mAgri and Weather Content

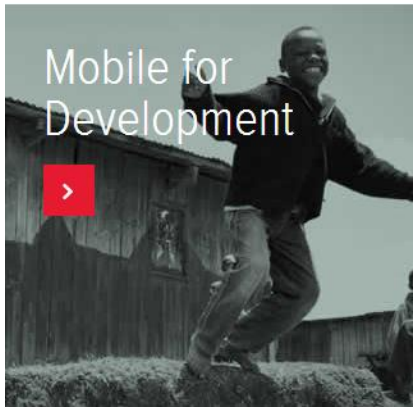
How mobile operators benefit from mAgri services and what weather content brings to the product mix

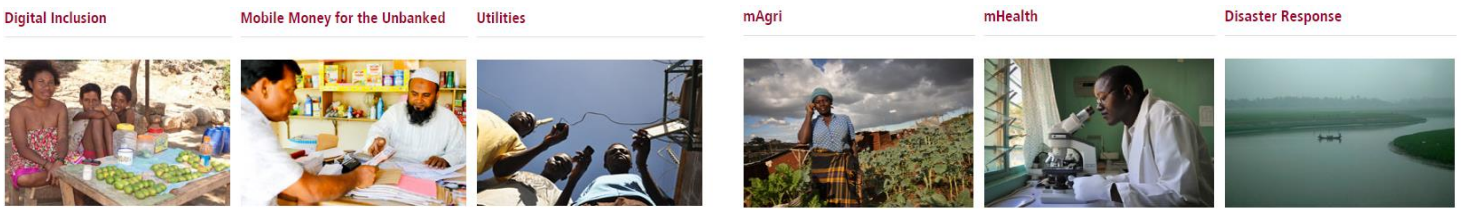
Why is GSMA involved?

Why Mobile Agriculture?

GSMA Mobile for Development works with the industry to develop commercial services for the underserved

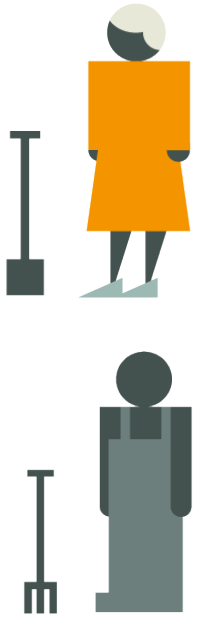
- GSMA Mobile for Development brings together our mobile operator members, the wider mobile industry and the development community to drive commercial mobile services for underserved people in emerging markets.
- We identify opportunities for social, economic and environmental impact and stimulate the development of scalable, life-enhancing mobile services.



