

➤ Niger climate information platform

Final Report



For Public Release



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NB: Names of institutions, companies, projects and products in the report have been replaced with letters e.g. Company A, B, C or Product 1, 2 3 in order to maintain confidentiality of entities, projects and products involved.

Annexes

Annex A: Overall approach

Annex B: Niger context

Annex C: Additional supply and demand charted data

Annex D: Study of global models of climate information platforms

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Executive Summary (1/3)

Dalberg was engaged to conduct a study on the feasibility of establishing a commercial climate information platform in Niger. A study of demand and supply helped to assess needs and gaps. Dalberg sought input from three key stakeholder groups for the three following components:

- Assessment of existing climate information networks in Niger and global best practices
- Assessment of private sector demand for climate information in Niger
- Recommendations on a climate information platform to be piloted in Niger

Three stakeholder groups were consulted – farmers, suppliers of climate data and information, and policymakers/donors:

- Interviewed over 400 farmers across six regions: Dosso, Maradi, Niamey, Tahoua, Tillabéri, and Zinder
- Surveyed companies in the private sector
- Engaged the donor community and the Government of Niger

A landlocked nation nested between the Sahara and the rest of the Sahel, Niger's economy is dominated by agriculture:

- Niger boasts the lowest GDP per capita across comparable countries with 60% of the population living below the poverty line and 80% of the population living in rural areas relying on agriculture for their livelihood, thus it is critical to increase agricultural resilience to tackle poverty
- Even though Niger shows high potential in terms of production, poor climate resilience impacts negatively on its growth
- In fact, the climate situation has gotten worse in the recent past, making climate resilience even more critical

The analysis takes into account four main sections: demand, supply, global models and business models

Executive Summary (2/3)

The demand analysis is based on four dimensions: Size/Profile (S/P), Awareness (AW), Affordability (AF), and Expectations (E)

- (AW). 87% of the surveyed farmers understand the meaning of climate change and recognize its impact through decreasing rainfall and production; 83% of farmers are using climate information but mostly as baseline weather information such as rainfall, wind, and temperature. Also, farmers mostly use TV and radio to access climate information with a clear preference for daily updates on climate information
- (AF). About 85% of the farmers are ready to have access to climate information in order to better plan and boost production and are willing to pay for this information; however, as many as 65% of those surveyed established a ceiling of \$12 per year, with about 43% at the \$6 per year or less mark
- (E). Surveyed farmers have very precise information needs and are mostly interested in the reliability of the information provided . About 70% of the farmers believed the climate platform would be successful mainly on the premise that they needed such a tool and clear focus on awareness raising, ensuring affordability, and quality of services

The supply chain analysis focuses on three components: Data Collection (C), Processing (P), and Distribution (D)

- (C). Stakeholders B and D are well positioned to serve as primary data collectors in addition to stakeholder A
- (P). Stakeholders B, c and D are well positioned to serve as primary data processors
- (D). TV, radio, and farmers' organizations are the main distribution channels today, while mobile seems to be a new channel as access to telecommunications is still in its growth stage

Executive Summary (3/3)

For the business model, three different options emerged:

- Option 1 - Adopt current model, where data collection/processing is conducted by current actors such as National Meteo; distribution by radio/TV/newspaper – This model is least likely, but addressing the capacity gap of current players both financially and technically is crucial
- Option 2 - Introduce a new distribution channel to the current model – with the integration of a mobile platform using an existing telecom network(s). Mobile based platforms provide both great opportunities and challenges with respect to Niger, and possibly hold the greatest promise
- Option 3 - Introduce data bundling/ service bundling such as other information products to Option 2, where climate information is bundled with other products/services and distributed/sold via a mobile platform

Options 2 and 3 were analyzed in depth, and found not to be commercially viable, mostly because of low subscription rates assumed, and low pricing. Option 3 however, may be pursued assuming additional grant support from donors or other low cost funds as impact investing

If pursued, the proposed platform model will require commitment from all actors and strong financial support and human capacity building of current and potentials stakeholders

- Engage stakeholders early in the process to increase their level of commitment before the implementation phase
- Continued donor support is paramount to make up for low governmental resources, and low disposable income in Niger, until the platform is truly “commercially viable”

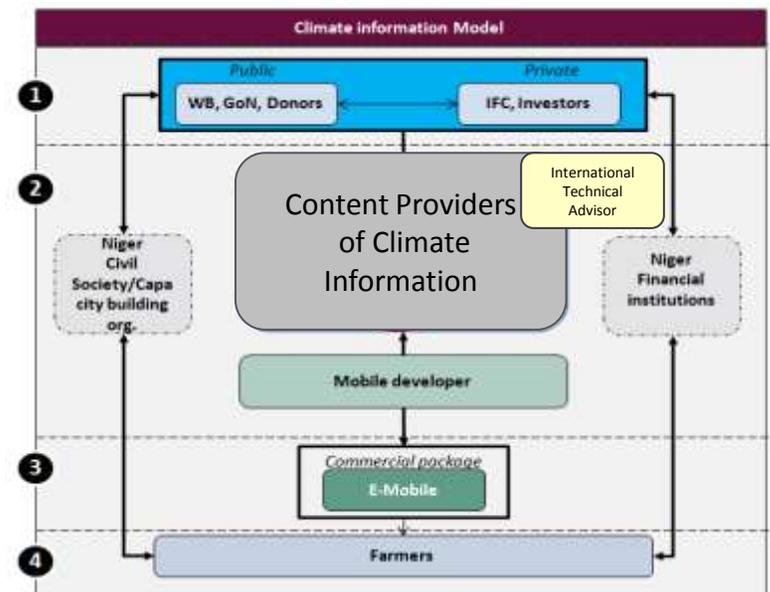


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Consultations with three key stakeholder groups anchored the analysis of supply and demand, and confirmed the existence of an ecosystem for climate information

Objectives



Stakeholders



Themes



The ecosystem is made up of key stakeholders that each have a specific role to play in the provision of climate information to Niger's farmers

