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U.S. GLOBAL DEVELOPMENT LAB



USAID
FROM THE AMERICAN PEOPLE

Digital Development for Feed the Future

May 20, 2016



Focus for Today:

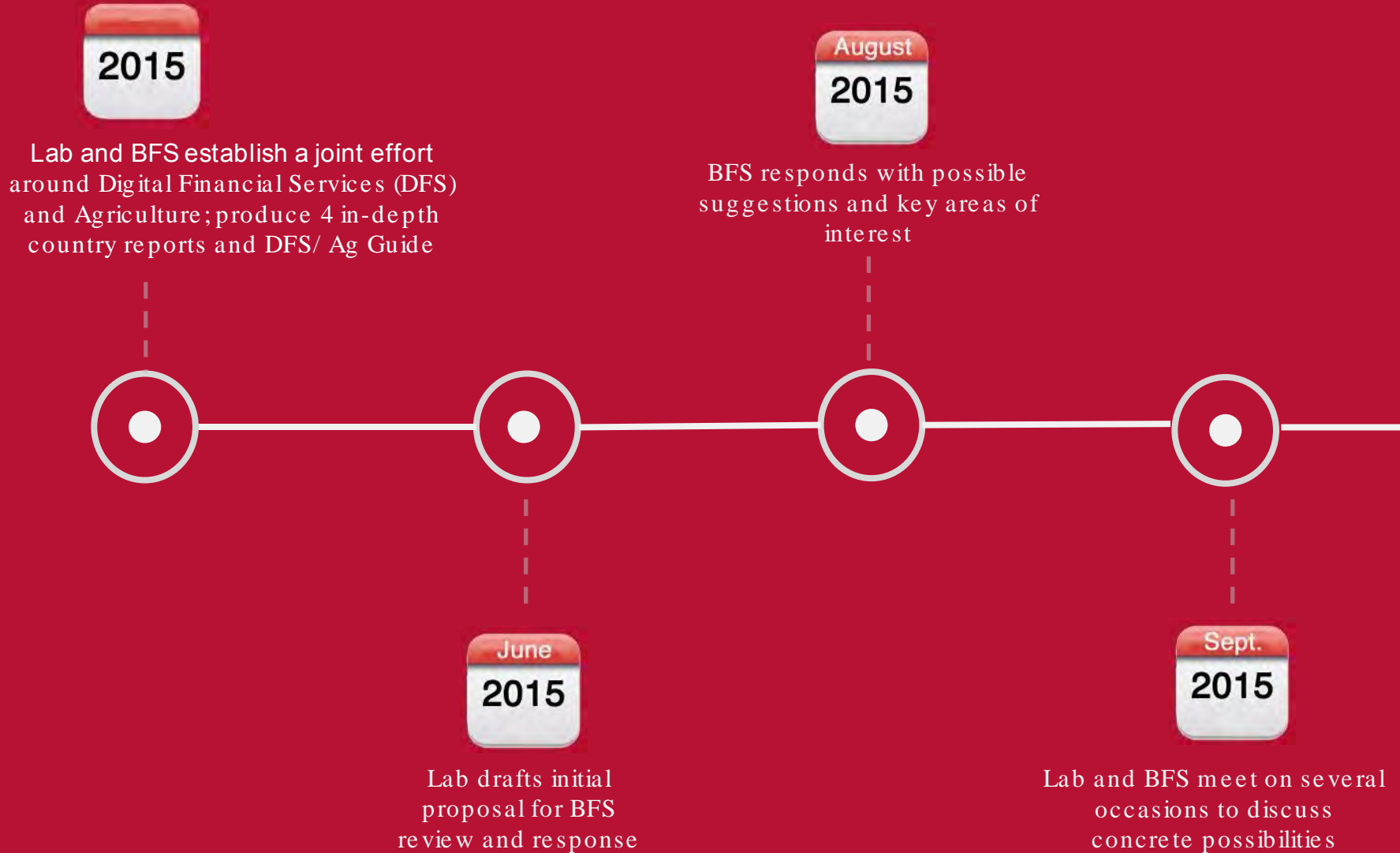
1. History of Collaboration
2. The Digital Opportunity in Agriculture
3. Vision of Digital Development
4. Digital Development for Feed the Future
5. A Redefined, Future “Internet of Things”
6. Discussion



Image source: Shutterstock

History of Collaboration

History and Context of Collaboration



History and Context of Collaboration

Oct-Nov
2015

Lab starts to recruit team members; BFS identifies POCs for collaboration; smaller, technically-focused and introductory level meetings held between the two bureaus

Jan.
2016

DFS Workshop is held in Uganda for Feed the Future IPs and Mission Stakeholders

Dec.
2015

DFS Workshop is held in Ghana for Feed the Future IPs

History and Context of Collaboration

Feb.
2016

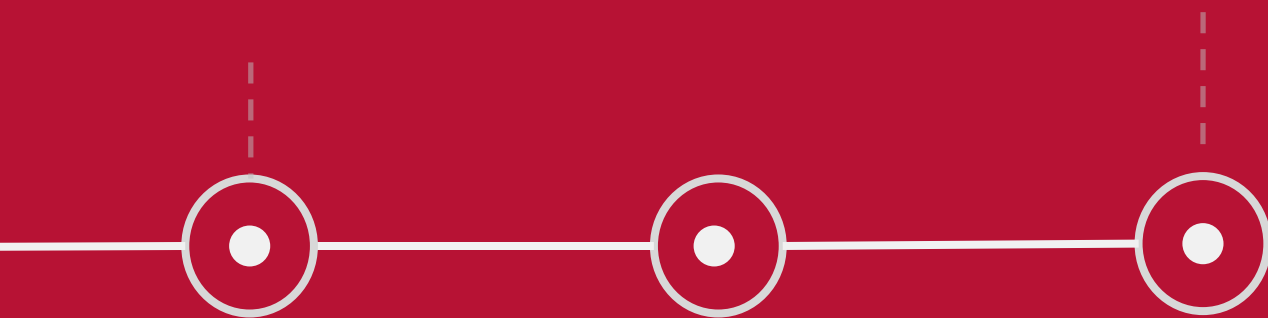
The *Guide to the Use of DFS in Agriculture* is finalized and launched publicly