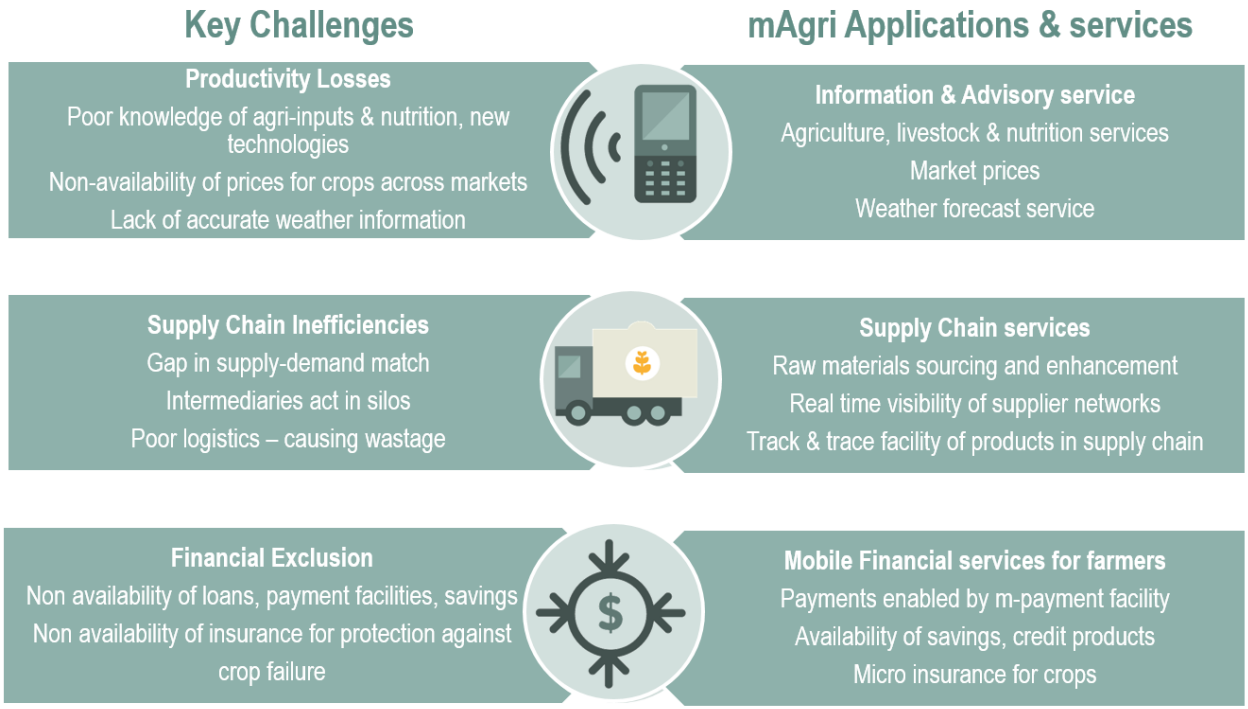


mAgri: Mobile as a key channel to provide critical information to smallholder farmers

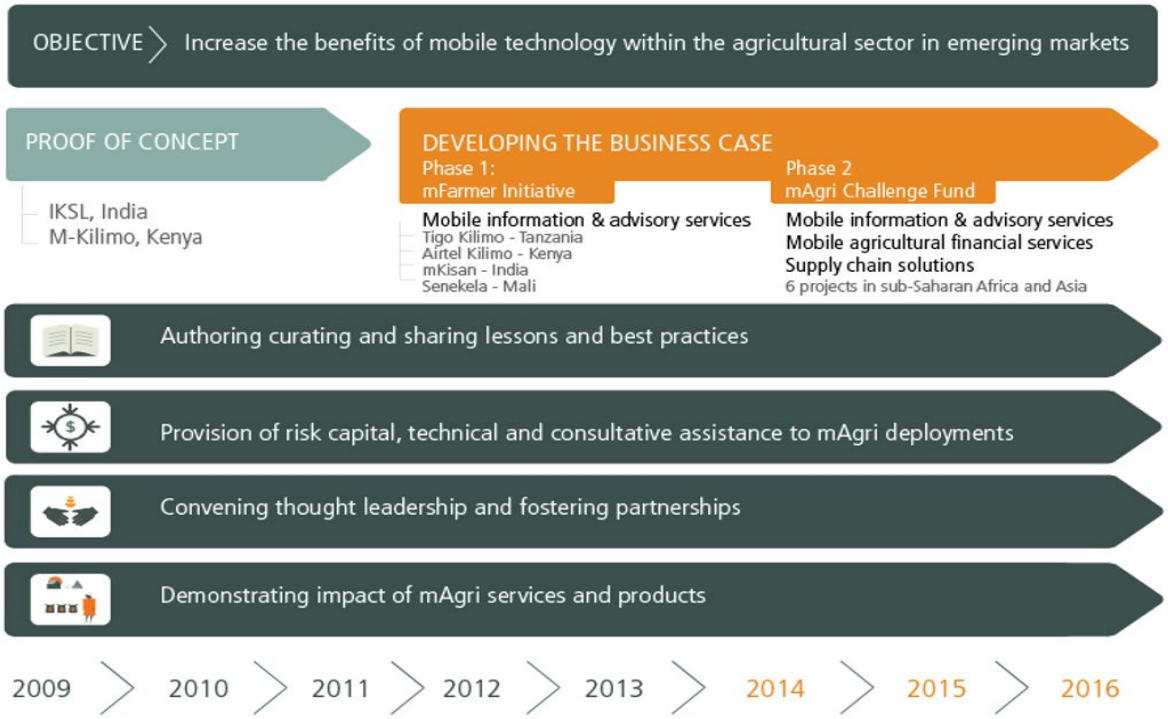
- Future mobile subscriber growth will be driven by rural areas, which GSMA estimates to be 1.8bn people throughout the next five years.
- Productivity of smallholder farmers is low in emerging markets due to poor access to information, affordable finance and efficient supply chain & infrastructure.
- GSMA mAgri is uniquely placed to leverage the mobile channel and bring together mobile operators, agriculture organisations and development community to foster sustainable, scalable mobile services.



