

Weather INformation for Development (WIND)

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Accenture Development Partnerships (ADP)

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GATES foundation

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FOUNDATION



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- **Project Overview**
- **Current State Findings**
- **Developing the WIND Business Plan**
- **Next Steps**

WIND's purpose is to develop a scalable and sustainable model to deliver weather information to farmers.



- The Gates and Rockefeller foundations funded a planning project in Kenya focused on improving the livelihoods of smallholder farmers through the provision of improved weather and climate information
- The project has 3 key objectives:

12 weeks, Nov 2010 – Feb 2011

1

**Improved access
to accurate &
timely weather
information**

2

**Increased capacity
for collecting &
disseminating
weather
information**

3

**Building an open,
sustainable
Public-Private
Partnership**

Kenya was chosen as the location for the WIND pilot due to the large farming community and the infrastructures in place to support the program.

Target farmer population needs

- Agriculture is the most important economic activity in Kenya
- >70% of the population are farmers
- Agriculture is rainfed and therefore vulnerable to weather fluctuations

Increasing climate vulnerability

- Increase in frequency of droughts
- Flooding is more extreme
- Seasons are less predictable

Infrastructure and market

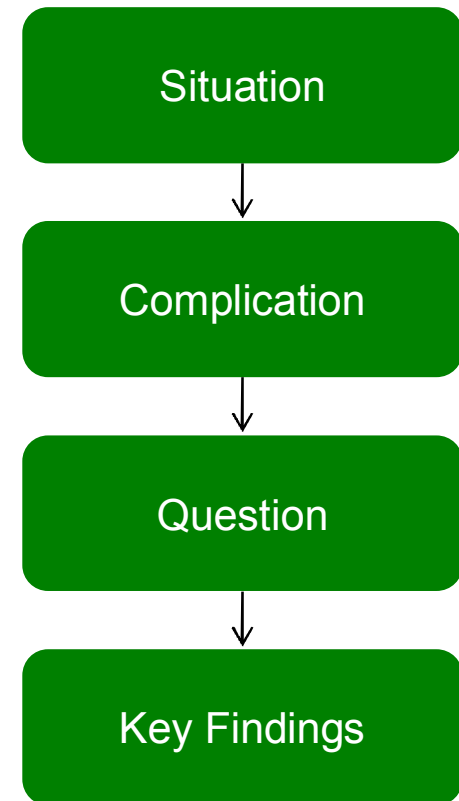
- Robust private sector, including foreign investors
- Competitive market
- Technical infrastructure in place



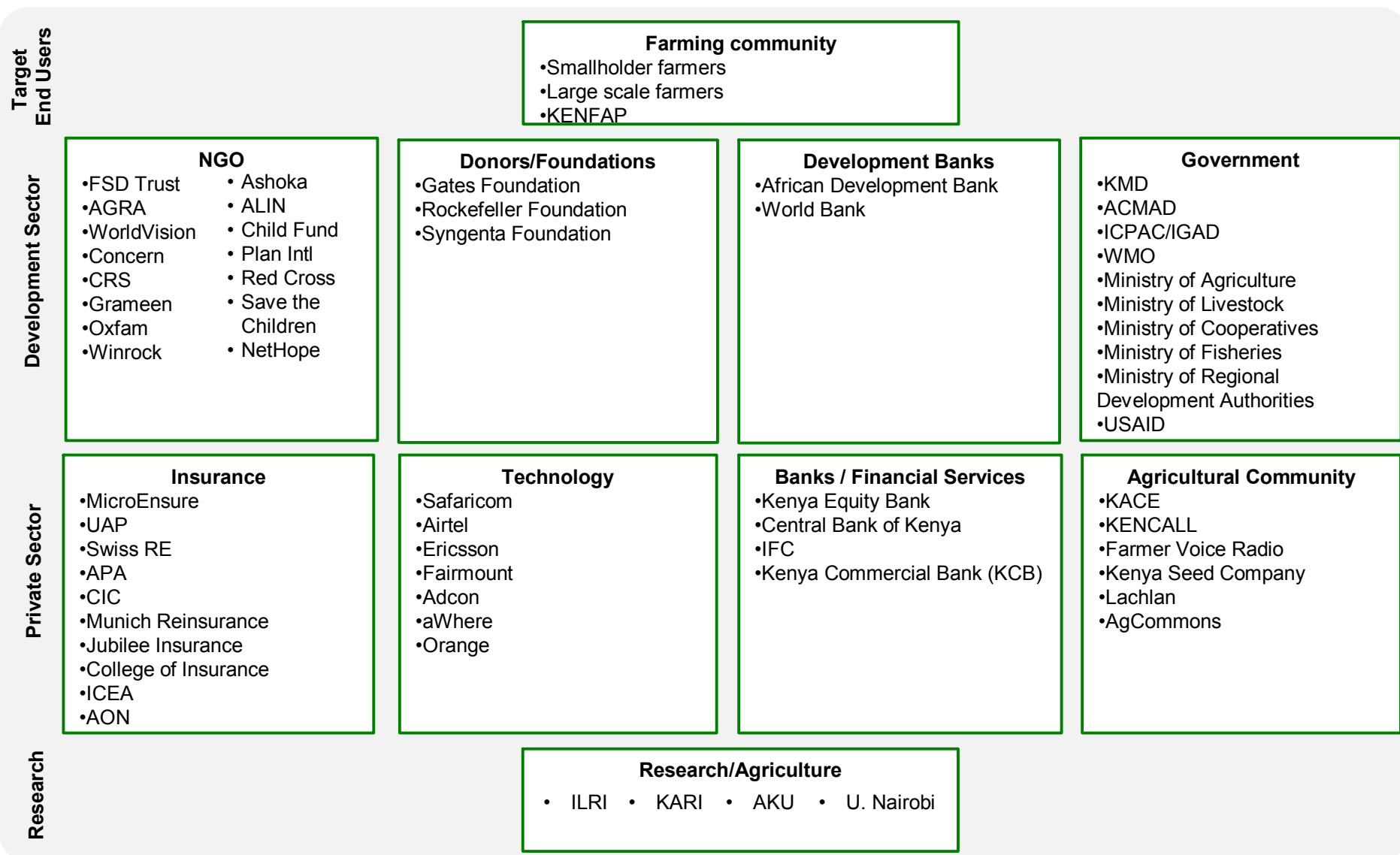
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We assessed the current landscape, gathering information from several different sources.