TODAY

Collaboration officially kicks off at the BFS All Hands Meeting

March
2016

Terms of Reference are finalized and signed by BFS/ AA and Lab/ ED





The Digital Opportunity

Facts & Figures



51%

Increase in unique mobile phone subscribership in sub-Saharan Africa from 2010-2015



5.5x

growth in smartphone adoption globally, 2010-2015

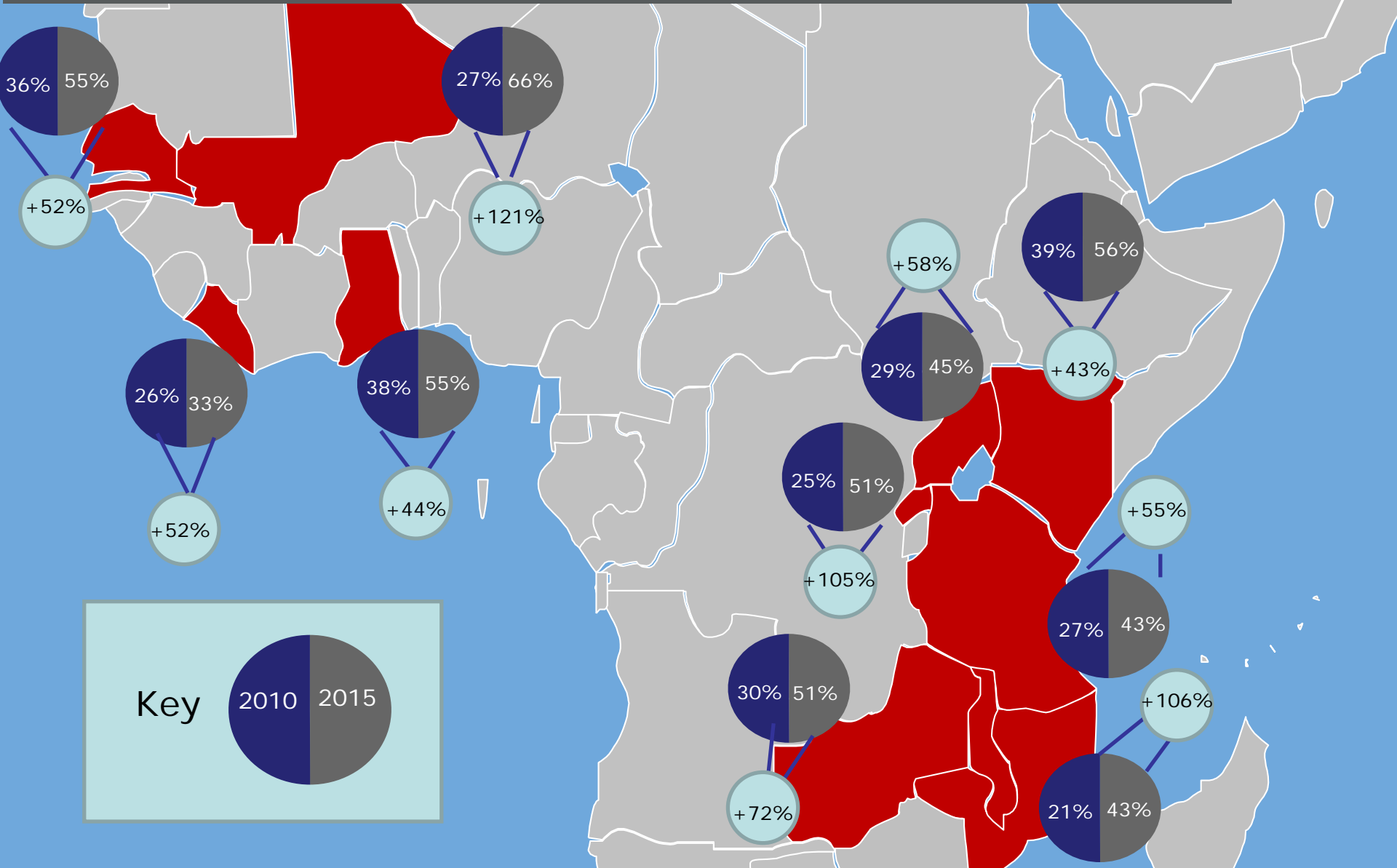


202

new mobile money deployments globally since 2010 (as of 2015)

The Market - Growth in Unique Subscribers

Feed the Future Focus Countries – East & West Africa



The Digital Economy - Ups and Downs

Upside: rapid mobile adoption

2010-2015:

