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Using ICT to Increase Impact of Agriculture Value Chain Development



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Outline

1. Why care about ICT in AG value chain development?
2. Where ICT fits in project design
3. Opportunities related to ICT
4. Some ICT Options
5. Key ICT Challenges
6. A Few Examples
7. A Few Questions
8. Resources

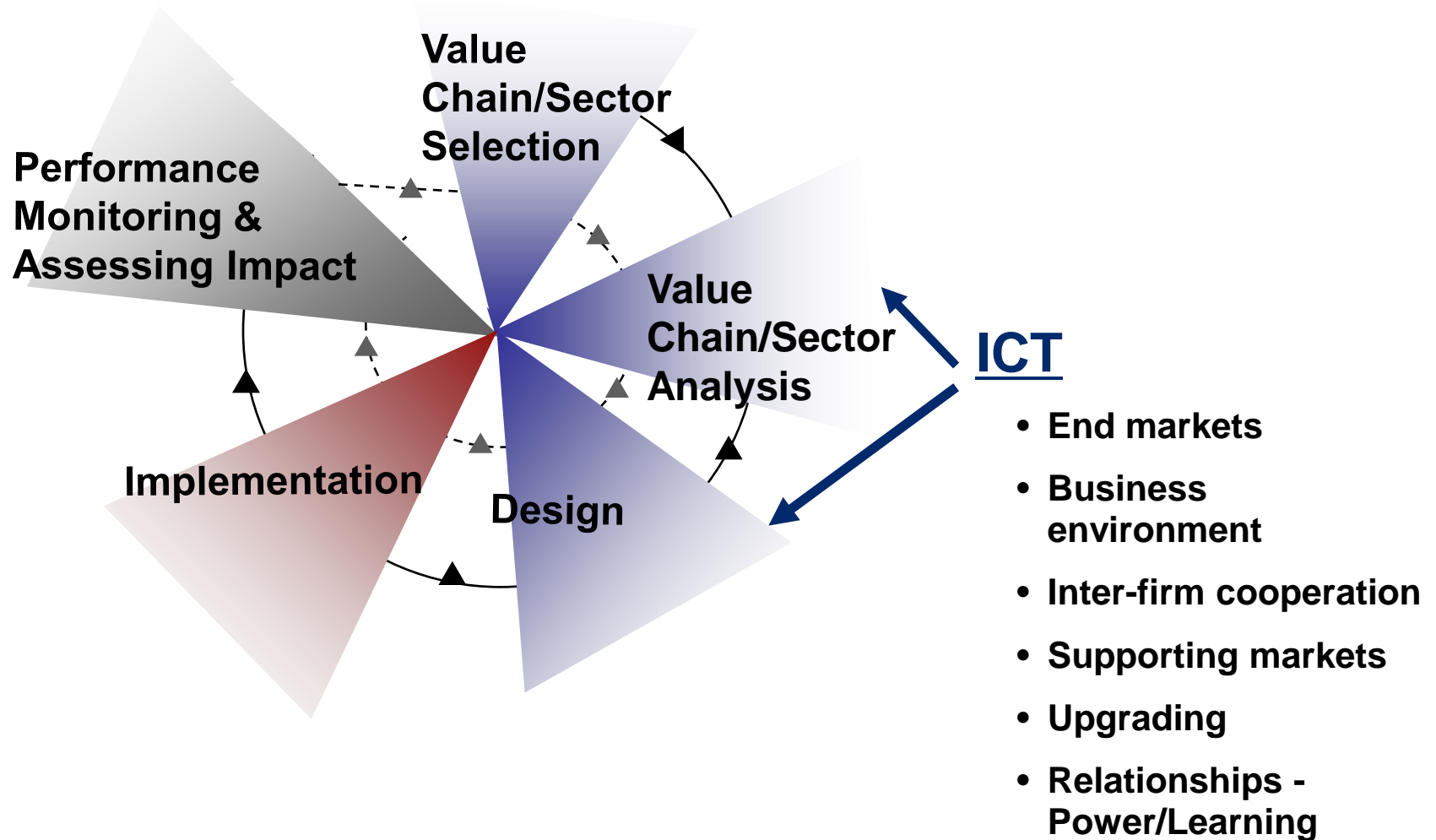


1. Why care about ICT in AG value chain development?

ICT can help you tackle key challenges in VCD

Key Challenge	How ICT can help
Poor access to good market info and weather info	Market info systems; much better weather info
High transaction costs for buyers working with 1000s of farmers	Apps to speed, help buyers manage/reward 1000s of farmers
Side selling frustrates buyers	Apps to speed payments by large buyers
Poor access to quality extension services	Strong range of new apps using (combining) phones, radio, video; reaching <u>millions</u> of farmers
Enabling environment needs changes	Advocacy via broad SMS apps
Poor access to affordable financial services	m-Money/m-banking; ICT-enabled indexed insurance; apps to help banks manage loans, increase re-payments

2. Where ICT Fits in Project Design



Keeping ICT in mind during Value Chain Analysis

- **Questions to ask during value chain/sector analysis**

- What types of ICT are VC actors already using – shared or not?
- What types do they have access to – how affordable?
- Sources of power – price, availability?
- Competition between providers you can leverage?
- Other donor projects using ICT to piggyback on?
- Universal service fund opportunities?

- **Questions for experts in target end market(s)**

- How does competition use ICT along its value chain?
- How do key end market customers use ICT today?
 - Internally
 - With other suppliers



3. Opportunities Related to ICT

- Mobile networks *especially* expanding dramatically
- The poor use cell phones
- MNOs handle voice, text and data apps
- MNOs competing hard for market share, and to reduce churn



4. Some ICT Options

ICT includes:

- Mobile networks
- Radio
- Video (stand-alone)
- Plethora of “devices”
- GIS
- Digital cameras
- Internet

And ICT channels augment more traditional ones:

- Face-to-face training, demo plots, chalk boards
- Strengthening of farmer groups

Fast feedback loop from farmer is unprecedented – “voice of the farmer”



4. Some ICT Options, *Continued*

More ICT-enabled options:

- “Push” or “pull” or both
- Mediated or direct access
- Back-end applications
- Cloud computing
- Combine with non-AG apps
- Business models:
 - Sponsored (MNO, big buyer...)