- **Desk based research**
 - Reports
 - Articles
 - Websites
- **Stakeholder interviews conducted**
 - Representatives from public, private, non-governmental, and research institutions



Public, private and non-governmental parties were engaged to develop the most appropriate operating model



Our findings suggested that farmers need access to more accurate weather information, combined with agricultural and financial advice



- Farmers need reliable, timely and granular information
- Traditional ways of predicting weather/ climate are no-longer working
- Weather and climate events are impacting livelihoods of farmers in Kenya
- Different types of farmers (livestock vs. crop) in different locations (Rift Valley v Coast) have different information needs
- There are many similar initiatives in Kenya that present opportunities for collaboration/ learning (including Farmer Voice Radio, KACE, mKilimo, Kilimo Salama)

Justus Monda, Smallholder Farmer, Nakuru



“If I had **better weather information**, I would be able to plan farming better throughout the year.

....I would be able to **effectively utilize my resources** in ploughing, planting, weeding and harvesting of crops. I would also be able to **improve animal husbandry by timing the reproduction of goats** and sheep during rainy season when pasture is available. I would be able to **plan for hired labour**.

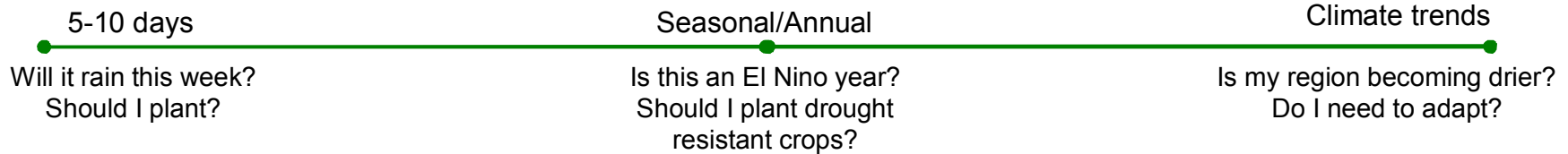
.....enable farmers **minimize risks and improve their credit worthiness** to the financial institutions thus access to more credit for expansion of production capacity.”

“I would like to receive weather information through:

- Modern information **technology such as SMS, voicemail**, email etc
- **Radio** (local fm stations) and TV
- Daily **newspapers**
- **Extension officers** from both public and private sector
- **Informal channels** (networking with other farmers)”

Having access to better information will enable farmers to improve their yields, revenues and ultimately livelihoods

1 Farmers need more accurate and granular weather and climate information



2 The information needs to be of a high quality, accessible and sustainable

High quality

- **Reliable** weather information that farmers trust
- **Granular** information that is relevant to a farmers situation
- **Targeted** information that farmers can act upon

Accessible

- **Simple format** in local dialect
- **Access** to the right information at the right time (mobile, radio, helpline)

Sustainable

- **Available** information in the future
- **Support** and education for farmers
- **Ability to adapt** livelihoods where necessary

3 The impact of having this information will enable farmers to:

- Understand the impact of weather and climate information on farming
- Plan and make better decisions
- Manage risk better through insurance
- Grow their business with loans from Banks
- Improve their yields, revenues and livelihoods

Related Initiatives (1/1)

Similar initiatives focused on providing information to smallholder farmers both in Kenya and globally.



