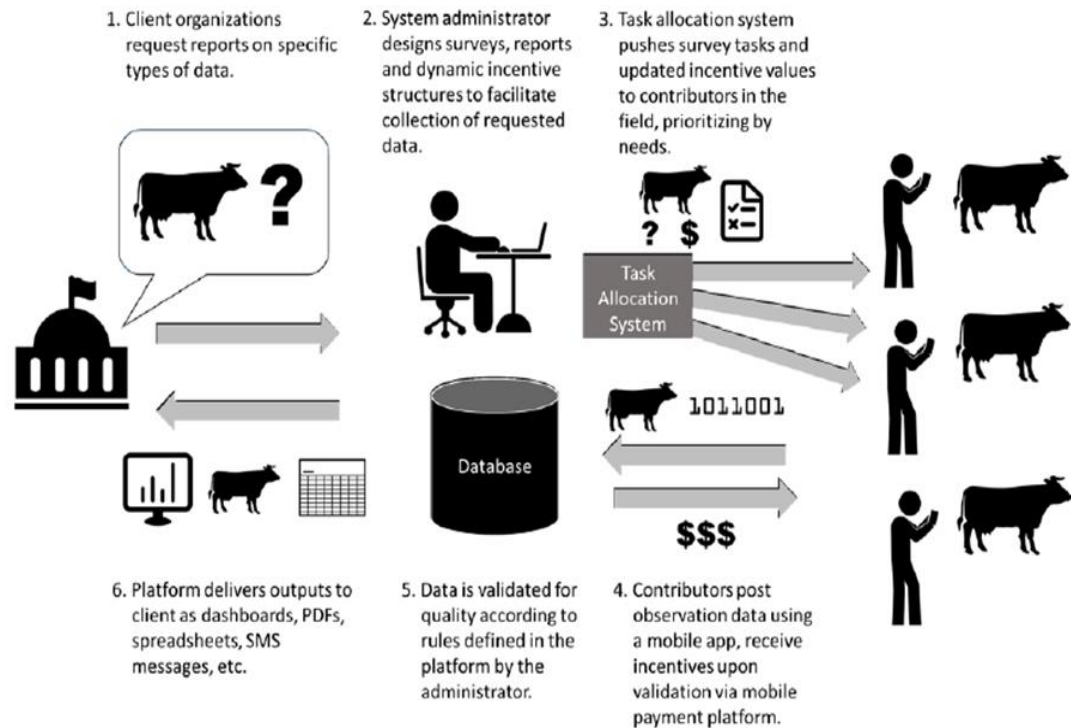
- **Challenge:** How to cost-efficiently validate satellite data? *Not all that's green is good*
- Crowdsourcing local and near real-time observations of vegetation type and conditions using smartphone apps.
- Develop a rangeland model that integrates local observations with existing remotely sensed data.
- Conduct value of information analysis of the rangeland model to direct further local data collection.



Mobile Phones as a Data Provisioning Tools

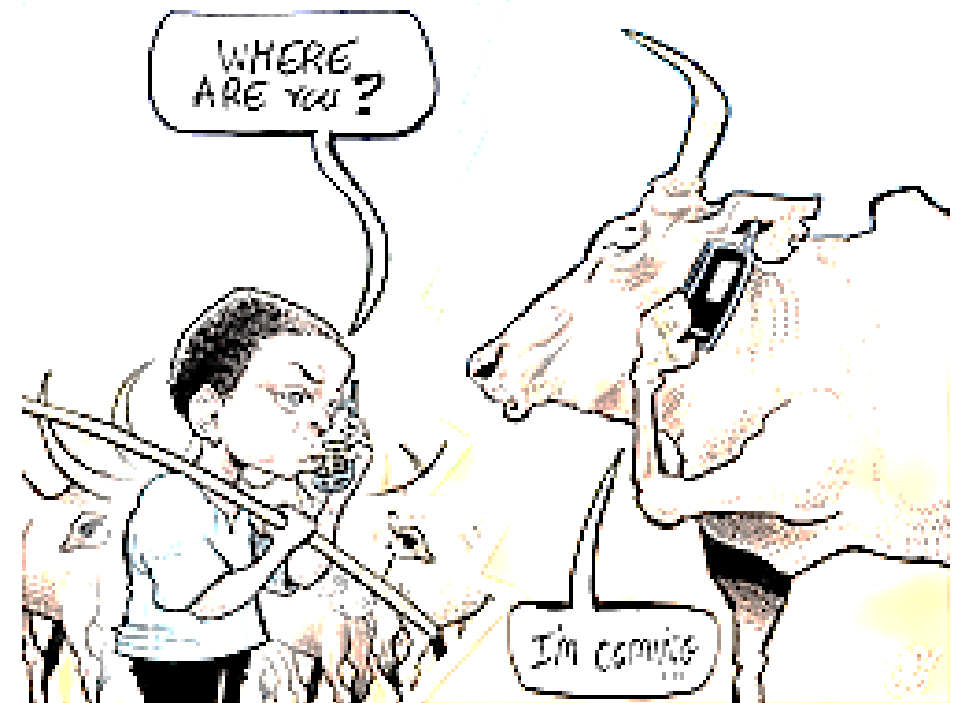
Crowdsourcing Livestock Market Information Systems...the pilot

System Schematic

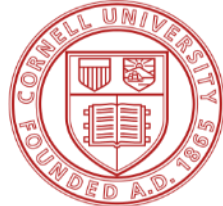


Leveraging mobile for rural agricultural development

- **Snapshot of the emerging influence of mobile applications in challenging terrain**
- **Mobile phones as an asset:**
 - Allowing access to far away markets and opportunity
 - Unlocking of underutilized resources
- **Beyond access to applications**
- **Knocking on the door of BIG DATA and its engines**
- **Critical Regulatory questions remain**
 - Issues of data ownership and security
 - Privacy
 - Enabling environment and digital literacy



It Takes a Village



IBLI Policy and Academic Workshop – July 2015



For more information on IBLI, visit <https://ibli.ilri.org/>

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ILRI thanks all donors and organizations who globally supported its work through their contributions to the **CGIAR system**

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