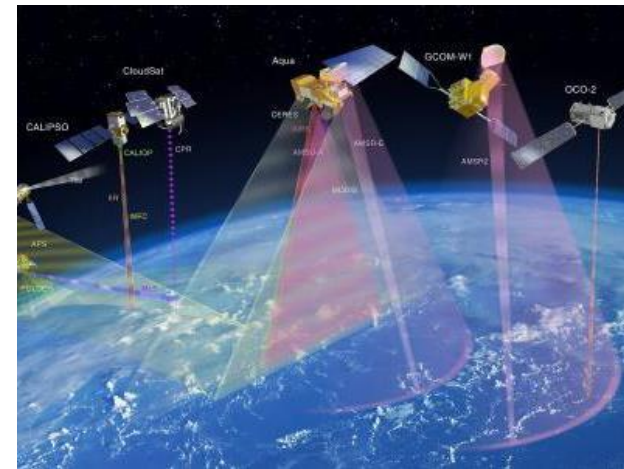# The role of mobile technologies in promoting sustainable delivery of livestock insurance in the East African Drylands

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



Andrew Mude

Crawford Fund Annual Conference, Aug 8 2017

# 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.**

**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?*

# 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
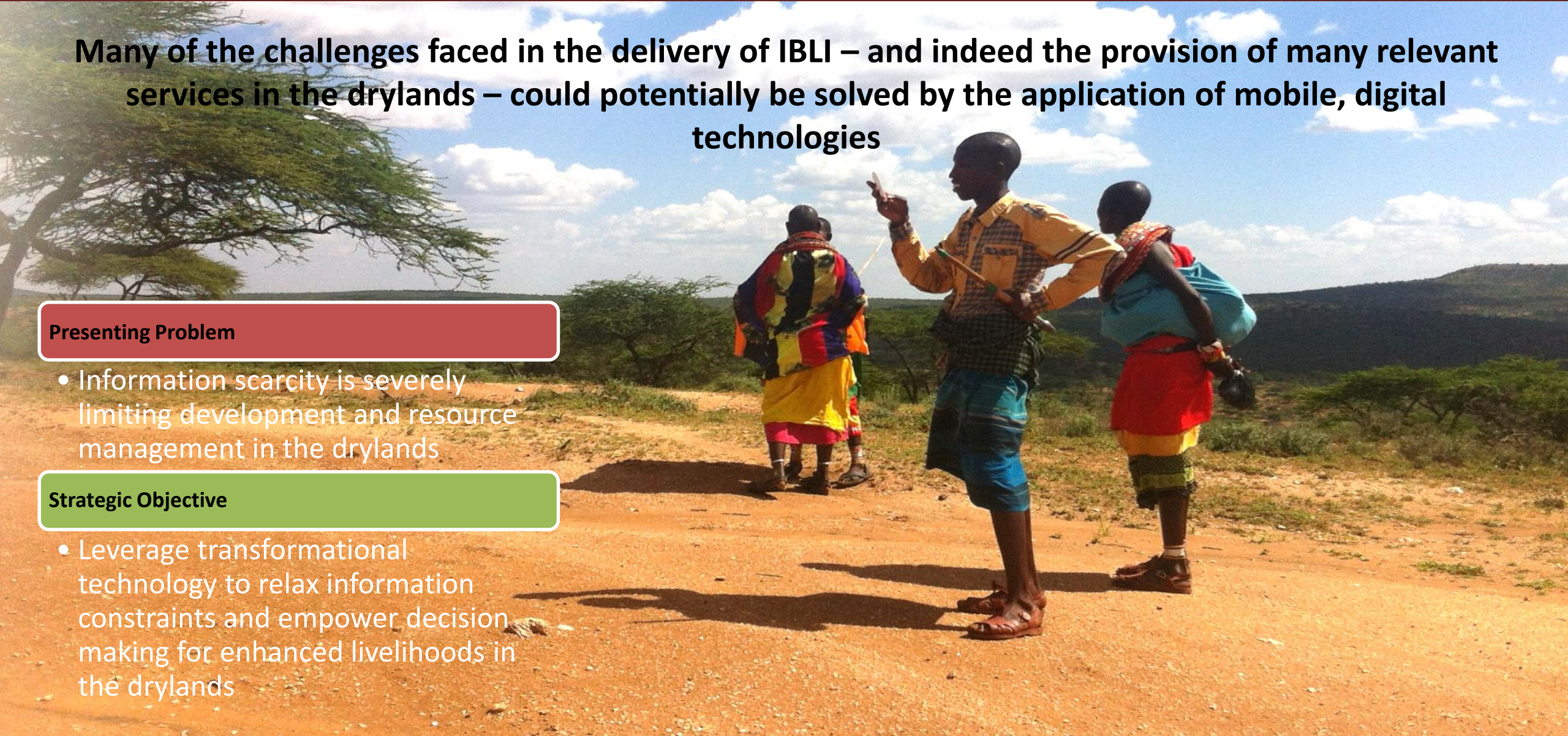
# Leveraging mobile technologies for IBLI and beyond