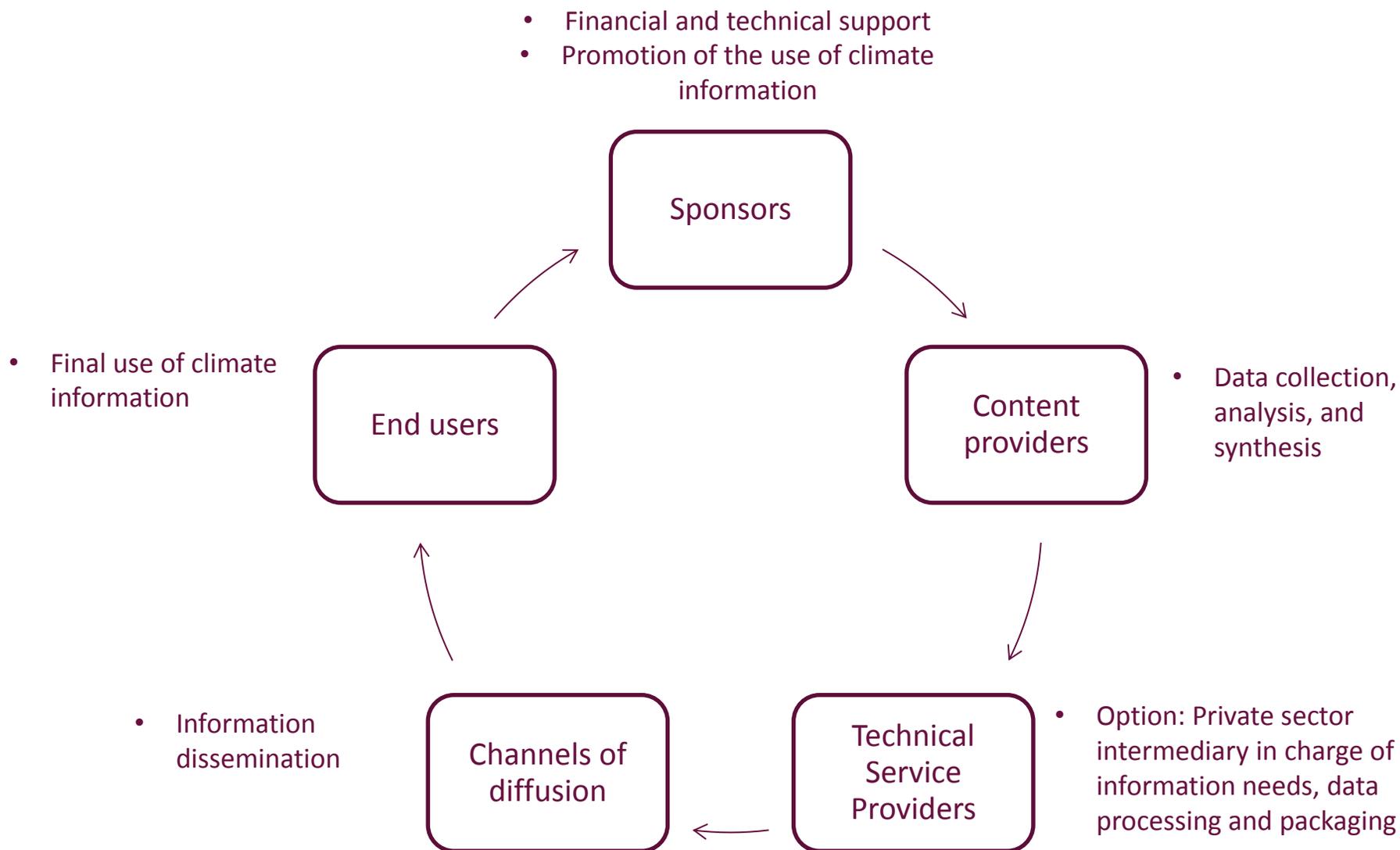


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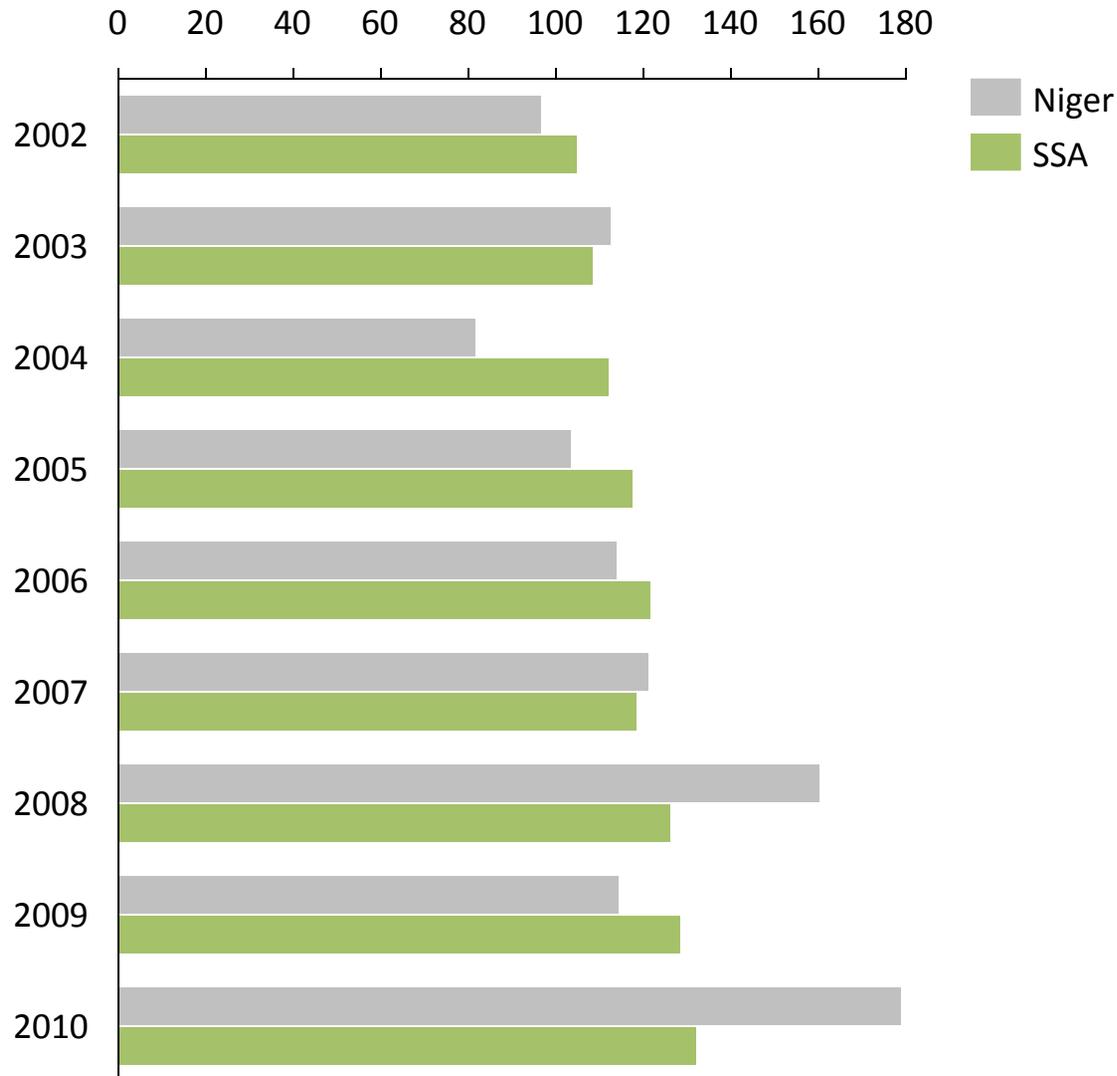
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Even though Niger shows high potential in terms of agricultural production, poor climate resilience impacts negatively on its growth

Crop production index (2004-2006 = 100)