→ *Growth in unique mobile subscribers*

+44% in Ghana

+121% in Mali

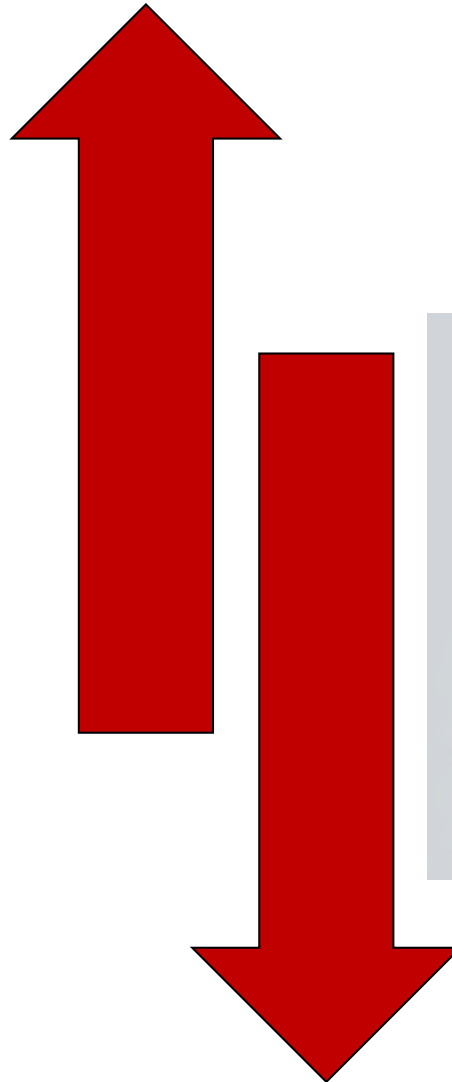
+109% in Nepal

→ *Growth in smartphone adoption*

+675% in Cambodia

+758% in Uganda

+1010% in Honduras



Downside: sustained mobile gender gaps



Women are on average 14% less likely to own a mobile phone than men,

which translates into **200 MILLION** fewer women than men owning mobile phones

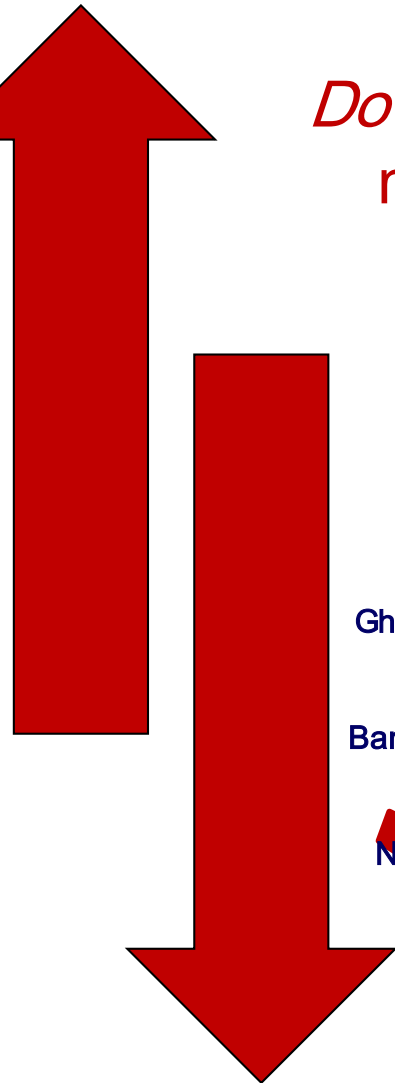
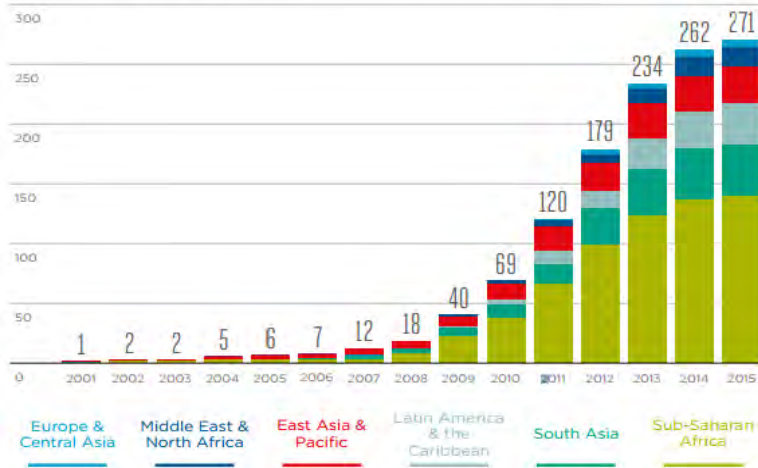
The Digital Economy - Ups and Downs

Upside: mobile money deployments on the rise

Downside: high costs of mobile broadband

202 new mobile money deployments since 2010, globally

Number of live mobile money services by region (2001-2015, year-end)



	500 MB data plan cost	Hourly min. wage	Hours of work for 500 MB
Ghana	\$8.21	\$0.21	38
Bangladesh	\$7.36	\$0.39	19
Nepal	\$4.82	\$0.43	11



**\$430-440
BILLION**

The estimated shortfall in serving the global demand for smallholder finance.