- **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

**HH Phone use : 2009-2015**
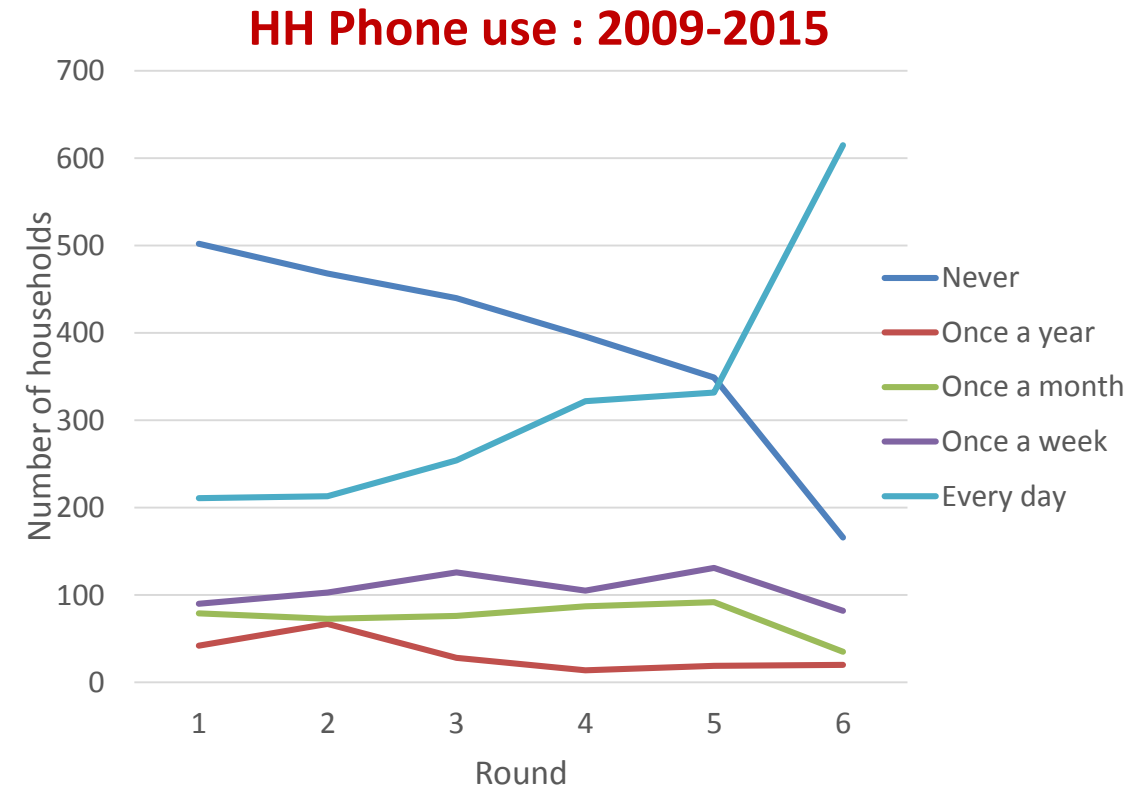


**Source: IBLI project data**
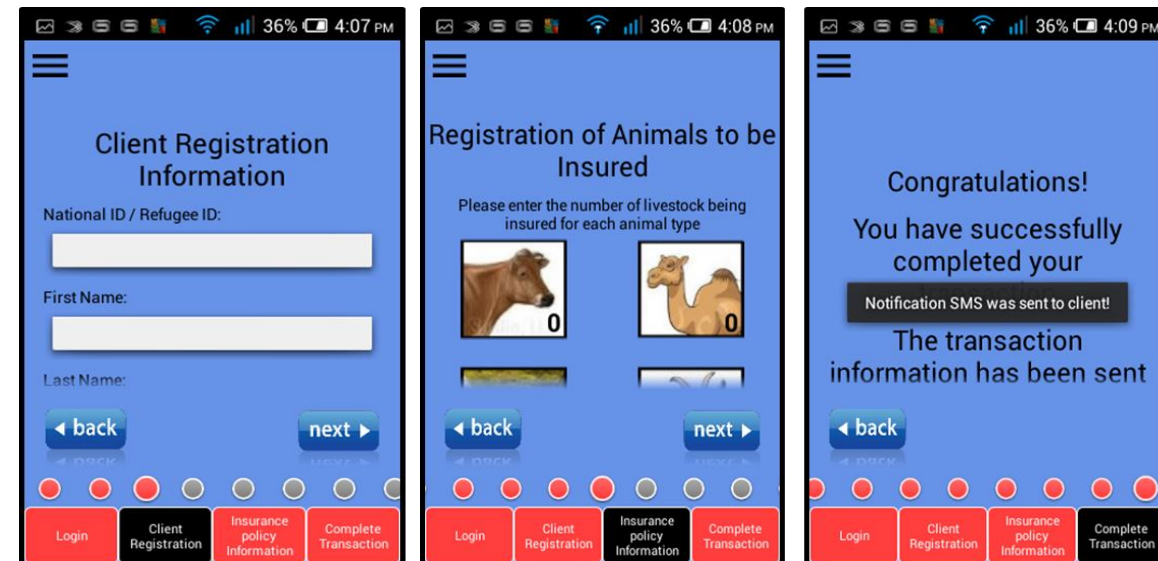
# Mobile Phones as a Service Delivery tool

- **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