ICPAC Indigenous Knowledge Climate Risk Management, Kenya
 •ICPAC is sponsoring a program that pairs Nganyi rainmakers with KMD meteorologists
 •After making individual predictions, two groups meet to develop a consensus forecast, which communicated to the indigenous community (in local dialects) through radio and churches

African Farm Radio, x-Africa
 •Working with 5 radio stations, provide 39m farmers in Mali, Ghana, Tanzania, Uganda and Malawi with information on agricultural issues e.g. disease-resistant crops, animal housing, soil/ water management

Kilimo Biashara, Kenya
 •AGRA/ Kenya Equity Bank program makes financing available for farmers and agricultural businesses in rural areas
 •\$3.1m in low-interest loans disbursed since 2008 (12% vs 18% standard lending rate)

Farmer weather alerts, Turkey
 •Farmer-focused weather alerts delivered to farmers by SMS
 •Provincial agricultural directorates tailor daily weather forecasts from Turkey's NMS, so that forecasts are tuned to local conditions/ needs

Nokia Life Tools Agriculture Services, India
 •Launched in 2009 to provide updates on seeds, fertilisers, pesticides, market prices, and weather via Nokia mobiles
 •Offered in 18 states and 11 languages. Subscribers choose from 2 monthly price plans

Agro-Met-Advisory-Service, India
 •Help farmers time crop-related activities with the weather by preparing weather forecast reports
 • Farmers receive weather forecast 3-5 days ahead of time, so they can mobilise their resources

ICICI Lombard, India
 •ICICI's Weather Insurance product collects weather data during the policy period e.g. following unpredictable rainfall, 7% of orange farmers in Rajasthan were provided cover

AGRA PASS, x-Africa
 •Launched to create new varieties of seeds and make improved seeds much more accessible to rural farmers
 •Involves training "agrodealers" to sell seeds and fertilisers in village shop, whilst also dispensing advice to farmers on how to use them

Community Knowledge Workers (CKW), Uganda
 •Grameen initiative - a network of rural information intermediaries use cell phones to provide smallholder farmers with best farming practices, market conditions, disease and pest control, and weather forecasts

AMSDP, Tanzania
 •Agricultural Marketing Systems Development Programme uses an online server provides latest cash crop prices via SMS for farmers (partner with Vodacom)

WIFA, Uganda
 •Pilot project focused on communicating and disseminating weather warnings using mobile phone technology
 •WMO collaborating with Ericsson

Nokia Life Tools, Kenya
 •Working with KMD and agro-based organisations to send farmers regular information on weather, prices of seeds, fertilisers/ pesticides and market prices via cell phone
 •The information is customized to the farmer's location and choice of crop.

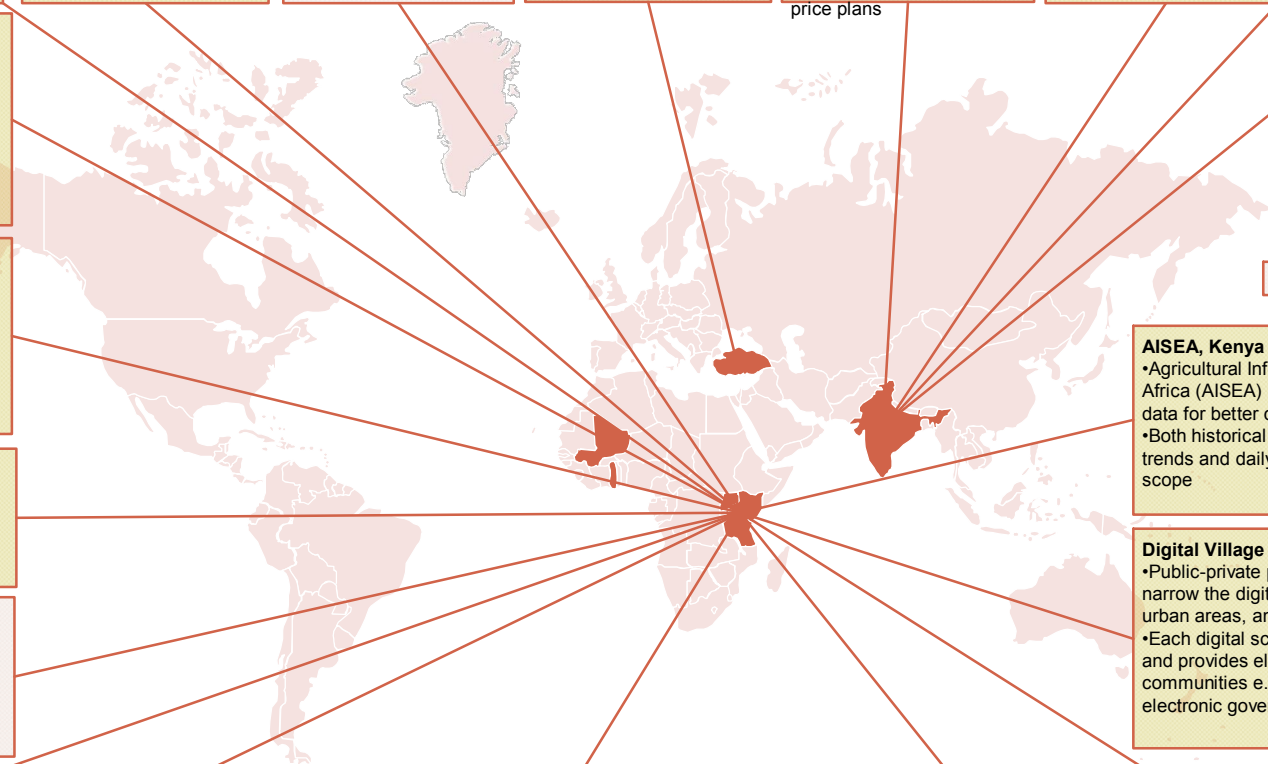
Kilimo Salama, Kenya
 •Micro-insurance program assesses crop loss based on data from AWSs
 •Partnership between UAP, Safaricom, Syngenta, MEA Fertilizers, KMD, CNFA
 •Since launch in 2009, 9,500 farmers in Kenya have "micro-insured" themselves