1.5 BILLION

of people
living on smallholder
farms globally



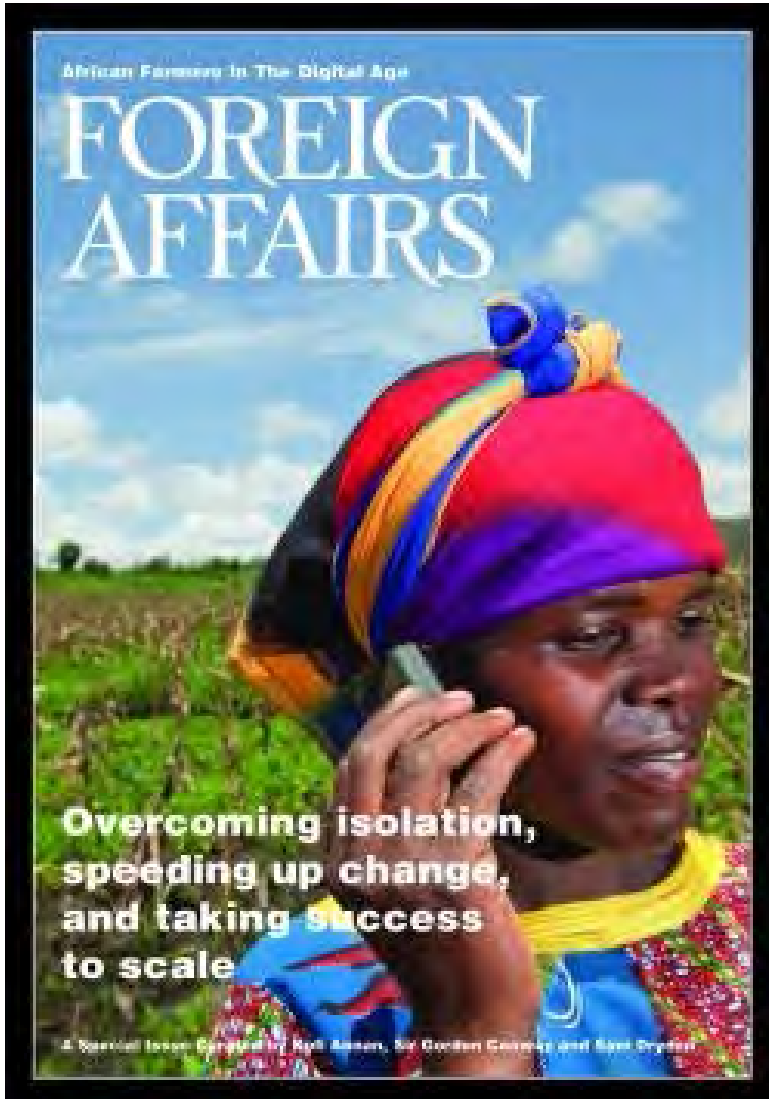
80%

**OF THE WORLD'S POPULATION IS
FED BY SMALLHOLDER FARMERS**



“African Farmers in the Digital Age”

Special February 2016 Issue of Foreign Affairs



Digital technologies will...

- A. Reshape farmer growth models
- B. Revolutionize farmer organizations
- C. Put African smallholder farmers squarely as part of the solution and not just as part of the problem
- D. Lower barriers and distance to markets for isolate smallholders
- E. Revamp tradition extension models
- F. Foster better, twoway and real time feedback loops, and
- G. Improve farmer decision-making and competitive advantage.



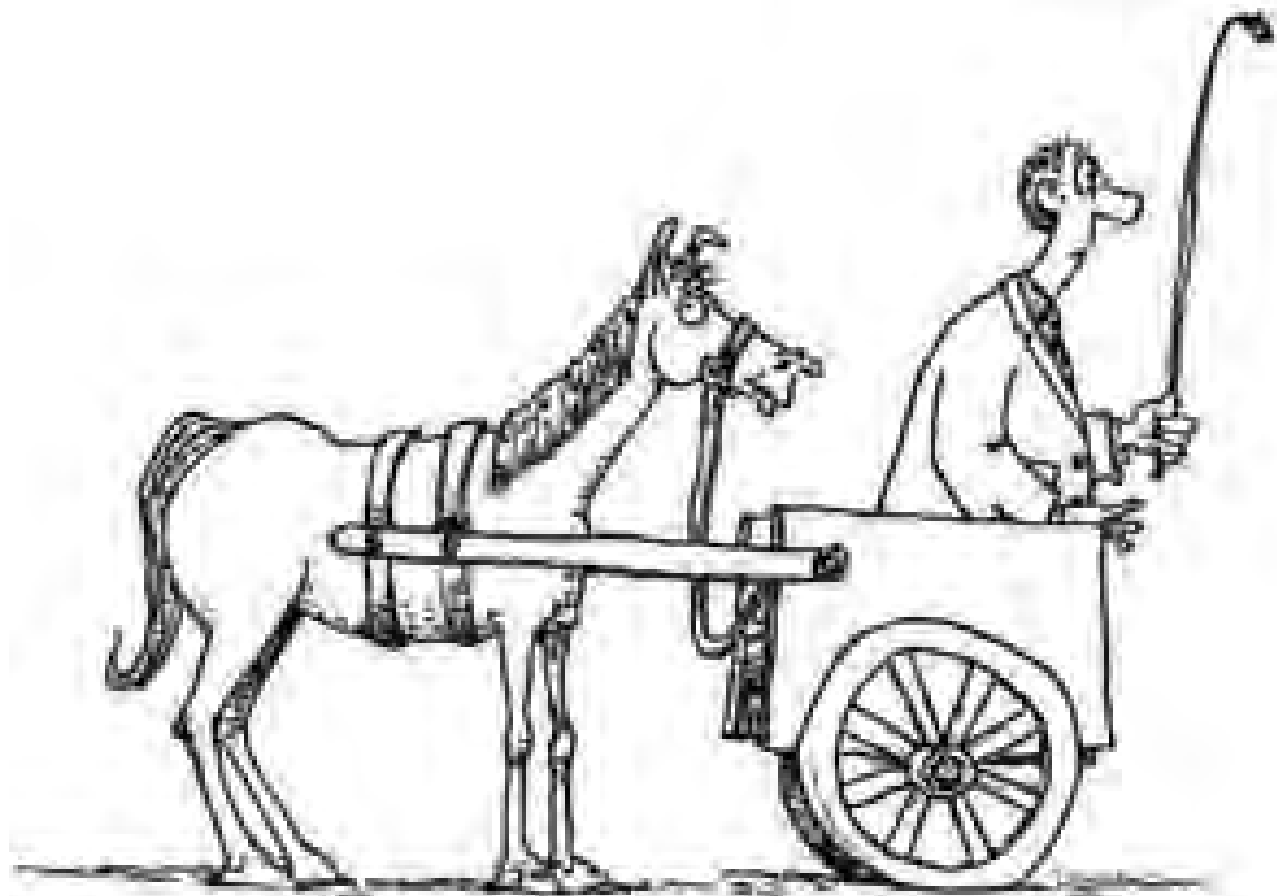
digitalGREEN

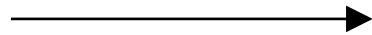


esoko

Agro-Hub







“Agricultural development is rightly recognized as a key pathway out of poverty for countries in which millions of people live off their labor on the land. But for agriculture to succeed in sowing prosperity across Africa, we need to look at the industry holistically. Without solving the most important components of the supply chain, powerful technology and communications tools and solutions will flounder.”