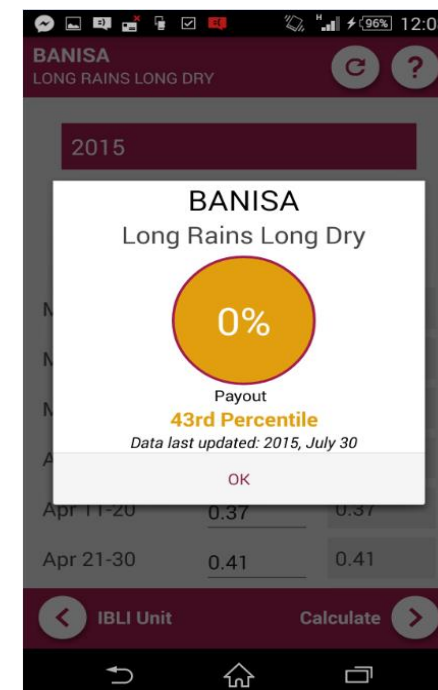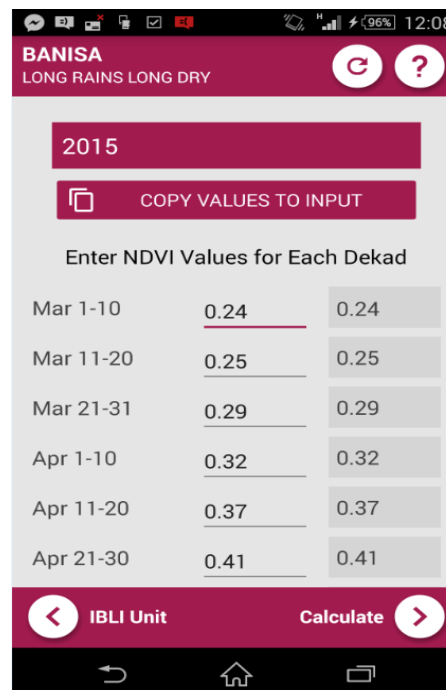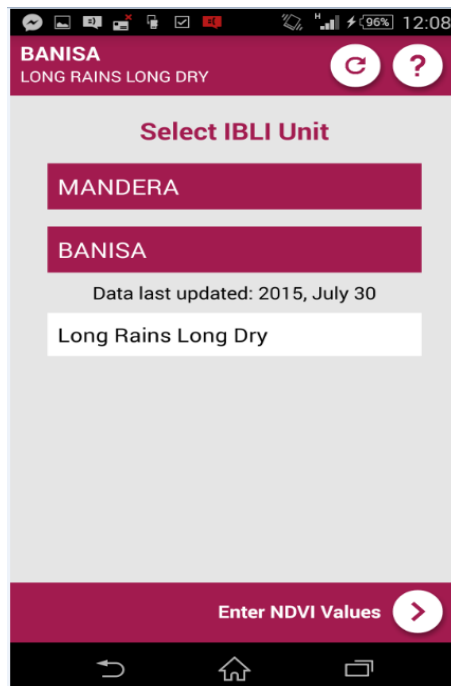
# Mobile Phones as a Training and Performance Assessment Tool

- 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:
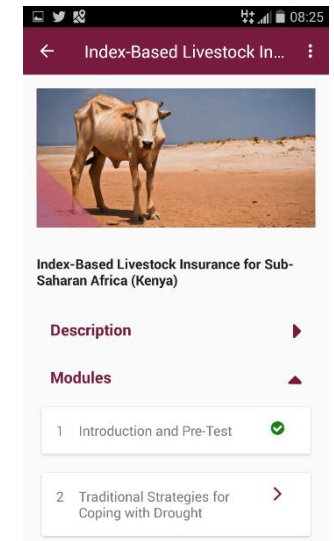
# Mobile Phones as a Training and Performance