KACE, Kenya
 •Kenya Agricultural Commodity Exchange; provides reliable and timely market information to farmers
 •Farmers access information via SMS, voicemail, radio, an internet database, or via Market Resource Centres in rural market areas

Kenya Farmer Helpline, Kenya
 •Kencall's 2-way communication channel between farmers and agriculture experts provides agricultural info, advice & support to smallholder farmers via phone
 •Farmers call the help line and ask questions on livestock/ crops/ climate

ALIN Maarifa Centres, Kenya
 •Network of knowledge centres in villages, from which communities can access information via different channels (e.g. web portals, mobiles, iPods, publications)
 •Centres are manned by trained information officers, who also go out to people

Reuters Market Light, India
 •Thompson Reuters' crop advisory mobile-based info service
 •Selected by UNDP as a business initiative with potential to contribute to the MDGs



Highly relevant for WIND

AISEA, Kenya
 •Agricultural Information System East Africa (AISEA) provides real-time weather data for better crop management.
 •Both historical data collection for climate trends and daily weather forecasts are in scope

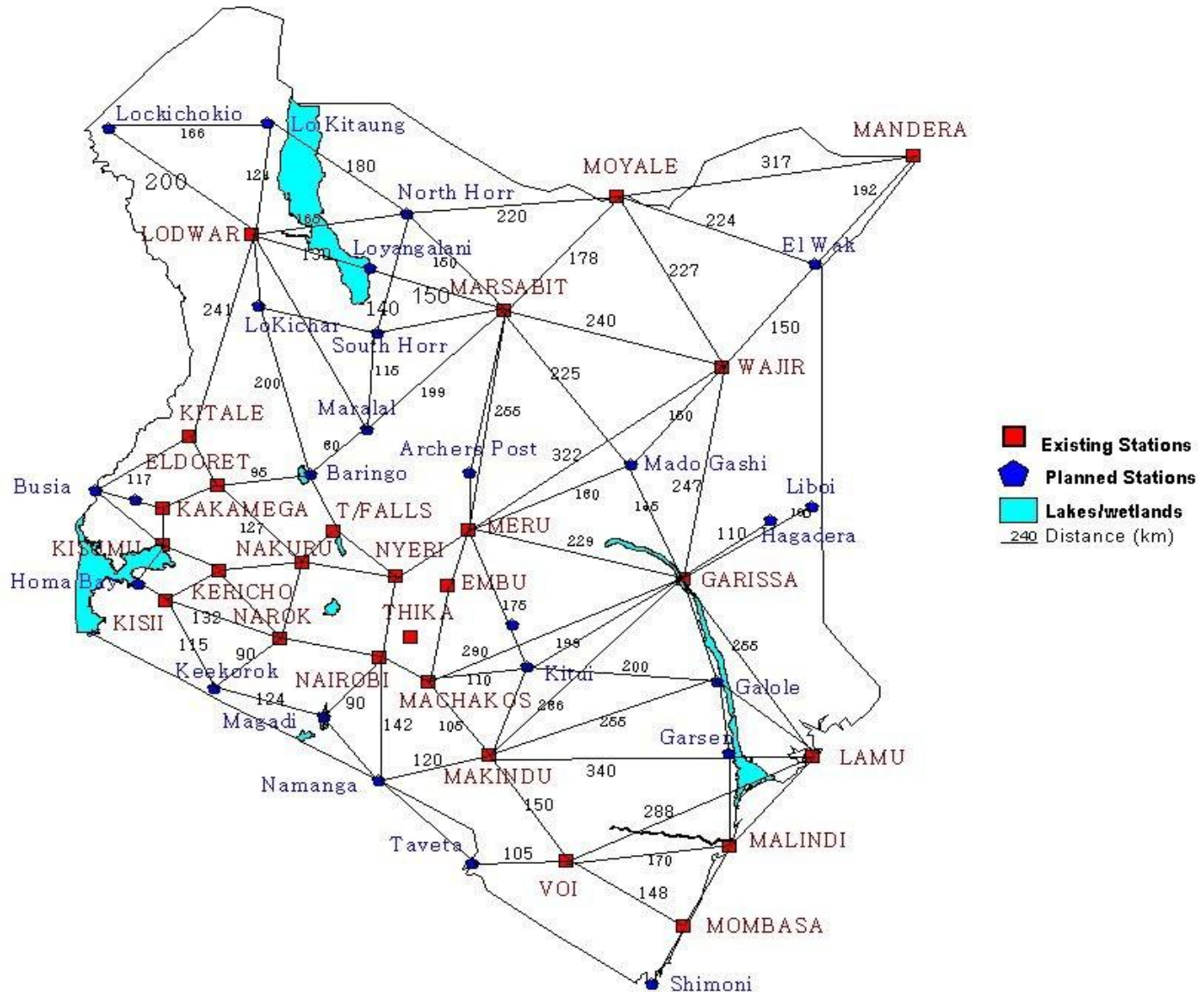
Digital Village Project, Kenya
 •Public-private partnership that aims to narrow the digital divide between rural and urban areas, and accelerate development
 •Each digital school has 5-10 computers and provides electronic services to communities e.g. Email, internet banking, electronic government forms.