 - Farmers pay (collectively, individually; pay-as-you-go vs. subscriptions)
 - Government pays
 - More



5. Key ICT Challenges



Sustainable scaling: beyond “success story”

Plan exit strategy up front

Public-private partnerships -- but not in lieu of competition

The lure of “cool” devices!

Try to use/adapt available platforms, apps, service providers

Measure impact

Is ICT most *cost effective* approach?

Avoid compensating for poor telecom access

***Affordable access: telecom enabling environment,
possible use of telecom universal service funds***

6. A Few Examples

Problem	Use ICT to improve	Examples
Where to sell and for how much?	Fast access to market info – often combined with other info	e-Choupal (india), Reuters Market Lite, Esoko (SSA)
Spoilage, traceability, trying to improve quality of products		
Farmers so small cash flow financial		
Face-to-face advice too costly so cannot reach many farmers.	services – complements face to face training and demo plots	DigitalGreen (video) IKSL (India with Airtel) Radio (many places) Kencall (Kenya)
High transport costs; pricing and transactions not transparent.	Warehouse receipt systems, Commodity exchanges	Caution! Difficult area to see cost effectiveness; many trying

- Most AG projects are already using some ICT
- Most not “packaged” as cool case studies
- Jury still out on most
- Danger of development “legends,” awardees
- Large buyers using/paying for ICT tools

Another Quick Look at Range of ICT Applications

Problem	Use ICT to improve	Examples
Where to sell and for how much?	Fast access to market info – often combined with other info (weather, AG advice)	e-Choupal (india), Reuters Market Lite, Esoko (SSA), Infotrade (Uganda), Manobi (Senegal)
Spoilage, lack of traceability, managing 1000s of producers	Supply chain management	Many private examples: Dunavant Cotton; SourceTrace (Mexico, Costa Rica); Sugar cane plantation (Kenya)
Side selling, risks of cash, hard to reach financial services	Delivery of financial services – <u>traditional and those only possible with ICT</u>	m-Money (Kenya, more) Indexed weather insurance; banks using to manage loan payments, reminders
Too few farmers receive up to date extension services	ICT-enabled farm extension services – complements face-to-face training and demo plots	Grameen AppLab CKW; DigitalGreen (video); IKSL (India with Airtel); Radio (many places); Kencall (Kenya)
High transport costs, pricing and transactions not transparent	Warehouse receipt systems, Commodity exchanges	Caution! Difficult area to see cost effectiveness; many trying

6. A Few Examples

Dunavant Cotton: Financial and Supply Chain

Where: Zambia.