Assessment Tool

## 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 F2FTraining.
  - Base mobile application (no incentives)
  - Mobile application with cash (MPESA incentives)
  - Mobile application with gamification (leaderboards)
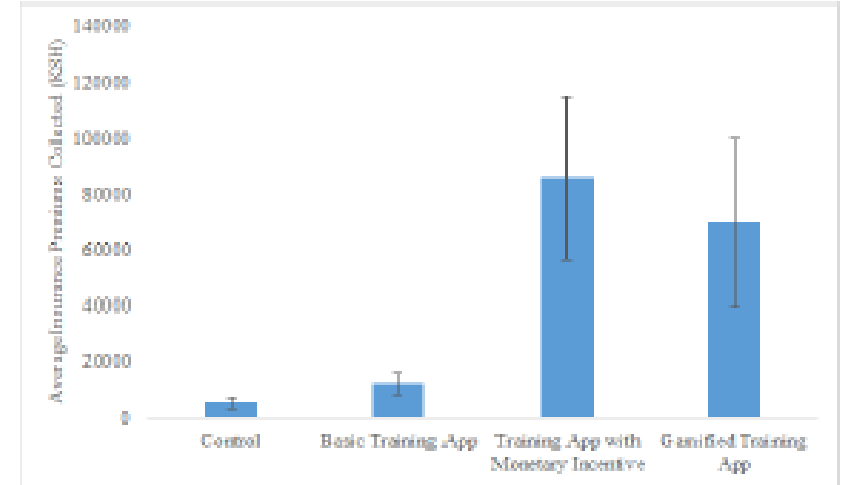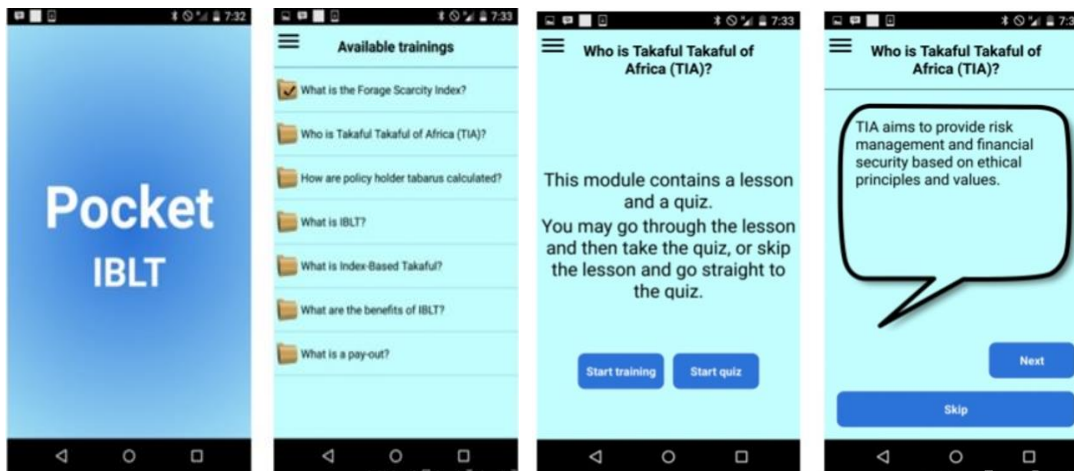