What are mAgri applications and services for?



GSMA mAgri aims to catalyze the industry through direct engagement and knowledge sharing



mFarmer services have launched across 4 countries in Sub-Saharan Africa and South Asia

- Started in 2011, the “mFarmer” initiative has now come to an end. GSMA partnered with USAID and Bill and Melinda Gates Foundation.
- mFarmer provided support to design, launch and improvement of mAgri services for farmers.
- Support included seed funding, local content, consumer research and service design, technical assistance, support to build the product and develop the business case.
- Partnerships with operators, service providers and agriculture partners.

The mAgri challenge fund is our ongoing initiative aiming to reach 2 million smallholders

- Supported by the UK Government under the “mNutrition” initiative, the “mAgri Challenge Fund” launched in 2014.
- The challenge fund aims to reach 2 million users with life-changing mobile agriculture services.
- We provide risk capital to strong and innovative projects selected through a competitive application process - up to GBP 250,000 per project.
- Current grantees are Airtel Malawi, Vodafone Ghana, Dialog Sri Lanka, Telenor Pakistan, Grameenphone Bangladesh and Ooredoo Myanmar.

Business Model Considerations for Mobile Network Operators (MNOs)

mAgri services show potential to generate direct and indirect business benefits for MNOs

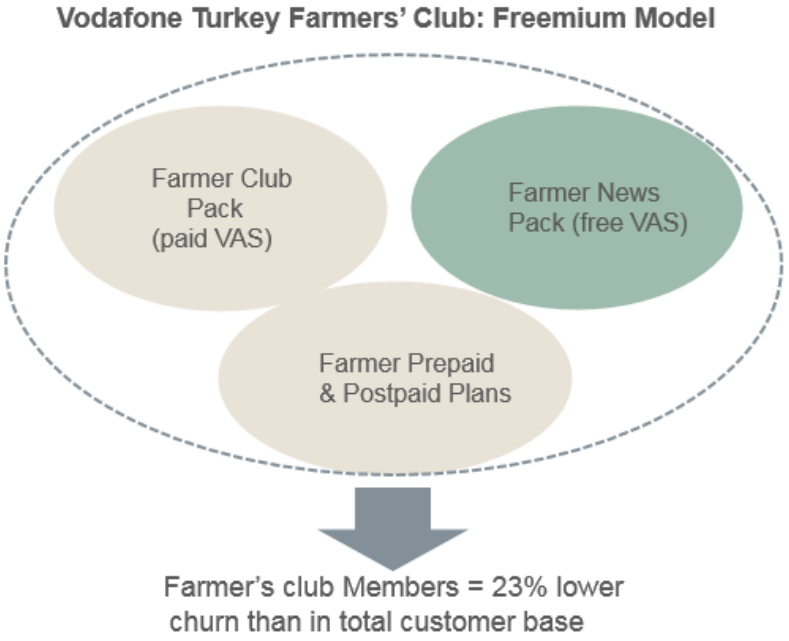
Business Model	Key Feature	Specific Barriers
Direct Revenue B2C	Smallholder farmers pay a fee	• Low WTP and ATP • High marketing cost • Commoditisation of information
Direct Revenue B2B	Agribusinesses pay for farmers to access the service	• Limited MNO skills in enterprise relationships • Market decentralisation
Direct Revenue Hybrid	Agri VAS generate revenue from farmers and agribusinesses	• Challenges and cost of creating value for both sets of customers
Indirect Benefits	MNO supports service to drive churn reduction, network usage etc.	• Difficulty in quantifying indirect benefits
Subsidised Model	Donors/NGOs or private companies fund the service for developmental purposes or CSR	• Continued support depends on donor's primary objectives • Change in donor's strategy leads to scaling back operations