Problem: Side selling; no visibility of best producers.

How it works: Agents pay farmers on the spot. Best producers tracked, rewarded.

Who Pays: Large buyer (Dunavant)

Scale: 110,000 small farmers.

Impact: Small farmers paid faster, rewarded for quality.



USAID PROFIT project catalyst

Private company sees clear gains

Small farmers win too

Started to solve side selling, but led to other gains

5. A Few Examples, *Continued*



Reuters Market Lite: Market Prices (and More)

Where: India (with exploration in Sub-Saharan Africa).

How it works: Market prices, weather, tips on farming via SMS personalized by crop, region, language. 300 content specialists with info on 250 crop types.

Who Pays: Farmers subscribe. Not yet breaking even.

Scale: Over 200,000 farmers subscribe in 15,000 villages in 12 states.

Impact: 1 study found benefits; second study now underway (IFPRI and Oxford) with control group.

Several types of information combined

No donor funding

Farmers pay

5. A Few Examples, *Continued*



Digital Green: Farm Extension Services

Where: India (exploring options in sub-Saharan Africa).

How it works: NGO helps farmers produce videos showing improved practices. Feedback loop via IVR (phone).

Who Pays: Donors + farmer association subscriptions farmer orgs. Not sustainable based on subscription fees alone.

Scale: So far 600 villages with 42,000 farmers.

Impact: 10x more cost effective than traditional approaches and adoption of better practices increased 7 fold. Larger scale control trial now under way.

Uses low-end video equipment well, involving farmers

Builds in feedback loop from farmers

Assumes ongoing subsidies available from gov't, others

Exploring expansion to SSA

7. A Few Questions

1. Are USAID FTF projects:

- Taking advantage of these and other promising ICT-enabled approaches?
- Using other scalable, effective approaches other projects could adapt?

2. What is impact and cost effectiveness?

3. How can public-private partnerships be used better?



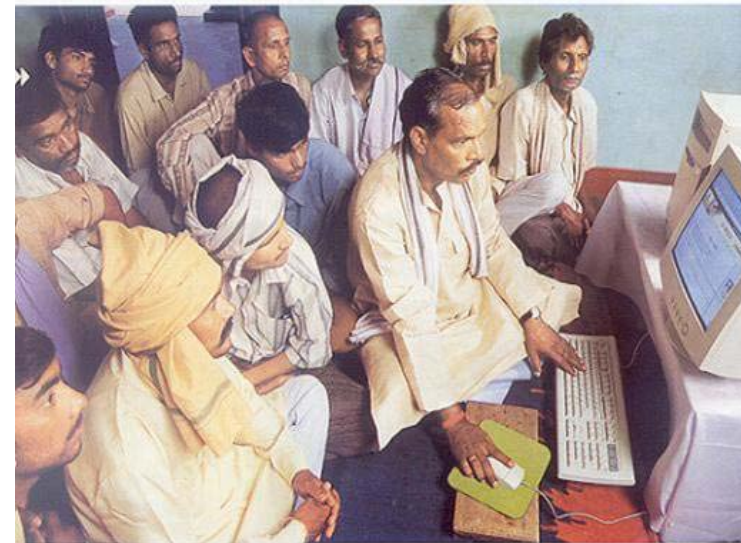
8. Resources

FACET (*google* FACET USAID):

- Briefing papers: 5 so far; 3 more underway
- Profiles of promising applications
- Short tech assistance to missions, projects

E-Agriculture: www.e-agriculture.org

World Bank: *future source book*





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FACET Papers and more:
<http://microlinks.kdid.org/learning-marketplace/news/facet-project-offers-briefing-papers-agriculture-and-ict>

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