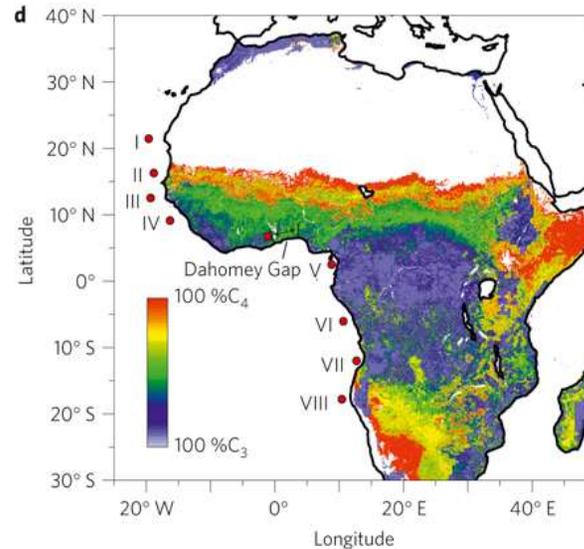
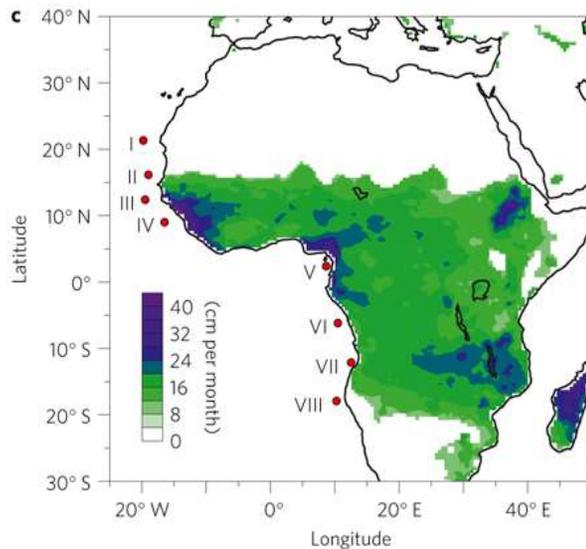
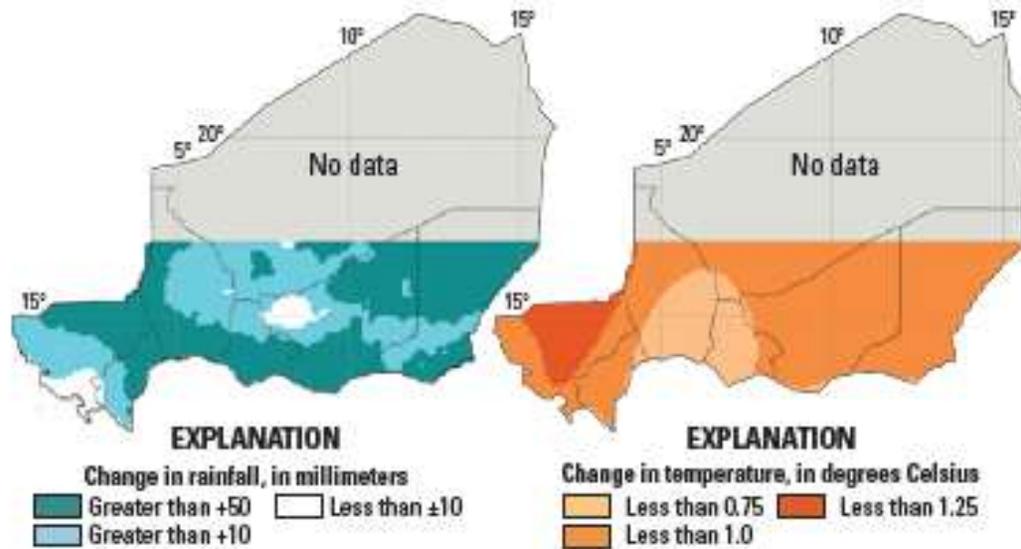
Ratings range from 0 to 100. The higher numbers indicate higher production potential.



Observations

- The agriculture sector faces numerous challenges and is highly volatile as it is susceptible to changing weather conditions
- Although Niger shows high growth potential in its production during the last few years, this growth has shown inconsistency due to climate variations

In fact, the climate situation has gotten worse in the recent past, so climate resilience has become even more important



- Niger receives most of its rain between June and September, and rainfall totals of more than 500 millimeters (mm) during this season typically provide enough water for crops and livestock. However, it is worth noting that 500 mm will only occur in a small area of Niger since most of the country is covered by the Sahara.
- Temperatures have increased by more than 0.7° Celsius (°C) across much of Niger, with typical rates of warming greater than 0.15°C per decade
- This transition to an even warmer climate could reduce crop harvests and pasture availability, amplifying the impact of droughts

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The demand study was carried out in order to find out more about the customer base's expectations, needs, and disposition to buy climate information

Key questions of demand analysis

- What is the actual size and profile of the potential customer base?
- What is the level of awareness of farmers of the importance of climate information?
- How much are farmers willing to pay for climate information?
- What are farmers' expectations with product design?

A survey of 414 famers in 6 regions of Niger confirmed farmers' awareness, interest, and willingness to pay for climate information

Size/Profile

- About 83% of farmers are using climate information but mostly as baseline weather information such as rainfalls, wind, and temperature. This was a result of our survey of 414 farmers across Niger

Awareness

- 87% of the farmers understand the meaning of climate change and recognize its impact through decreasing rainfall and production
- Insufficient erratic rains and lower production levels are the most often cited reasons by farmers surveyed as evidence of climate change

Affordability

- 83% of the farmers are willing to buy climate information while the remaining farmers can't, citing affordability as a main driver
- Farmers are willing to pay to access climate information but as many as 43% of those surveyed established a ceiling of \$6 per year
- Today, climate information is a public good accessed freely

Expectations

- About 62% of the farmers are interested in information about rain due to the characteristic of their crops and low capacity in terms of irrigation
- They are marginally interested in a few other indicators such as temperature, wind, or pests that they deem complementary
- In general, when asked about expectations reliability is identified as a main driver of their buying criteria, and the most important element according to farmers

The supply analysis was carried out in order to find out more about the availability and quality of climate information in Niger

Key questions of supply analysis

- Who are the main actors involved in the supply of climate information?
- How can we ascertain their technical, and financial capacity?
- How could they contribute efficiently to the platform?
- What were their current needs with respect to their current capacity?

Many stakeholders are involved in the collection of climate information, each with specific strengths and weaknesses (1/2)

Stakeholder A	Stakeholder B	Stakeholder C	Stakeholder D	Stakeholder E
<ul style="list-style-type: none">• Public organization in the Meteorology field• Statutorily, the DNM is the only organization in charge of making climate information available to the public	<ul style="list-style-type: none">• Collection, treatment and diffusion of scientific and meteorological data related to the fields of food security, water control and fight against desertification in the Sahel	<ul style="list-style-type: none">• Conception and implementation of agronomic research programs in all the sectors of rural development• Coordination and supervision of all agronomic research efforts in Niger• Contribution to the development of national policies in the field of agronomic research	<ul style="list-style-type: none">• Provision of weather and climate information and promotion of sustainable development (notably within the context of national strategies for poverty eradication), in the fields of agriculture, water resources, health, and public safety	<ul style="list-style-type: none">• Collection, treatment and dissemination of price information to farmers in the entire country

- Levels of technical capacity vary across different climate information providers.

Many stakeholders are involved in the collection of climate information, each with specific strengths and weaknesses (2/2)

Stakeholder F	Stakeholder G	Stakeholder H	Observations
<ul style="list-style-type: none">• Public organization in charge of managing and reviewing economic activities in terms of their impact on the environment	<ul style="list-style-type: none">• Placed under the direct authority of the Cabinet of the Prime Minister. Responsible for alerting, preventing and reducing the risks linked to food and nutritional insecurity and natural disasters	<ul style="list-style-type: none">• Largest farmers' organization in Niger• Contribution to the defence of the material and moral interests of its members at a national, regional, international level through development actions, dialogue, lobbying, and sharing of experiences	<ul style="list-style-type: none">• Farmers organization are the ideal organizations to involve in information dissemination, awareness raising, and even payments for climate information

- F could only play a secondary role within the platform, while an organization like G can be involved at the onset

This required an assessment of the potential suppliers of climate information based on technical and financial capacity, experience , and existing end user portfolio

Financial capacity

- Financial capacity is without a doubt the most important indicator, as it tends to greatly affect all other indicators. It was important for us to know whether providers surveyed boasted high or low capacity in this regard, in order to better correlate it to their performance elsewhere

Technical capacity

- Technical capacity often derives from financial capacity, which allows greater technical means. However, technical capacity can be enhanced by high levels of human capacity, where able professionals can deliver great results by being more creative, in light of low technical capacity levels

Experience in climate

- Has the actor been involved in climate service/product provision in the past? How extensive or marginal is this experience?