General Barriers

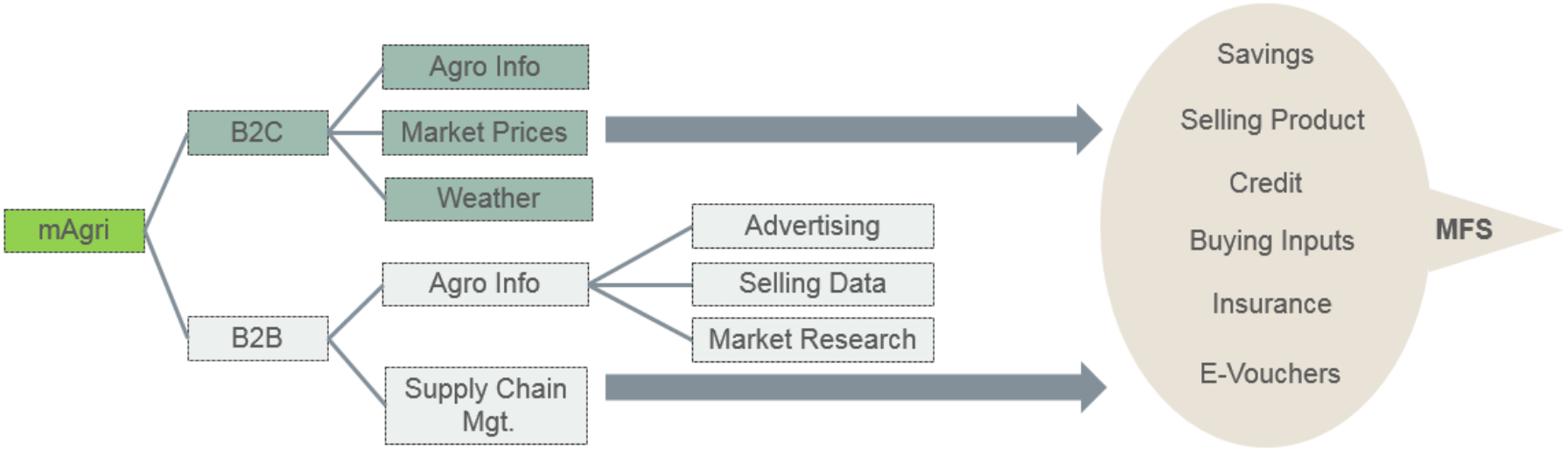
- Poor network coverage
- Cost of devices
- Cost of content
- Forming partnerships with content providers
- Language and literacy barriers
- Technology barriers
- Forming viable MNO and VAS Provider partnerships

There is a case for MNOs to consider the indirect business benefit model in mAgri initiatives

- Services focusing on indirect business benefits have proved viable.
- There is a case for the indirect benefits model where poor rural farmers have low ATL and WTL.
- To build scale while covering cost, there is potential for MNOs to deploy a freemium model.



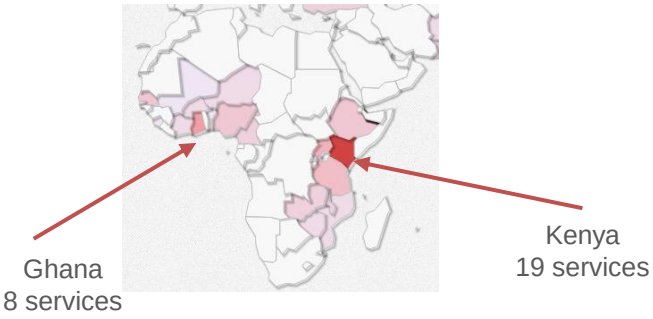
mAgri services open up to new opportunities in mobile financial services (MFS)



Sizing the Opportunity for mAgri in Emerging Markets

Current State of mAgri in Africa and South Asia

- 120+ mAgri deployments from MNOs, VAS providers, NGOs across emerging market regions
- Not enough services are providing meaningful revenue or scale to MNOs.
- Most services are not reaching scale or financial viability.
- There is a vast variety of services ranging from information/advisories, supply chain and financial services.