Our findings show that stations are being deployed in Kenya, but the network of stations, and dissemination of information, need to be extended and improved



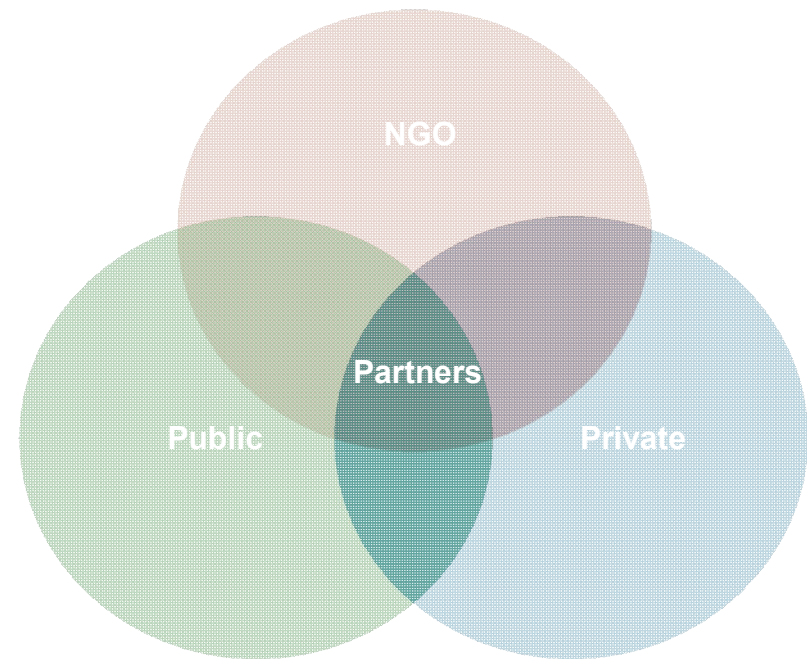
- Data collection requires both automatic weather stations (AWSs) and satellites
- Existing network of weather stations is inadequate
- AWSs are being deployed in Kenya by KMD, donors and private companies
- Improvements are required in the dissemination of weather and climate information
- Mobile technology, radio and local extension services are the preferred dissemination channels

KMD have a network of stations with plans to increase the network over the next few years



A public-private partnership will be critical role in making WIND successful

- Public-private partnership will be key to building a sustainable model
- First step is to build trust between the public and private sectors through transparent negotiations and clear agreements
- There is a market for weather and climate information



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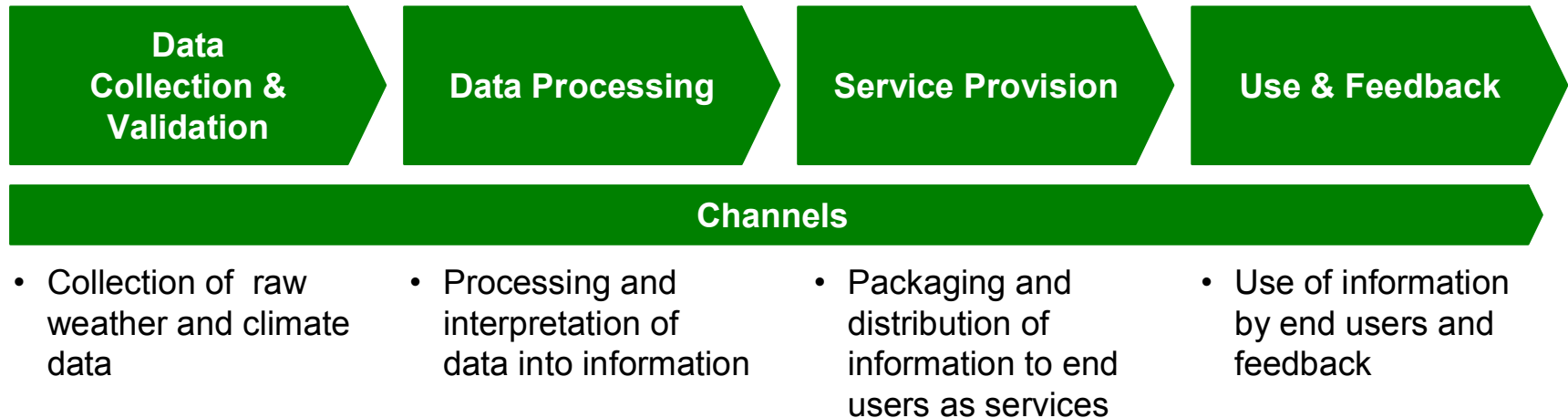
WIND will facilitate provision of weather information to farmers and Service providers will create weather-related products for the farming community