End-user portfolio

- Access to a large base of potential customers

Experience in similar projects

- Similar to experience in climate although it supposes experience with multi-stakeholder projects in developing nations

The capacities of “producers” of climate information range, but overall require some strengthening to meet the needs of users

Very limited
 Limited
 Moderate
 No assessment

	Financial Capacity	Technical Capacity	Experience in climate	End-user portfolio	Similar projects
Stakeholder A					
Stakeholder B					
Stakeholder C					
Stakeholder D					
Stakeholder E					

- Financial capacity or access to funding is the strongest need across all providers
- Actors such as B and C with strong international linkages appear to have the strongest capacity but would still require some support to perform efficiently
- While the A is at the center of the ecosystem of climate information, it is one of the institutions with capacity constraints
- Leveraging any of the existing providers of climate information will require investments
- Even as we consider a commercially viable climate information platform, grants may be necessary to support content providers

Some active stakeholders can support the strengthening needs of stakeholders in the climate information platform

Sponsors

- A number of stakeholders outside the World Bank Group have expressed interest in supporting agricultural resilience in Niger including other multilateral institutions
- While the IFC can provide financing, another development institution has pledged \$8 million in support of Stakeholder A to raise their technical capacity levels
- Additional grants and loans may be available through private sector participation (telcos are interested in participating financially as well as technically)
- Other international organizations have already committed more than \$100 million since 2008, but mostly for emergency relief
- Sponsors will be critical in providing the means to raise technical and financial capacity and support all actors within the project

Government of Niger

- The Government of Niger must also be involved in providing additional resources to the platform to ensure its sustainability
- Besides, the Government of Niger is the primary responsible for ensuring that the policy environment does not endanger the viability of the platform
- Through the PPCR, the Government of Niger has pledged resources to agricultural resilience and food security, and has also ensured that all the necessary support from public bodies would be extended with respect to setting up the climate information platform
- One recommendation within our implementation roadmap is to convene a roundtable with interested stakeholders and the GoN in order to harmonize action and agree on roadmap, ownership of key agenda items, and resources allocated by each organization

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The demand and supply analysis led to key design principles for such a platform to exist, including financial viability, strengthening of actors and demand-driven

Commercially viable climate information platform

- The overarching premise of our product design work lies in the fact that the climate information platform model we propose must be commercially viable
- Although our model requires some additional grant monies to support the ecosystem, it is by and large relying on payments from farmers, and as such, does not depend on continued grant injection to be sustainable
- It was important to reconcile the expectation of a commercially viable platform with the customer base's resources, so we were able to find out how much farmers were willing to pay

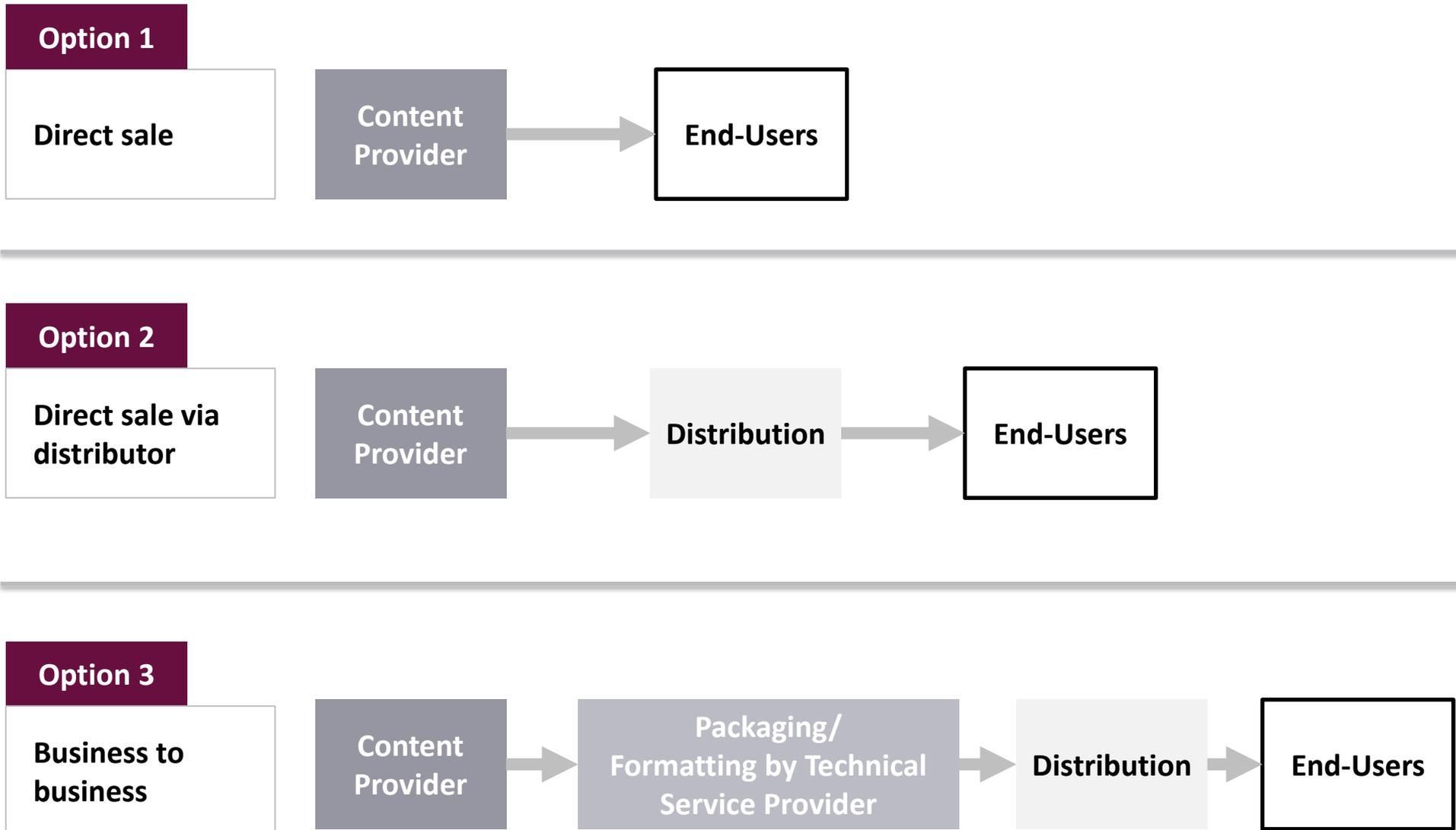
Embedded technical assistance to content providers

- Success for the climate information platform is contingent on technical assistance being available to content providers
- Our surveys have identified quality and reliability of the data as the main deal breakers as far as customers are concerned. Hence, the climate information platform will not work, if the quality of data is not above its current level
- Such a result may only be obtained if content providers are supported to be able to deliver better information

Product design with customers' expectations and needs in mind

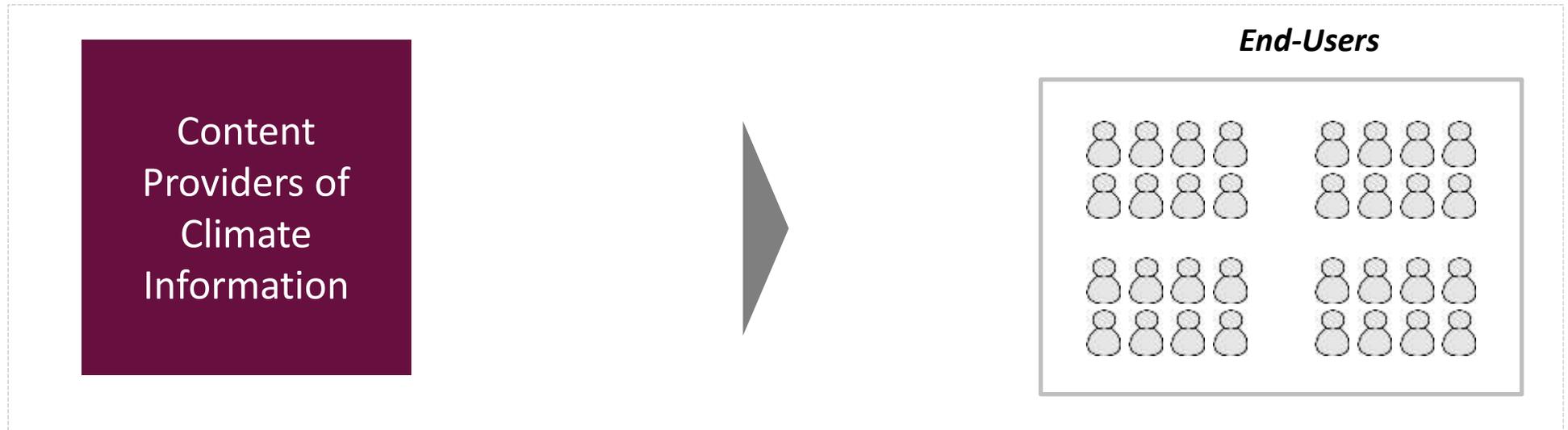
- Through our surveys, we were able to find out many of the expectations and needs of customers beyond just reliability and quality
- The specific information needs of farmers are known and informed our "bundling" approach
- Frequency of access, means of access, key information, are all variables that can inform product design insofar as farmers have very specific information needs at specific times during the agricultural cycle