-Jamila Abass, CEO and
founder of m-Farm



Vision of Digital Development

Image source: Shutterstock

Inclusive Digital Economy

ENABLERS



Inclusive Digital Economy

And includes cultivating a healthy **enabling environment** which supports the critical policies, regulations, and infrastructure that underpin the digital economy



Inclusive national policies & regulatory reforms



Mobile & broadband infrastructure for connectivity



Digital financial platforms



Real-time data systems & similar platforms



Affordable devices & broadband services

ENABLING ENVIRONMENT

By supporting and helping to shape these “building blocks”...



Our vision is that **digital development** lays the foundation for an integrated set of tools and services that empowers people to live more productive and resilient lives.



Image source: Shutterstock

Digital Development for Feed the Future

D2FTF Theory of Change

Through the application of a coordinated suite of digital tools and technologies, based on strong evidence, this collaboration will accelerate the top-line objectives of Feed the Future: inclusive agricultural sector growth and improved nutrition of women and children.



Development Hypotheses (*illustrative*)

If there is reliable and affordable **network connectivity**, and widespread **digital literacy**, then...



...people will be more able to employ **digital financial services** to meet their economics and livelihood needs...

...leading to greater **financial inclusion**, a component of **agricultural productivity** and **economic growth**.



Development Hypotheses (*illustrative*)

If smallholder farmers can receive **timely and individually-tailored agronomic information** based on *where they live; what they grow; and the time in the crop cycle...*

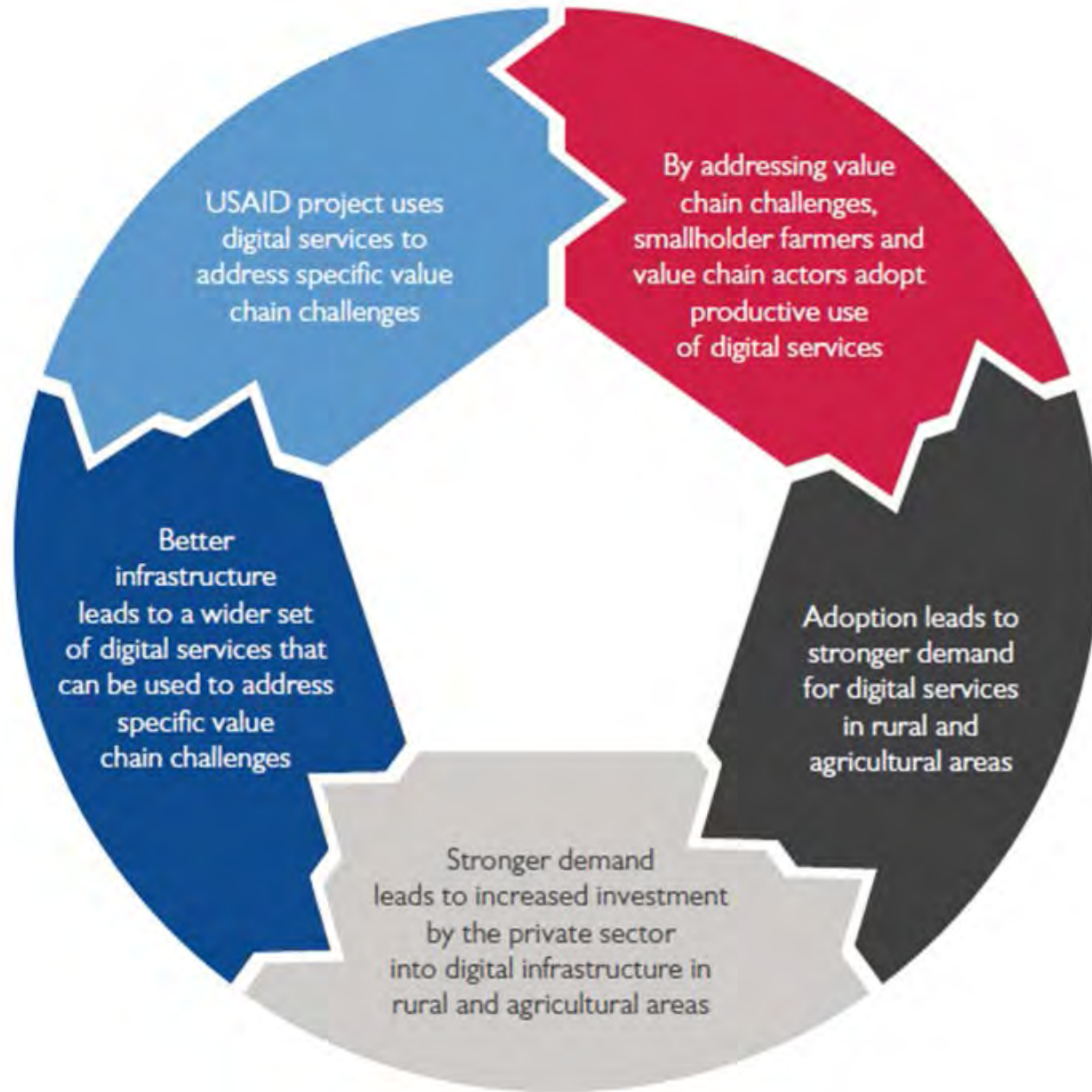


...such as through **mobile/ digital agricultural extension delivery** services...