	Service Name	Description	Example Products	Channels
Weather Info (WIND)	1 Weather/Climate Information	<ul style="list-style-type: none"> Weather/Climate information 	<ul style="list-style-type: none"> Weather forecasts (24 hr, 4 day, 7 day, monthly, seasonal) Emergency alerts 	<ul style="list-style-type: none"> Mobile Phones (SMS, voice), radio Extension officers/community groups Internet (KMD website)
	2 Weather Products	<ul style="list-style-type: none"> Specialized weather products paired with agricultural advice 	<ul style="list-style-type: none"> Tailored weather/climate advice based on farmer needs (location, crops v livestock, etc) 	<ul style="list-style-type: none"> TV, Papers SMS, Voice based messaging service Internet Agro-dealer network
Weather Related Products (Service Providers)	3 Agricultural Products	<ul style="list-style-type: none"> Weather products paired with additional data (e.g. market prices, crop data, input advice) 	<ul style="list-style-type: none"> Tailored advice that includes crop, market and weather/climate information 	<ul style="list-style-type: none"> SMS, Voice based messaging service, Internet Agro-dealers, extension workers
	4 Insurance Products	<ul style="list-style-type: none"> Products to protect farmers from financial loss due to weather related incidents 	<ul style="list-style-type: none"> Index insurance (crop and livestock) Horticulture insurance 	<ul style="list-style-type: none"> Mobile Phones (SMS and voice) Internet Community based channels
	5 Finance Products	<ul style="list-style-type: none"> Products that provide capital to purchase equipment, livestock, etc. 	<ul style="list-style-type: none"> Loans Savings 	<ul style="list-style-type: none"> Mobile Phones (SMS and voice) Internet Community-based channels



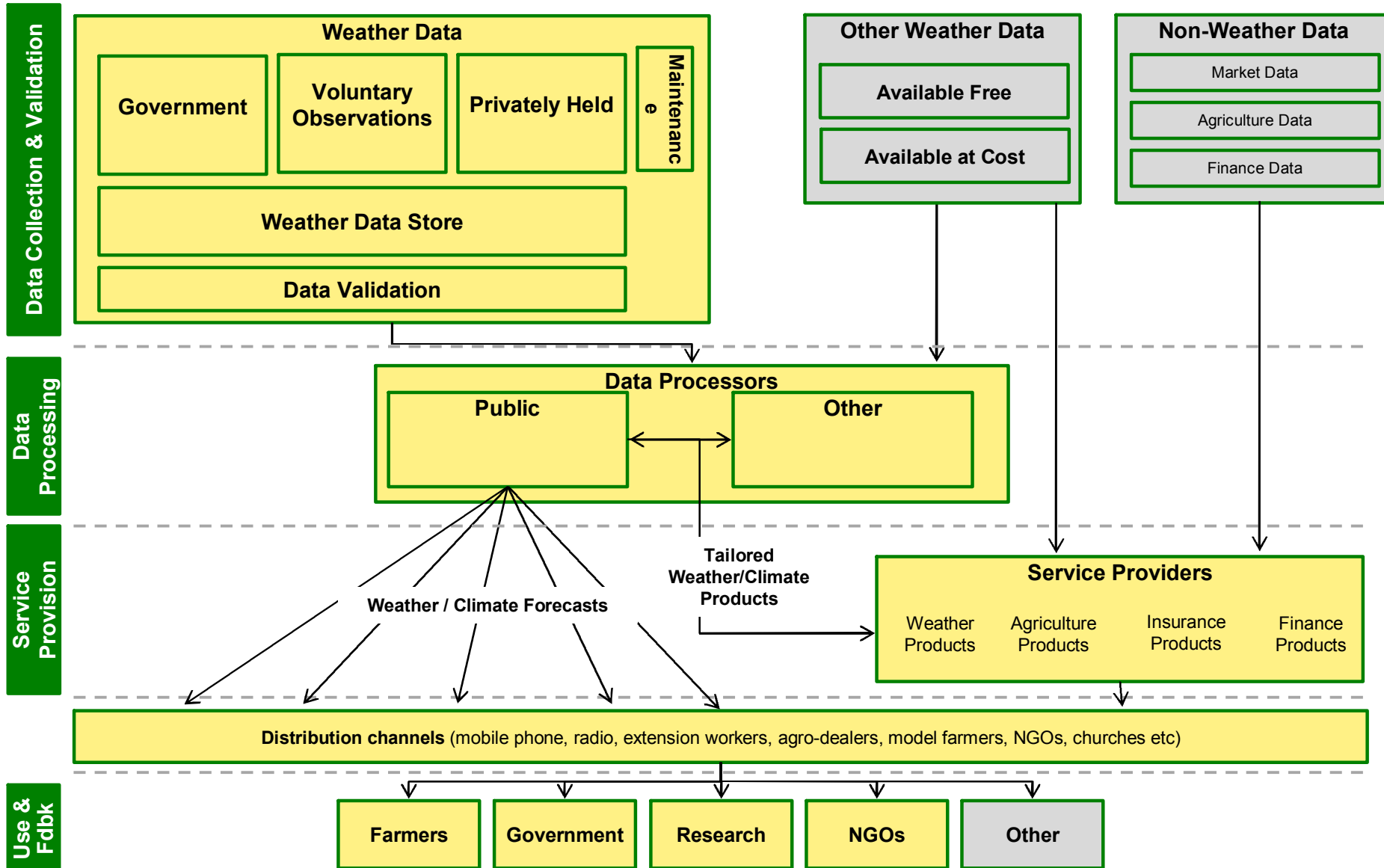
The value chain shows the key steps from data collection through to the use of the information by individuals