Three different models emerged depending on the intermediaries required to package and deliver the information to end users



Direct sale is least likely, as it may be necessary to have a distributor or other intermediary to ensure rapid, and scalable delivery

Option 1 – Direct sale



High ● Low ○

Finance	<ul style="list-style-type: none"> • Heavy cost driven • Payback control 	<p>●</p> <p>◐</p>
Data	<ul style="list-style-type: none"> • Control on quality • Control on delivery timing 	<p>◐</p> <p>◐</p>
Access	<ul style="list-style-type: none"> • End- user reach • Ability to scale • Affordability 	<p>◐</p> <p>◑</p> <p>◑</p>

- This option allows a significant reduction of transaction costs within the platform but remains risky, as a breakdown between the content developer and the end-users would render the platform useless
- However, one must also note that all of these content developers boast extensive experience working directly with farmers

Direct sale via distributors seems a sensible option as many companies could be qualified to play this role

Option 2 – Direct sale via distributor



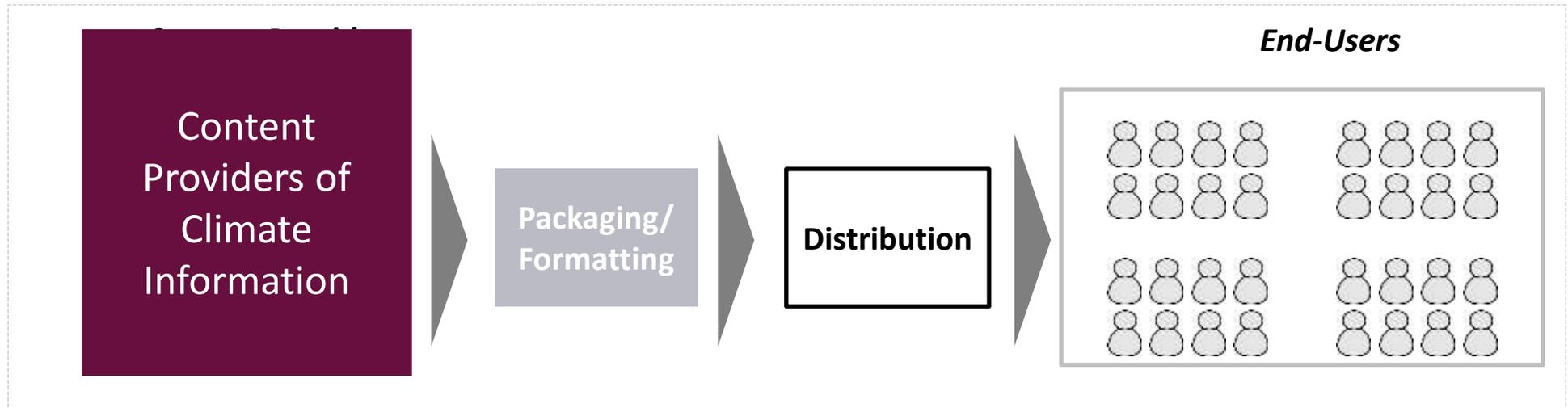
High ● Low ○

Finance	• Heavy cost driven	◐
	• Payback control	◐
Data	• Control on quality	◐
	• Control on delivery timing	◐
Access	• End- user reach	◐
	• Ability to scale	◐
	• Affordability	◐

- In terms of access to the customer base, companies with a large customer base may be well positioned to distribute
- The insurance sector, while interested may be difficult to get onboard at the onset especially because of the novelty of the approach and inherent risks for them
- A real opportunity, however, exists with telecom operators

Business to business may be required as neither content providers nor delivery agents have the capacity to package and format the information for distribution

Option 3 – Direct business to business



Status High ● Low ○

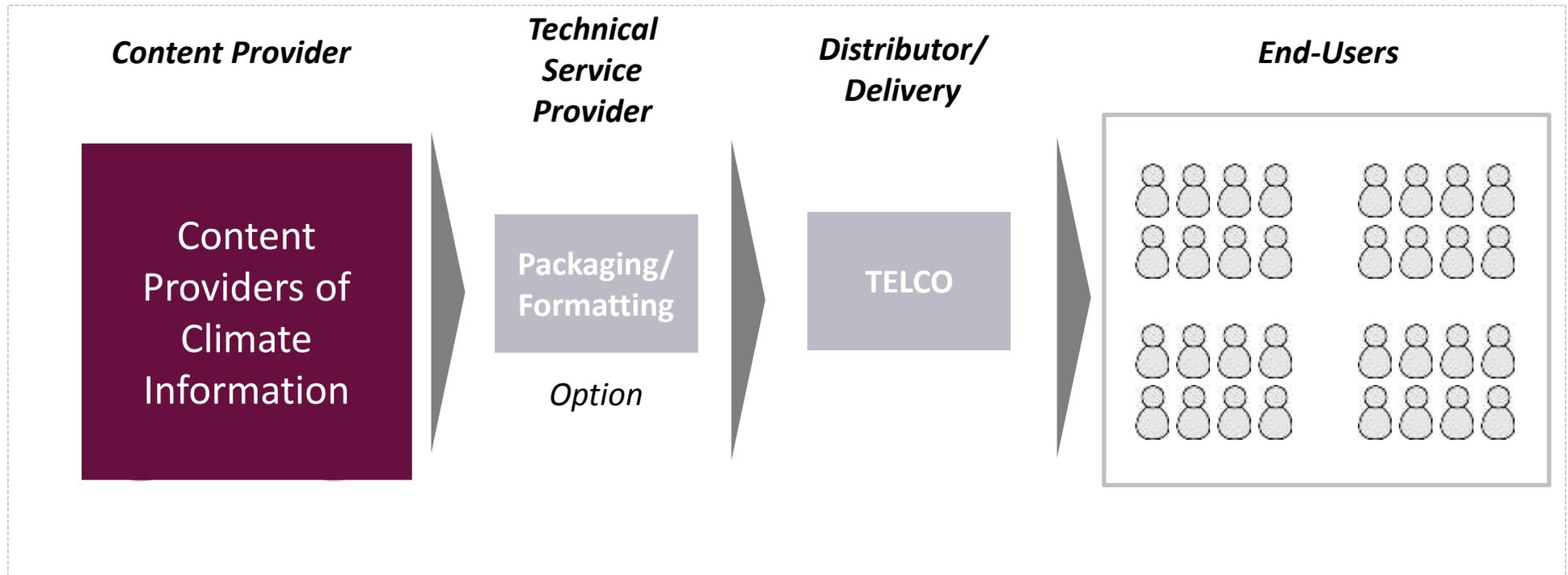
Finance	<ul style="list-style-type: none"> • Heavy cost driven • Payback control 	<ul style="list-style-type: none"> ● ◐
Data	<ul style="list-style-type: none"> • Control on quality • Control on delivery timing 	<ul style="list-style-type: none"> ◐ ◑
Access	<ul style="list-style-type: none"> • End- user reach • Ability to scale • Affordability 	<ul style="list-style-type: none"> ◑ ◐ ◑