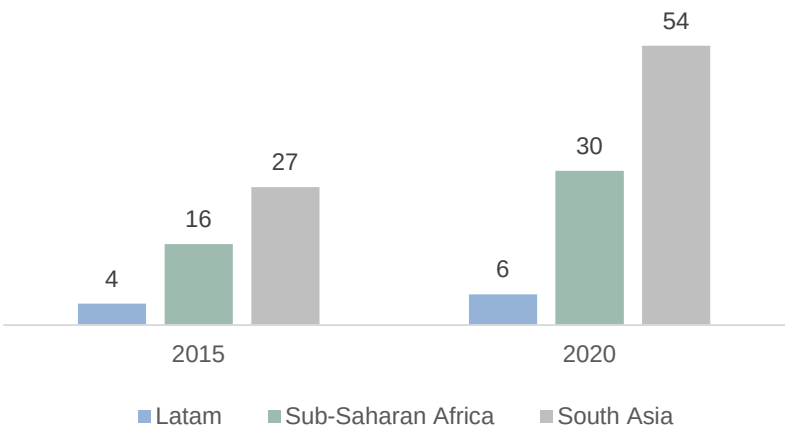


Source: GMA mAgri Deployment Tracker

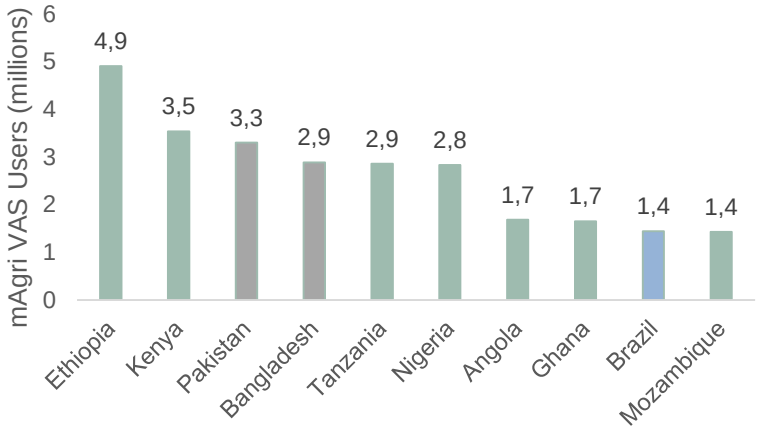
The mAgri user base in key emerging regions can expand to 90+ million by 2020

Potential mAgri users, 2015 and 2020

(agricultural workers with a mobile phone subscribing to agri VAS)