WIND Value Chain



The sections of the value chain provide the structure and foundation for the recommended operating model. The model will highlight the processes, technology, and partners needed at each step of the chain.

The proposed Operating Model for WIND has been developed in conjunction with KMD and other key stakeholders



A consultative meeting was held for the key public, private, research and non-governmental organisations interested in WIND

Key points to note

- 44 people attended representing 30 organizations (including 3 farmers)
- Ministry of Agriculture and Rockefeller Foundation opened the meeting
- Meeting comprised of a mixture of plenary presentations, Q&A and breakout groups where key topics were discussed
 - Data collection and processing
 - Service requirements and dissemination
 - Deployment criteria and strategy
- Outcome was a very positive dialogue between all sectors - very promising for future partnership discussions

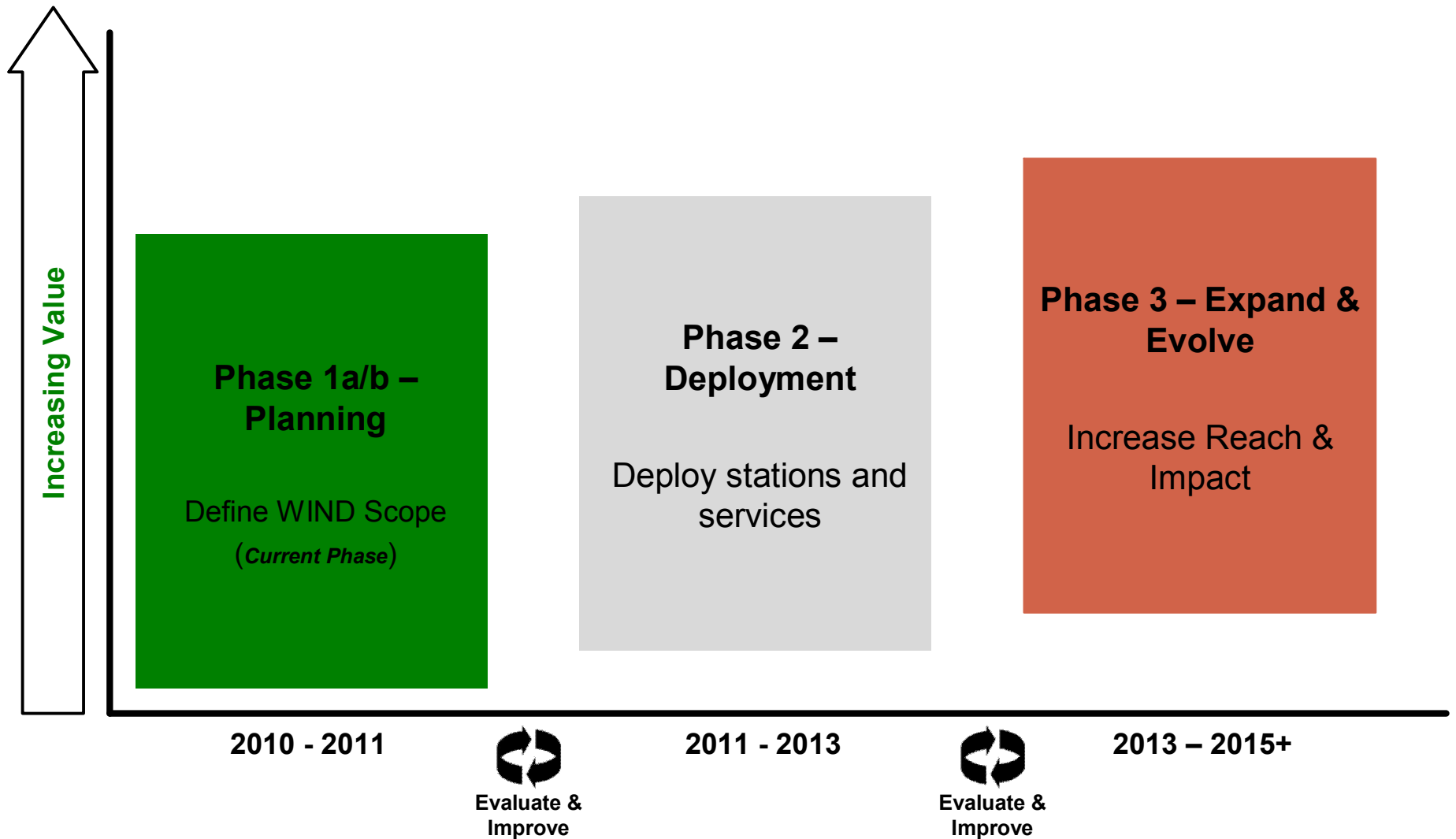
Organisations represented



Stakeholders in action at the workshop