- We first considered this option with agribusiness companies in mind, but it seems this option drives the total costs up as it would require significant volume to reach the economies of scale necessary to keep costs down
- However, other existing distribution mechanisms such as mobile could reduce costs

Mobile telecommunication are the best positioned to play the distributor role in the climate platform

		Mobile Telecoms Provider	Agricultural Input Provider	Insurance Provider	Microfinance Provider
Finance	• Financial capacity	●	◐	●	◐
	• Payback control system	◐	◐	◐	◐
Data	• Quality assurance	◐	◐	◐	◐
	• Automatic process	◐	◐	◐	◐
	• Push technology	●	○	○	○
Access	• End-User easy to reach	◐	◐	◐	◐
	• Easy to scale in country	◐	◐	◐	◐
	• Affordable	◐	◐	◐	◐
Experience	• Data packages' distribution	◐	◐	◐	◐
	• Climate information	◐	◐	◐	◐
	• Building external platform	◐	○	◐	○

Mobile based platforms provide both great opportunities and challenges with respect to Niger, and possibly hold the greatest promise



- Mobile based platforms could be the best entry point although challenges such as, low penetration rates, and a lack of access to technology remain
- However, it must be noted that Niger knows exponential growth in mobile phone penetration and is likely to boast similar rates as its neighbors in only a few years (5-7 years)
- Specific provisions might be needed in the case of Airtel because of their overexposure with IFC

A Technical Service Provider is required in Niger to serve as intermediary to process the data from Content Providers, conduct quality control, and interface with end users

Additional technical content provider

- An additional private sector actor may be necessary for additional information needs, packaging and value addition to the climate information

Role

- This private sector actor would be responsible for running the climate information platform as opposed to the distributor, only responsible for dissemination

Criteria in selecting this actor

- High levels of technical capacity in order to run the platform
- Experience with similar projects
- Experience producing, analyzing, and distributing large amounts of data

Examples

- Company G is a company specialized in agri-VAS, and boasts significant experience developing tailored information platforms for the agricultural sector in West Africa. Other companies with similar experience and some interest in this platform include Companies U, X and Y
- These companies can develop a number of value added information products and run the platform

Mobile platforms offer the opportunity to share a wealth of information, requiring prioritization and a balance of needs, availability of information and financial feasibility

Product offering 1: Climate information is sold alone

- The information is created by content providers and transferred to technical service providers
- The end product from technical service providers is formatted, packaged and transferred to a telecom operator for distribution, likely through a platform the telco creates

Business model

- Only climate information is sold by the distributor to the farmer on a subscription basis or on a per sms basis

Product offering 2: Climate information is sold bundled with several information products

- In this option, climate information is bundled with several other information products such as:
 - Market information in real time on a wide range of agricultural produce on local and international markets
 - Information on input acquisition
 - Information on commercialization of agricultural produce on local and international markets
 - Information on traceability of products for export markets
 - Classification and continued monitoring of farms
 - Information on access and management of credit

Business model

- Combination of priority products for sale and “freemiums”. Only one or two of the information products would be commercialized, while the others would be available as “freemiums”, raising the overall interest level for the entire platform
- Priority products are based on farmer subscriptions for a fee to receive sms

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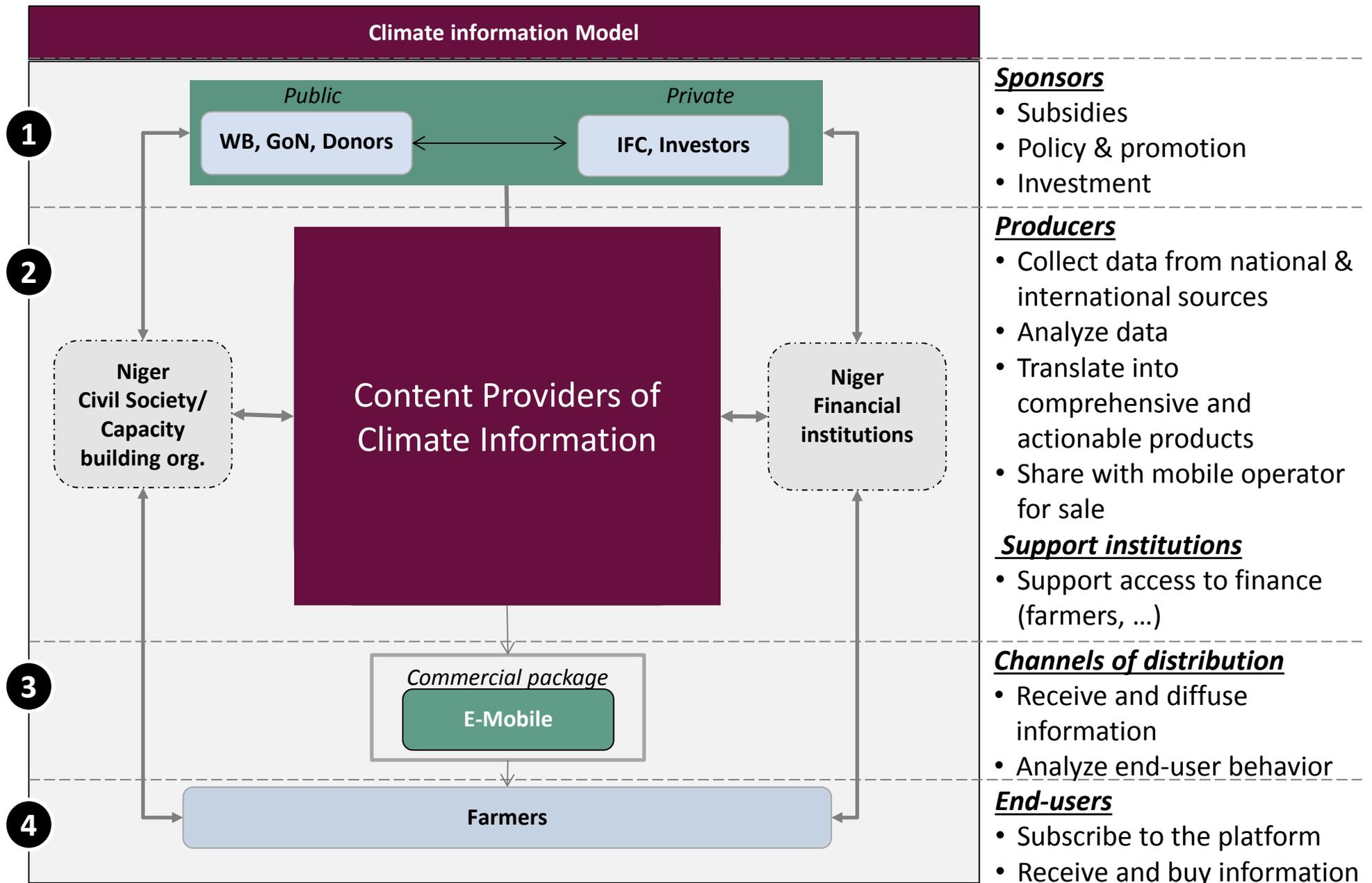
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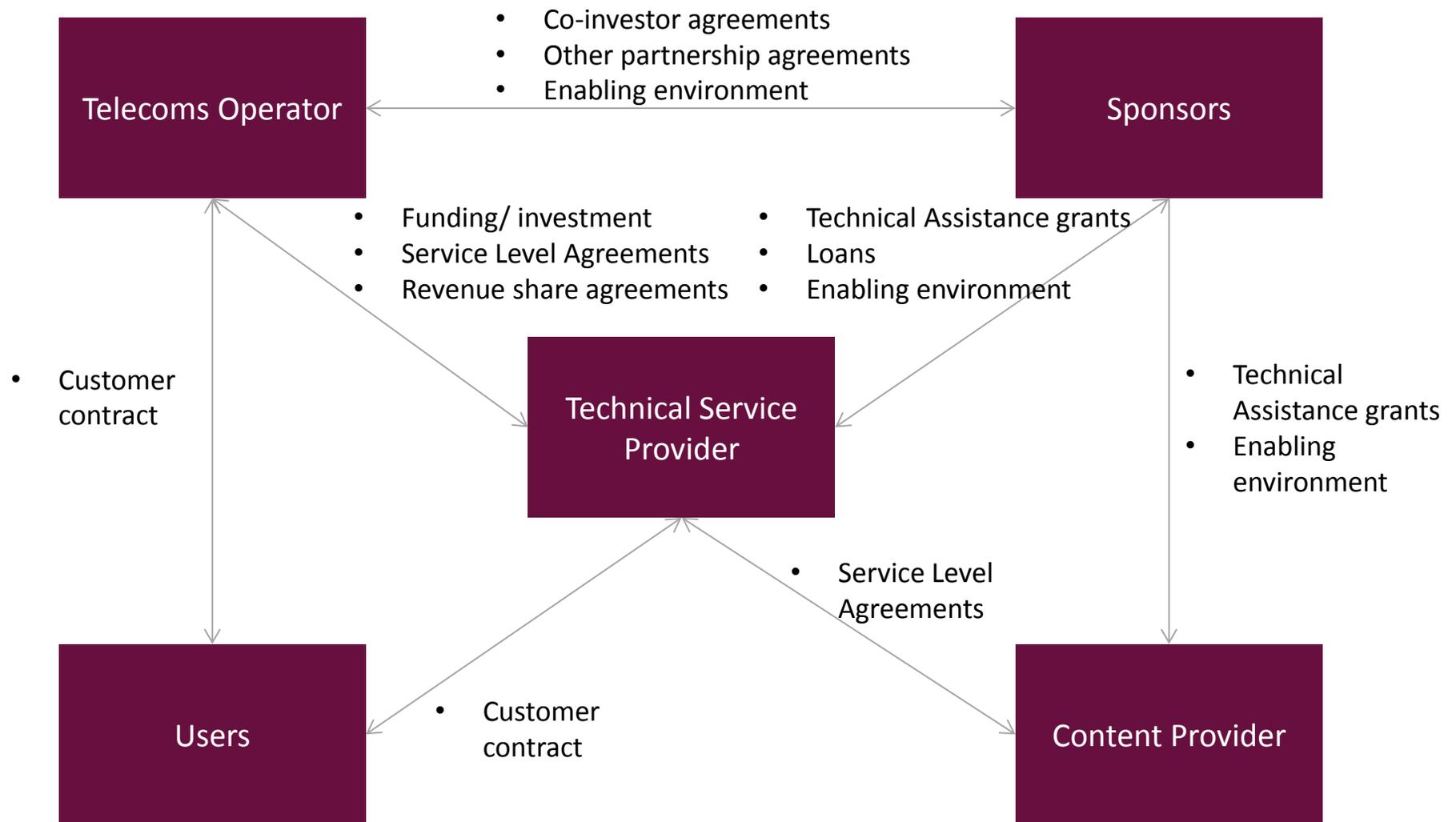
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The climate platform models we propose will require strong commitment from all actors