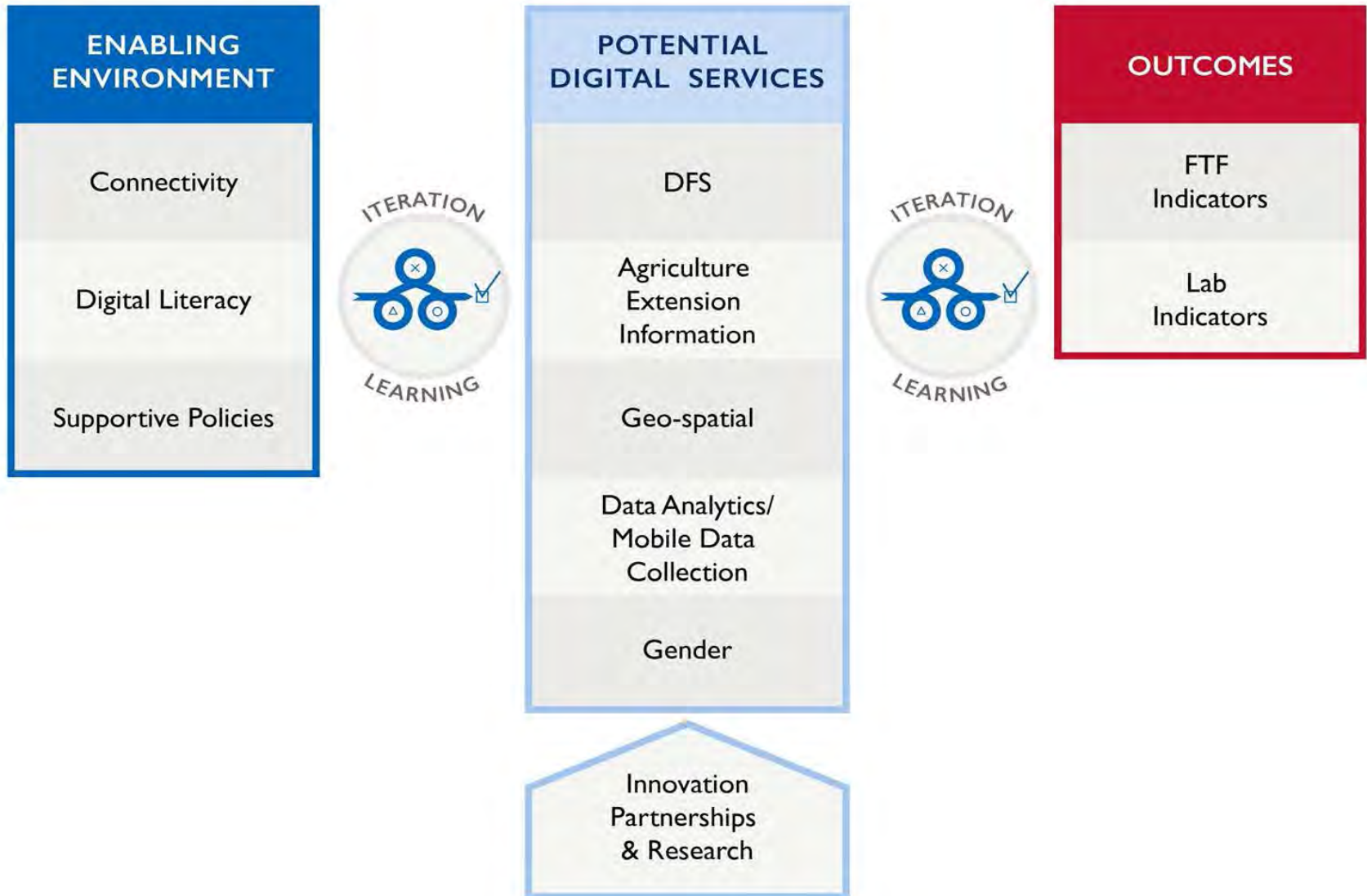
...then the probability of adopting new agronomic technologies correctly will increase and lead to **greater productivity**.



Creating a Sustainable Ecosystem



D2FTF Work Flow



D2FTF Primary Activities

Activity	Description	Status
Technical Assistance to Feed the Future Implementing Partners	<ul style="list-style-type: none"> Work with Feed the Future programs in select countries to provide technical assistance to IPs in order to integrate digital tools into their programs 	In Progress in Uganda and Ghana
Supporting the Enabling Environment	<ul style="list-style-type: none"> Work with USAID Missions and IPs in country to support the enabling environment for digital technologies 	In Progress in Uganda and Ghana
Capacity Building and Operational Support	<ul style="list-style-type: none"> Provide additional support to Feed the Future programs to USAID Missions by hiring personnel, FSN fellowships, etc. M&E support to Feed the Future programs using real time data, Geospatial analysis, Adaptive Programming and other tools 	In Progress in Uganda and Ghana
Supporting and Contributing to the Community of Practice	<ul style="list-style-type: none"> Organizing and contributing to conferences, convenings, etc. focused on digital technology for agriculture (i.e GES) Publication of guides (i.e. DFS for Ag), case studies, blog posts, etc. on relevant topics 	In Progress
Identifying and Scaling Blue Sky Technologies	<ul style="list-style-type: none"> Prize competitions or co -creation workshops, and potential research, focused on identifying new technologies and/ or adapting existing technologies for agriculture 	Preliminary Conversations with iDesign Team
Portfolio-wide Feed the Future Opportunities	<ul style="list-style-type: none"> Full integration of DFS across FTF (through guides, etc.), adaptive management practices, mobile data collection, research and innovation, BFS/ FTF-wide training and capacity building 	Not Started