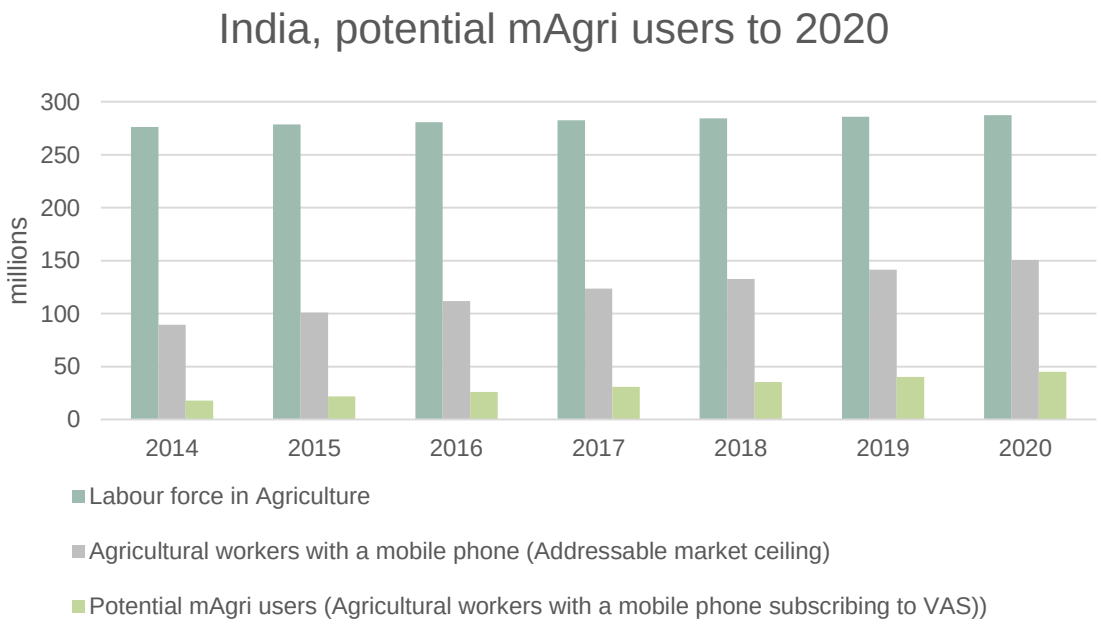


Potential mAgri users in 2020, selected countries*



**Selected countries (excl. India as an outlier)*
Source: GSMA mAgri and GSMAi

India has potential to grow to 45 million users by 2020, 15% CAGR in 2016-2020



Weather Content: Current Trends and Potential to Innovate in mAgri

Weather forecasts (via mobile) are in demand but this content is one of the most challenging to provide

Relevance

- Providing 3+ day forecast for tropics is challenging
- Weather models achieving higher resolution (i.e. ISKA)
- Can we have seasonal forecasts?
- Can we extend beyond rain?