- Access to the application increased sales dramatically for incentivized agents.

- 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*

- Crowdsource 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.

**Herders Submit Vegetation Images and Surveys with Smartphones**
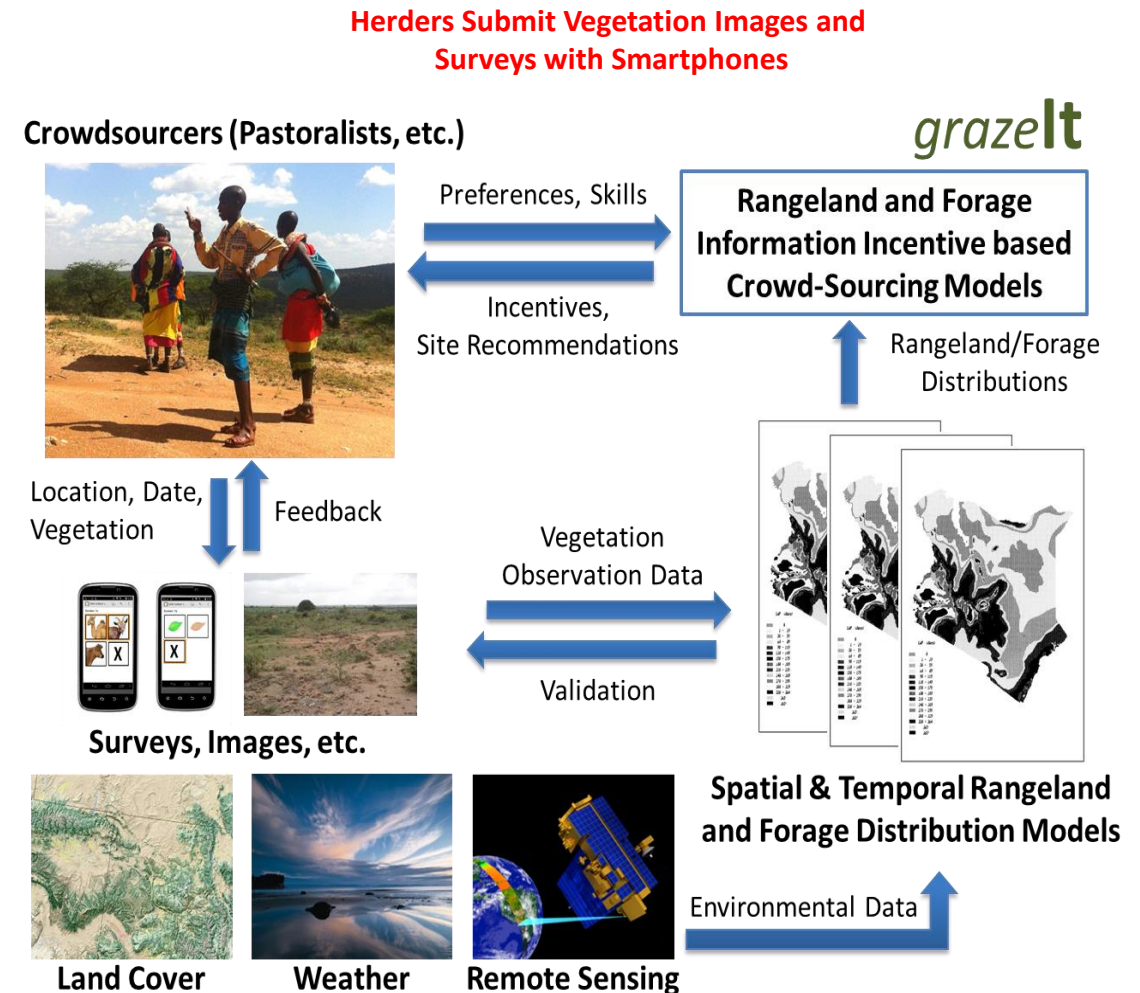
# Mobile Phones as a Data Provisioning Tools