In collaboration with other stakeholders, WIND will be able to scale by geography, services provided, *and* types of end users/service providers targeted

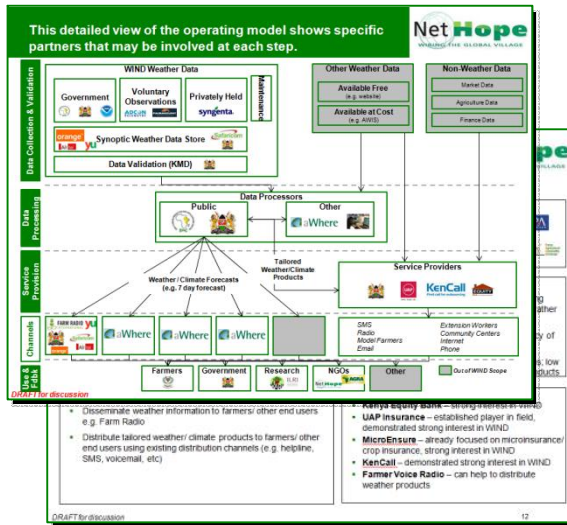


Input from workshop used to shape initial phase deliverables

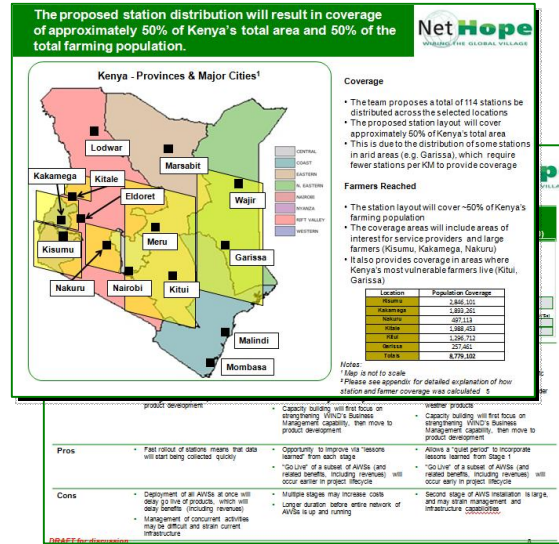
DRAFT for discussion

WIND Operating Model

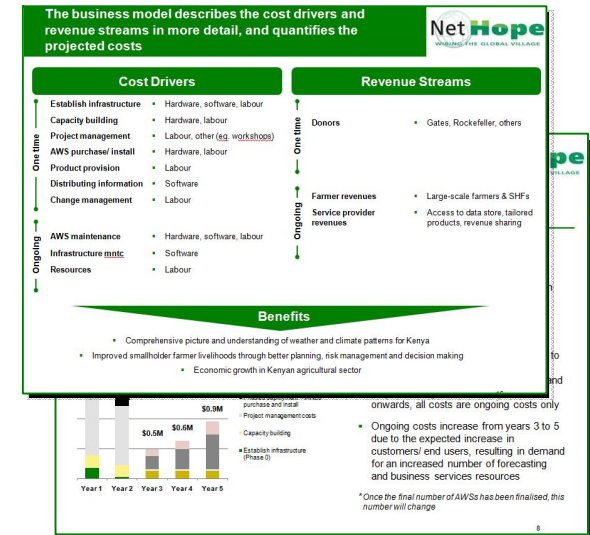
Initial partner roles & responsibilities



High level Deployment Strategy



High level Business Model



High Level WIND Business Plan

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WIND has now completed the first phase of the project and is embarking on the next phase on 28 February 2011

- **The overall objectives remain the same:**

17 weeks, Feb – Jun 2011



- **The key activities include development of:**
 - **Capacity assessment**
 - **Governance model and partnership recommendations**
 - **Multi year business plan (inc. costs and revenue streams)**
 - **Detailed plan for deployment of stations and services**

Thank you....
....Asante Sana