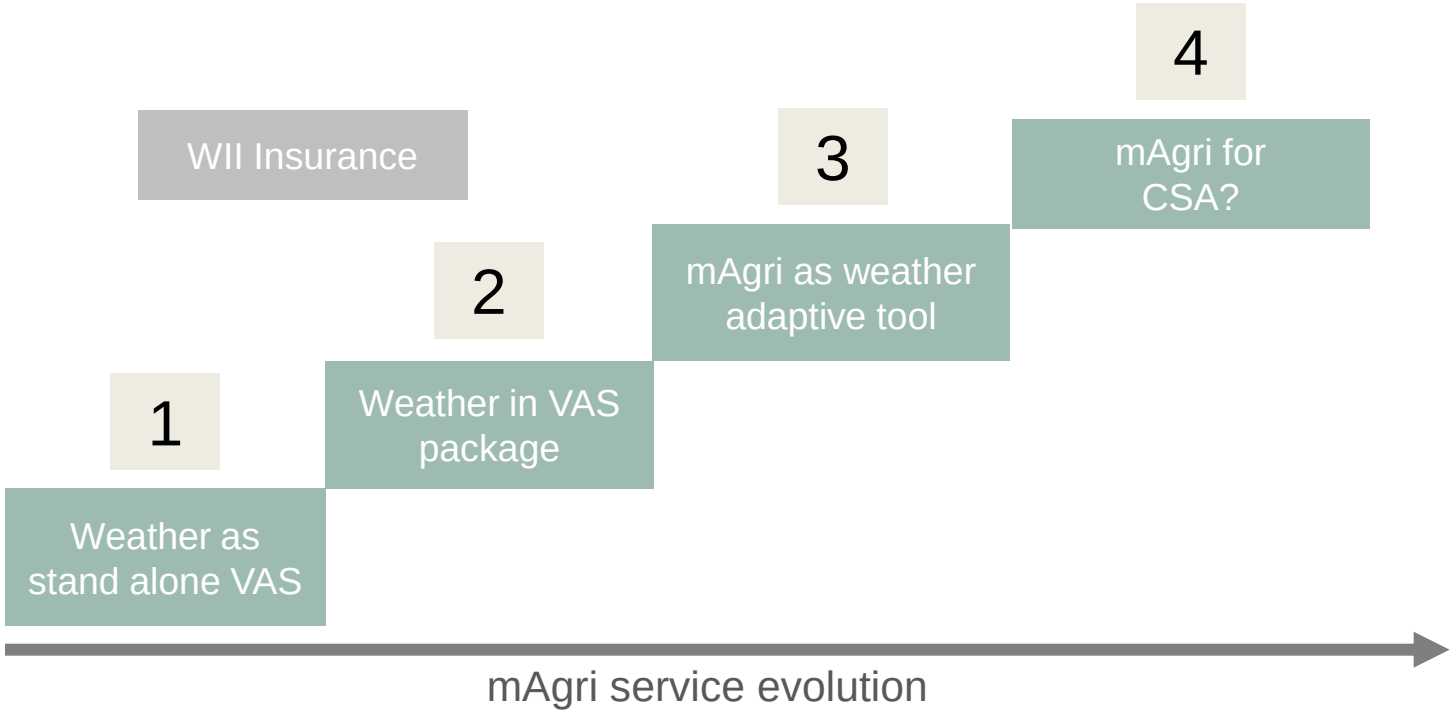
Localisation

- MNOs can help (triangulation, verification calls, and of course GPS)
- Can we provide highly localised (farm level) weather forecasts?

Frequency

- With market prices, weather is a dynamic content piece
- To what extent can MNOs/VAS manage a large and constantly evolving content volume?

Weather content presents an opportunity to differentiate and evolve the service proposition



How is weather content being used so far? Some results from the mFarmer initiative

- **Airtel Kilimo (Kenya)**: 68% of users join to learn new agricultural practices. Just 2% say they joined for the weather forecast service.
- **mKisan (India)**: Of the 33% of users who reported making changes to their agricultural practices due to mKisan advice, 33% reported seeing a better yield, 2% felt they could better predict the weather.
- **Tigo Kilimo (Tanzania)**: 32% of repeat users reported using weather forecasts to change their farming practices in the previous 12 months. Weather is the most dynamic content on the service, changing almost every day.

Case study: Tigo Kilimo Tanzania – Understanding weather forecasts as actionable mAgri content (1)

PRODUCT TIMELINE

DEC 2012	APRIL 2013	JULY 2013	FEB 2014	APRIL 2014	DECEMBER 2014
Tigo Kilimo launches with USSD channel offering agronomy, weather and market price information	Tigo Kilimo launches USSD subscription packages	Tigo Kilimo reaches over 30,000 subscribers	USSD menu is made free of charge; USSD menu improved with dynamic menus	Tigo launches IVR channel and helpline	Tigo Kilimo attains almost 400,000 subscribers

PRICING MODEL FOR TIGO KILIMO DECEMBER 2014

SERVICES CURRENTLY OFFERED	CHANNELS	CHARGE
• Agronomy tips • 1-5 day weather forecasts • Market prices	USSD (pull)	Free
	SMS subscription (push)	Free
	IVR (pull)	50 TZS (0.03 USD)/access
	Call Centre (pull)	6 TZS (0.004 USD)/second

Case study: Tigo Kilimo in Tanzania – Understanding weather forecasts as actionable mAgri content (2)

Results:

- Weather content has been in high demand in the user base.
- Tigo has improved its most popular channel (USSD) to incorporate more menu options based on the availability of dynamic content (weather forecasts and market prices).

Looking ahead:

- Users desire more frequent market information, and more locally accurate weather information including longer-term seasonal forecasts.

Some questions we need to answer

- What is the potential for MNOs and VAS providers to innovate/transform their mAgri services with dynamic weather and agriculture content?
- What is the potential from a technology standpoint?
- What role can geo data play in the coming years?
- To what extent can weather forecasts change the product offering?
- To what extent can mAgri become a climate adaptive tool?



Thank you!

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