

# Agriculture and Open Data

29 January 2016

Colombo, Sri Lanka



# Who are we?

- A regional think tank active across Asia Pacific
- Worked in telecom, agri, e-gov, electricity etc



# Some previous work in Agriculture

- ICTs, Transaction Costs & Traceability in Agricultural Markets (2006-2008)
  - Research focusing on Gherkins supply chain. Funded by IDRC
- Price Transparency through ICTs: (2009-2010)
  - Research on providing market prices for farmers in Dambulla, Sri Lanka. Funded by ENRAP
- Supply chain studies (2010-2012)
  - Study on information and knowledge requirements of 6 supply chains in BD, IN, LK. Funded by IDRC
- Regional FAO Workshop on the use of Mobile Technologies in Agriculture (8th April 2012)
- Use of ICTs by the rural poor in select Asian economies (2013-2014)
  - A gender focused study on use of ICTs by rural poor in select Asian economies. Funded by FAO

# Why this approach?

- Previous research shows:
  - that changes can take place with provision of accurate and timely information/knowledge and incentives.
  - Export oriented value chains bring in more money for farmers
  - Information/knowledge given on pull basis works better than those given on push basis

# Research method

Identify crops facing quality issues

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graph TD; A[Identify crops facing quality issues] --> B[Identify information/knowledge relevant to identified crops available with institutions and personnel.]; B --> C[Digitize information/knowledge pertaining to the identified crops]; C --> D[Create mobile app to access digitised information/knowledge and introduce the app to farmers]; D --> E[Assess the impact of app]; E --> F[Dissemination];
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Identify information/knowledge relevant to identified crops available with institutions and personnel.

Digitize information/knowledge pertaining to the identified crops

Create mobile app to access digitised information/knowledge and introduce the app to farmers

Assess the impact of app

Dissemination

# Why this method?

- 95.6 Mobile SIMS per 100 by 2013\*
- By Q4 2014 its estimated that 22% of the phones sold were smartphones\*\*
- App interfaces – what works? Use of images and icons\*\*\*
- Rigour necessary for sustainability, replicability and scalability
- Sustainability – Commercial potential
- Replicability – Can be used for other crops

Sources:

\*International Telecommunication Union

\*\* <http://www.idc.com/getdoc.jsp?containerId=prIN25472415>

\*\*\*Agrawal, R., Atray, M., & Sattiraju, K. S. (2013, September). Exploring suitable interfaces for agriculture based smartphone apps in India. In Proceedings of the 11th Asia Pacific Conference on Computer Human Interaction (pp. 280-285). ACM

# Which crops?

	How common are problems?		How big is production?		Avg Export vol (MT)**
	Rank	No of 1920 calls (2006-2014)*	Rank	Avg Production (MT) (2006-2012)*	
Banana	1	19,236	1	415,301	12,265
Papaya	2	17,914	8	28,338	927
Chili	3	11,731	5	62,192	147
Mango	4	9,804	4	68,471	41
Brinjal	5	7,808	2		
Tomato	6	6,136	3		
Pepper	7	6,015	9	15,230	9,671
Betel	8	5,807	7	30,338	2,966
Ginger	9	5,433	11	11,621	83
Beans	10	5,229	6	42,145	0.9

Final list:

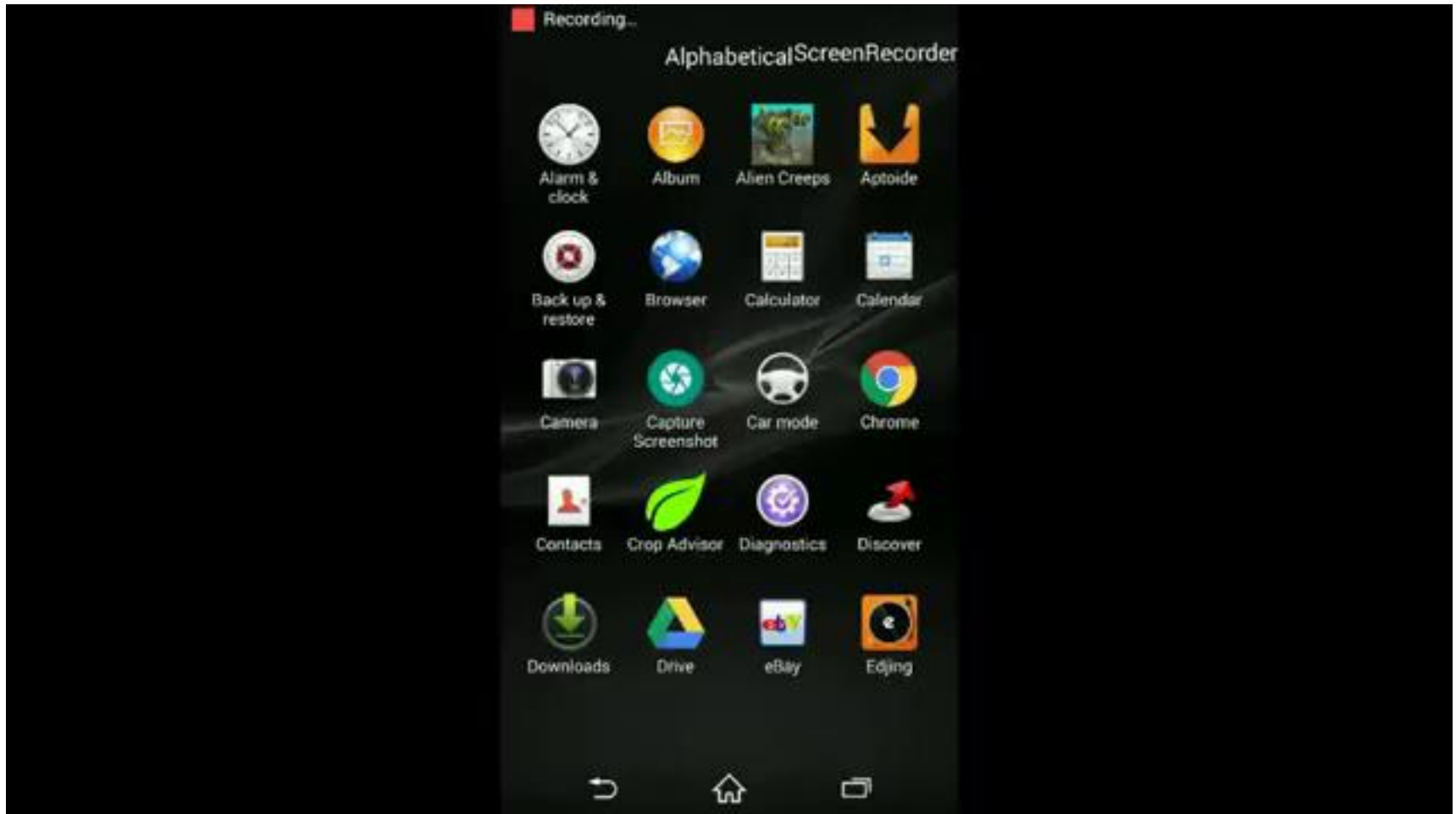
- Cucurbits + Banana + Papaya + Mango

•Source: Department of Agriculture

\*\*Sources: Department of Agriculture, External Trade Statistics- Sri Lanka Customs, Export Development Board

# Demo

<https://www.youtube.com/watch?v=ac0NGa8Z0K8>





# What can LIRNEasia contribute?

- Learnings from the field testing
- Results of the impact studies
  - Research rigor using quasi experimental method
- Ability to conduct impact studies (or evaluations) on-going or up-coming projects