## Crowdsourcing Livestock Market Information Systems...the pilot

### System Schematic
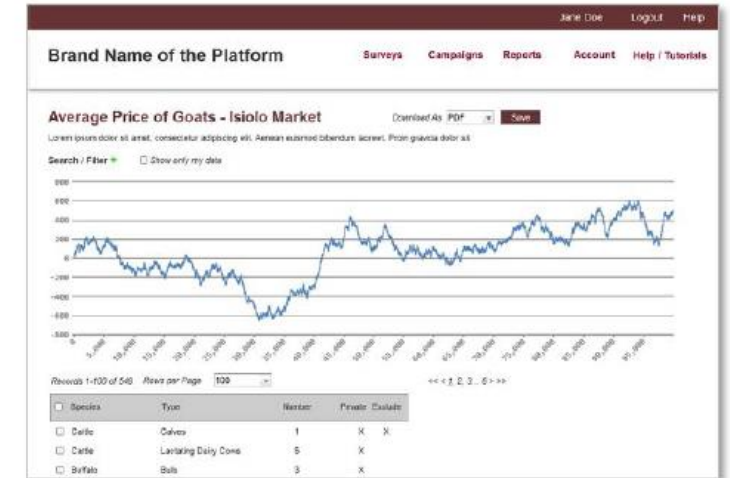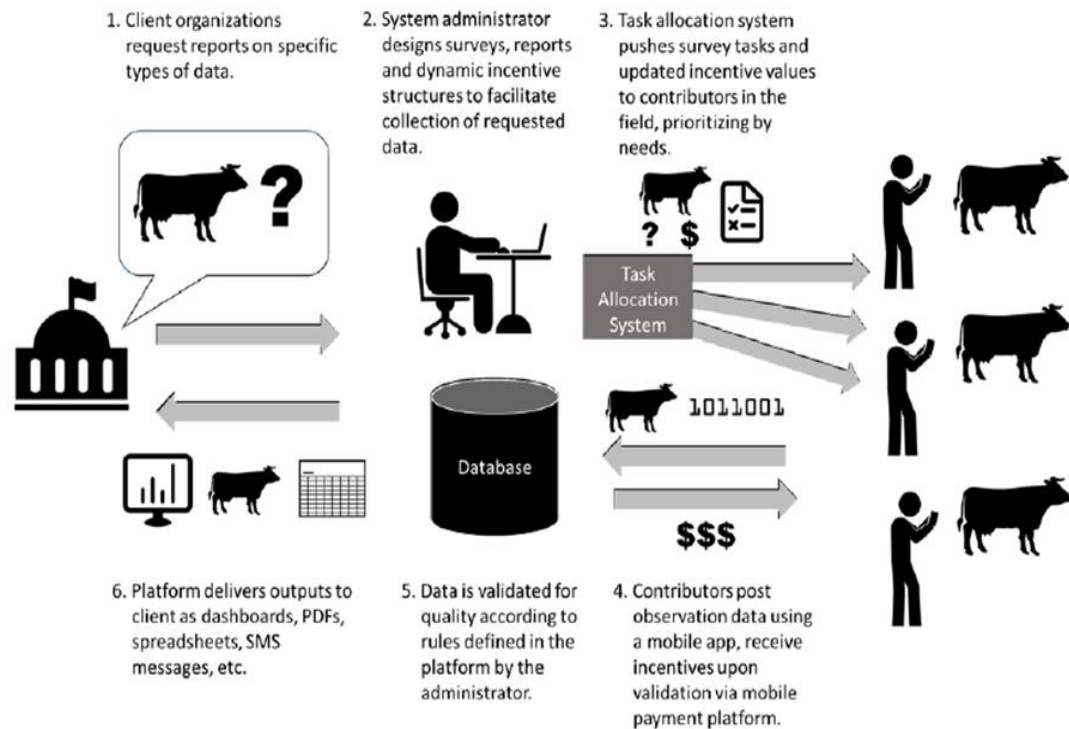
# Leveraging mobile for rural agricultural development