There are several options to consider with regards to structuring the relationships or partnerships within the platform



- The Technical Service Provider can be an existing entity, or one that is created; it can also be a Joint-Venture between various entities
- The Technical Service Provider can be selected through an open competition

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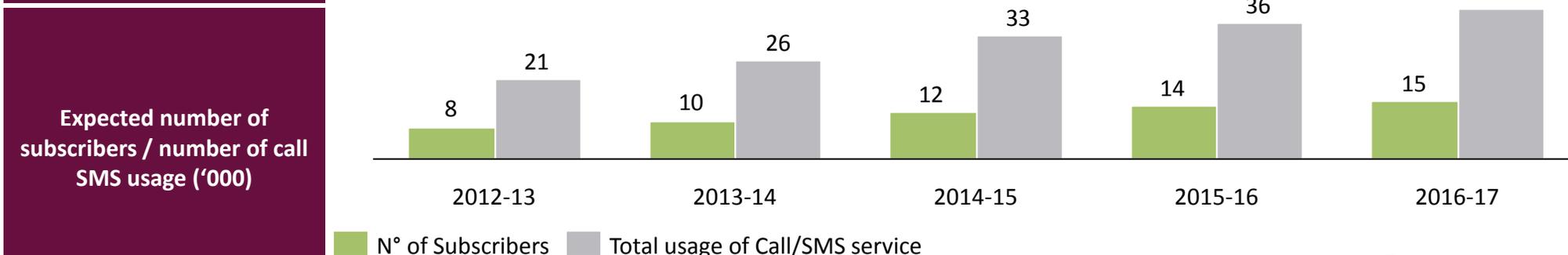
The financial models include core assumptions about consumption, CAPEX and OPEX (1/3)

General assumptions

Number of targeted farmers	<ul style="list-style-type: none"> • 3,854,670 farmers • <i>The FAO estimate of Niger’s farming population is 3,854,670 as of 2011. The FAO estimate relies on data from the National Statistics Office of Niger.</i>
Interested farmers	<ul style="list-style-type: none"> • 83% of farmers • <i>Dalberg surveyed a sample of 414 farmers across 6 regions and 4 crops in Niger. 83% of surveyed farmers expressed interest for climate information.</i>
Expected growth rate	<ul style="list-style-type: none"> • 2012 – 2014 : 25% • 2014 – 2015 : 10% • <i>Average between company X growth rate (30%) company Y growth rate (10%). 5% was added in the case of Niger where we assumed greater interest</i>
Inflation rate	<ul style="list-style-type: none"> • 1% • <i>The rate of inflation is assumed based on historical inflation trends in Niger in the past ten years. Except for a short-lived spike in 2008.</i>
Tax rate	<ul style="list-style-type: none"> • 15% • <i>15% tax deferral assumed from 30% official tax rate after discussions with Government</i>

Consumer assumptions

Take off rate	<ul style="list-style-type: none"> • 0.25% • <i>Average takeoff rate between Product 1 (0.2%); Product 2 (0.2%); Product 3 (0.4%) and Product 4 (0.2%)</i>
Price for subscribers	<ul style="list-style-type: none"> • USD 8 per year • <i>Subscription fee derived from Dalberg survey with farmers in Niger</i>
Charge for CI through call/SMS	<ul style="list-style-type: none"> • USD 0.8 per usage • <i>This level of charges has been seen for models such as Product 2</i>



The financial models include core assumptions about consumption, CAPEX and OPEX (2/3)

CAPEX assumptions

Applications development cost

- USD 100,000

Data storage

- USD 50,000

Operating systems

- USD 50,000

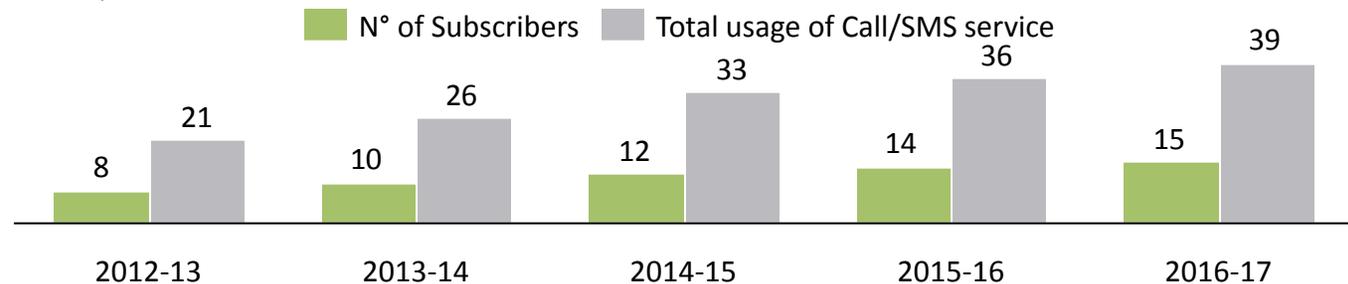
Data collected from Products 1 and 2. We mirrored the cost items of product 1. Capital expenses represented a total cost of \$ 200,000. Product 1 proves much more transparent in sharing some information publicly on their website. In addition, the number of testimonies from customers that can be traced back is impressive.