(Likely) Countries of Focus



- Workshop with Feed the Future Implementing Partners (Dec 2015)
- Opportunities Document Shared with Mission (Feb 2016)
- Mission agrees to select activities (March 2016)
- Next Steps:
 - Drafting Scopes of Work and Workplans for: TA to IPs, Digital Literacy Training to IPs and Peace Corps, Affordable Connectivity Policy work, DFS enabling environment, M&E and Geospatial TA, and Digital Staffing



- Digital Financial Services in Agriculture Forum (Feb 2016)
- Workshop with Feed the Future Implementing Partners (Feb 2016)
- (Revised) Opportunities Document Shared with Mission (March/April 2016)
- Next Steps:
 - Agree upon workplan which will likely include: Digital Literacy Training, DFS and Digital TA, M&E through RTD and Adaptive Programming, Digital Savings Groups, Digital Staffing

Third Country
(TBD)

- Preliminary conversations with Bangladesh (Feb-March 2016)
- Potential alignment with Lab/DFS activities in CAM
- BFS has also expressed interest in Nepal and Cambodia; conversations to begin Spring/ Summer 2016

Illustrative Output

SUSTAINABLY REDUCE GLOBAL POVERTY AND HUNGER



ROADBLOCK

Smallholder farmers not competitive in commercial supply chains
DFS can enable: Digitizing payments throughout the value chain to lower costs for buyers (and farmers) and increase price transparency



ROADBLOCK

Appropriate credit products don't exist for smallholder farmers
DFS can enable: Lower transaction costs to lend to smallholder farmers, making credit more available



ROADBLOCK

Women disempowered in decision-making in agriculture
DFS can enable: Improved access to markets and better control of funds



ROADBLOCK

Limited ability to manage post-harvest loss and speculate for higher prices for harvests
DFS can enable: Access to storage facilities with inventory-based credit



ROADBLOCK

Smallholder farmers cannot save for long-term investments
DFS can enable: Savings products and services



ROADBLOCK

Cost of buying quality and quantity inputs is prohibitive and risky
DFS can enable: Increased purchasing power, reduced risk, decreased transaction costs



ROADBLOCK

Managing and mitigating weather risks to crops
DFS can enable: Weather-indexed microinsurance, purchase of weather risk-mitigating farm equipment (i.e., drip irrigation, climate resilient seeds)



The Lab's Offer to BFS



Resources

For the three-year effort, the Lab will provide \$6 million in FY2015 expiring funds, with additional funding assessed each year (including \$6m anticipated in FY16)



Dedicated Team

Full-time, dedicated team including:
Senior Coordinator,
Deputy Coordinator,
Program Analyst and
Sr. Advisor for Digital Development



Lab Expertise

Additional technical expertise in areas such as: Digital Financial Services, Real-Time Data, Geospatial Analysis, Digital Inclusion, Open Innovation, Research, Adaptive Programming and Partnerships

Geospatial Analysis



ETHIOPIA: FEED THE FUTURE (FTF) ZONES OF INFLUENCE (ZOI)

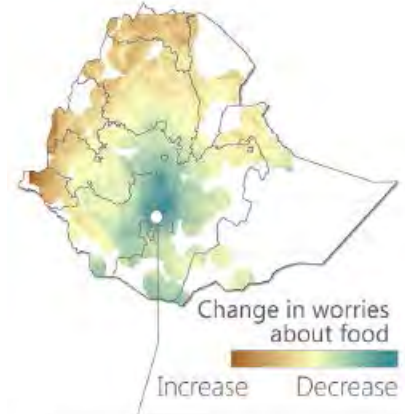
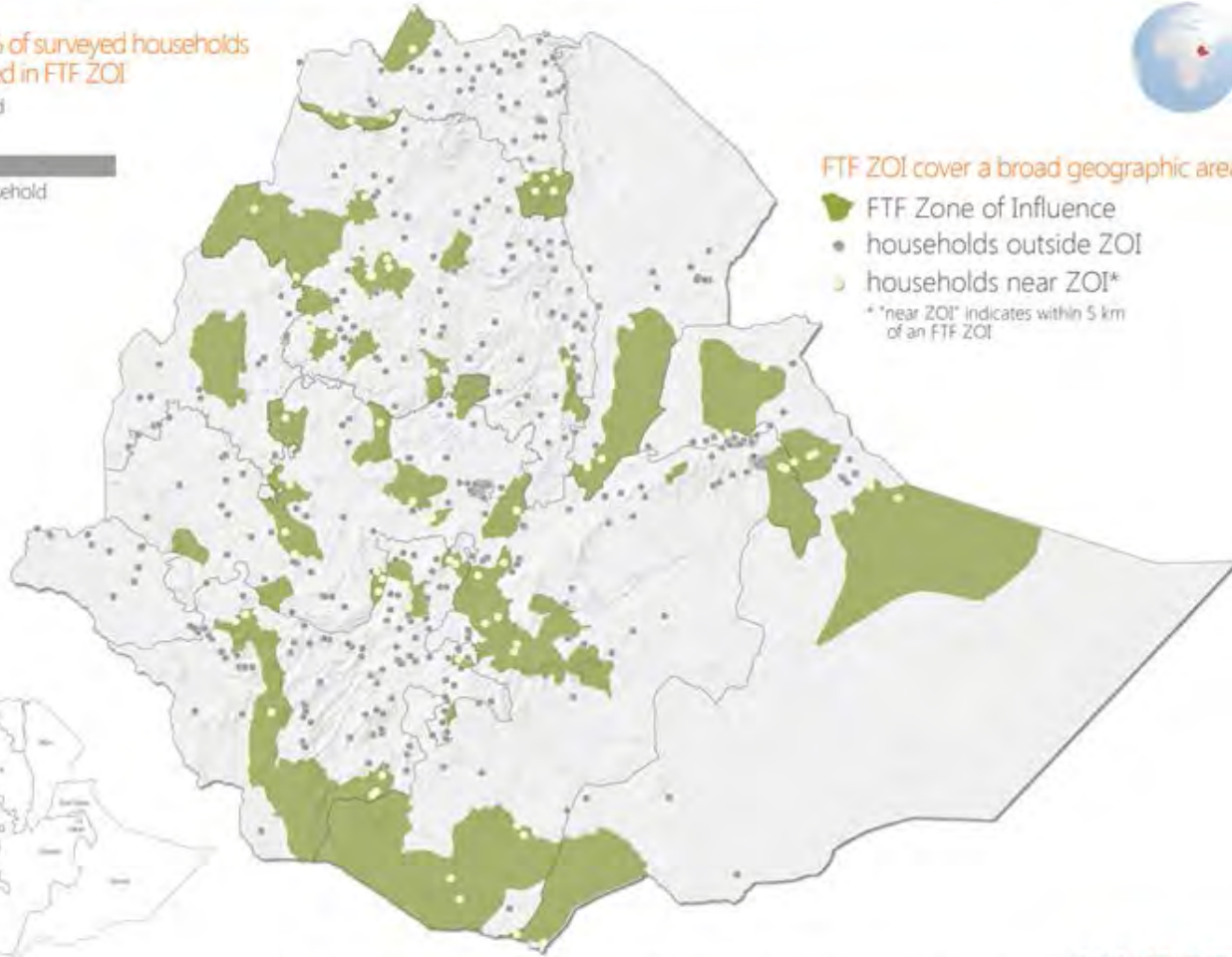
Nearly 25% of surveyed households were located in FTF ZOI