- **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
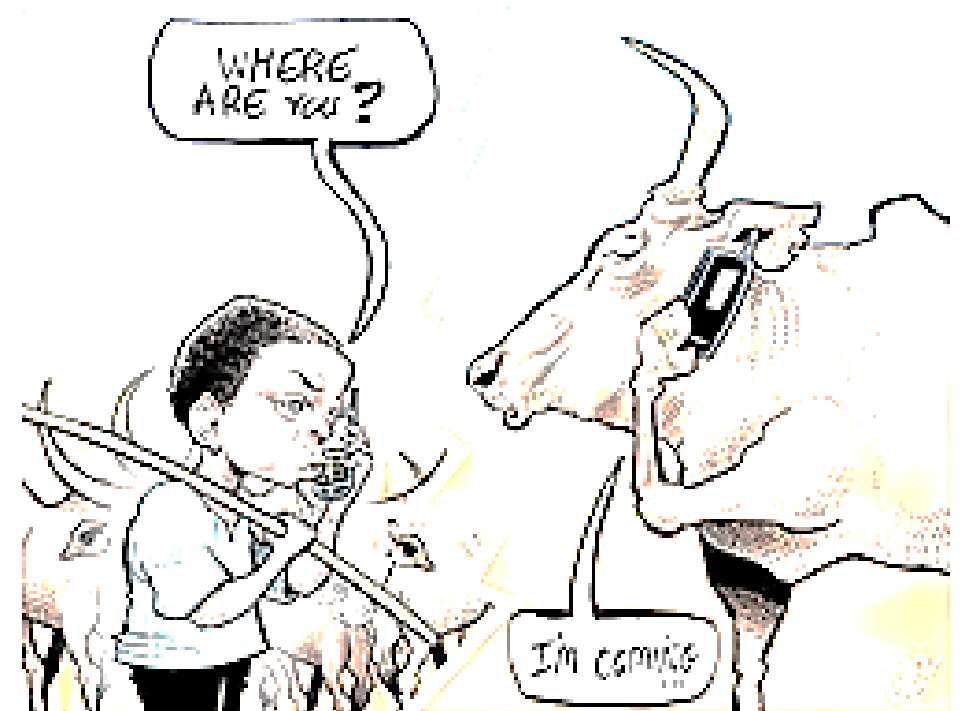
# It Takes a Village



IBLI Policy and Academic Workshop – July 2015

# Thank you!

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

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ilri.org

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

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