FTF household

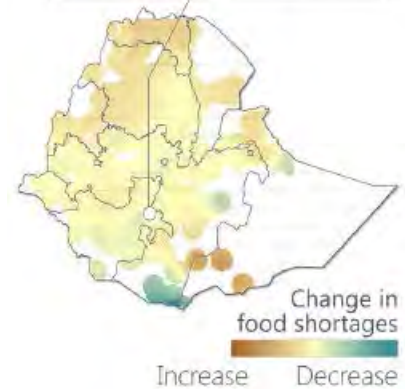
877

2,886

Non-FTF household



The central rift valley saw large improvements in food security perceptions. The areas in blue indicate regions that report fewer worries about food (above) and fewer months with food shortages (below) in February/March 2014 compared to February 2012, while areas in brown indicate worse food security.



Global Alliances and Mechanisms



- 17 Governments, including Ghana, Senegal and Bangladesh
- Over 40 members
- Advocacy and TA



- Policy reform (African B'band Partnership)
- Last mile, low-cost technologies
- Previous work in Nigeria and Ghana; spotlight on Indonesia



- 5 Governments, including Ghana and Nigeria; work in Liberia
- Over 80 members
- Policy reform



- 3 donors
- Global approach
- Focused on strengthening M4D sector



- Digital Tech. Assistance
- All digital streams



- 11 grants (Mali, CI, Nigeria)
- 15 million new women on device



Image source: Shutterstock

A Redefined, Future “Internet of Things”





7.03



15%







70%



60%



60%



10%



25%



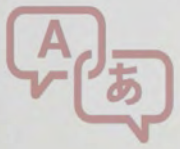
80%

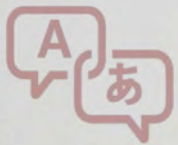


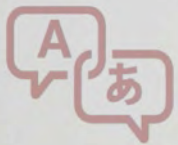


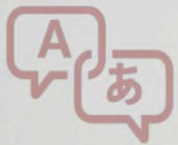


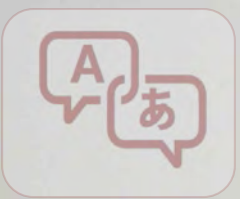


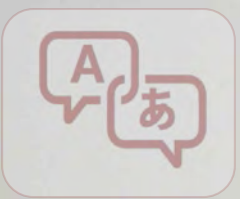


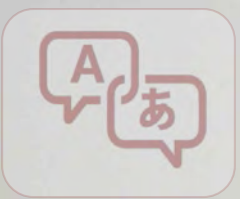


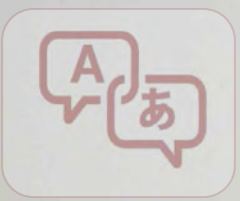


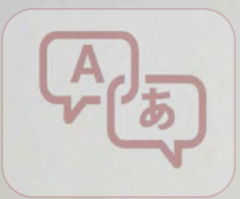


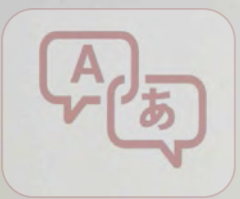


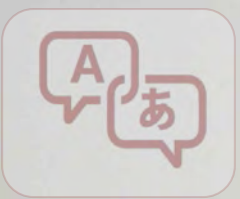


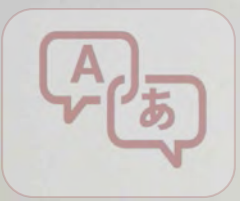


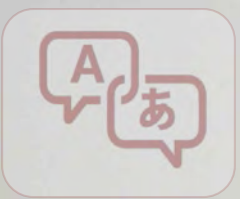












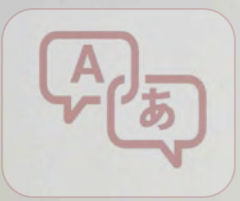








Image source: GSMA

Discussion

Where is the Evidence?

- What do we know works in applying digital tools to the field of agricultural development?
- Why has the Ag. sector not kept speed with other sectors?
- Do any studies, reports, case studies, etc. point to evidence that demonstrates impact or potential for impact?
- What have you seen to support this transition?



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