OPEX assumptions

Numbers of time farmers access information per year ('000)

- 3 SMS per month for subscribers
- 1 SMS per month for Call/SMS users

As far as subscription was concerned we witnessed similar levels for products 1 and 3



Cost per SMS usage

- USD 0.45

This was the cost in Niger for product 4

Building rental

- USD 12,000

1,000 \$/month based on averages reported by Doing Business reports

Staff salaries

- USD 52,800

Average salaries for 8 staff's receiving each \$6,600 as annual salary

Recruiting cost

- USD 15,000

Hiring new staff for required skills (Fig in \$) - One time payment

Utilities

- 25% of direct cost

Estimation based on overhead rate paid to host institutions in the region

Data processing

- 2% of total costs

As witnessed for product 1

The financial models includes core assumptions about consumer, CAPEX and OPEX (3/3)

Other assumptions

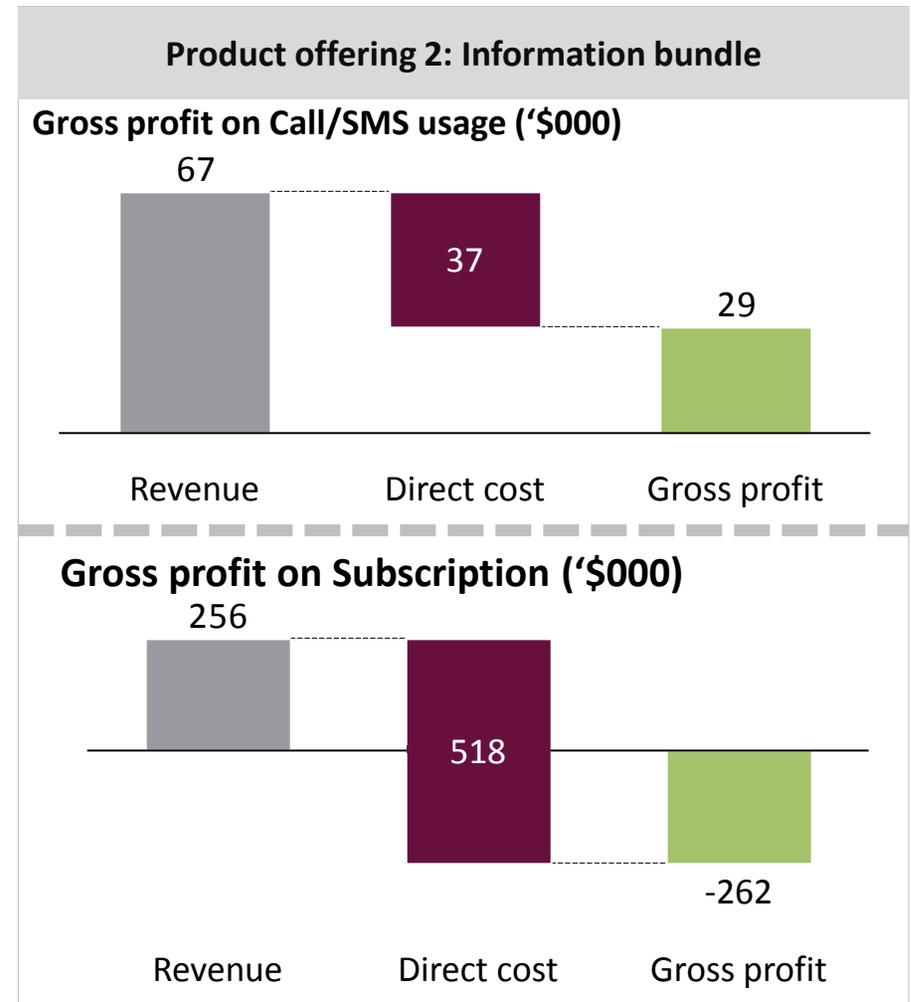
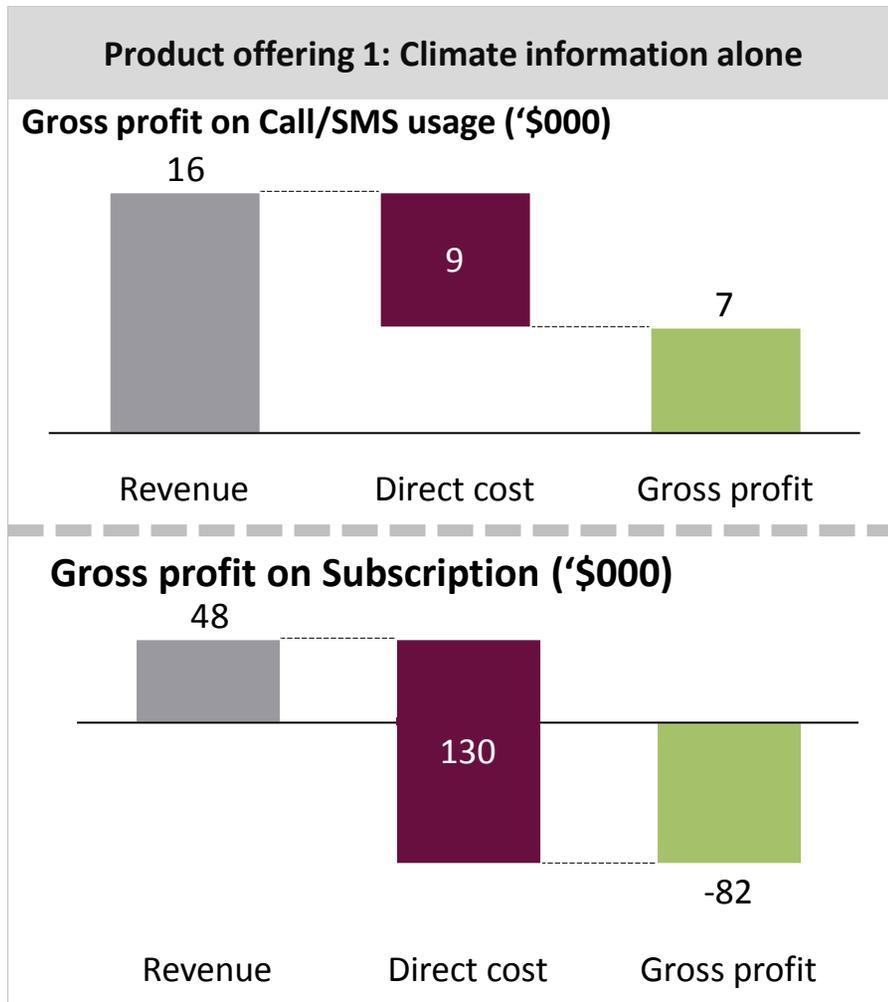
Loan	<ul style="list-style-type: none"> • USD 1,000,000 	<ul style="list-style-type: none"> • <i>Baseline information from IFC that the loan amount could vary between 1 and 2 million dollars.</i>
Interest rate	<ul style="list-style-type: none"> • 2% 	<ul style="list-style-type: none"> • <i>IFC commercial loan is a low interest loan</i>
Fixed assets life	<ul style="list-style-type: none"> • 5 years 	<ul style="list-style-type: none"> • <i>General baseline financial assumptions that can be made for a variety of projects of this scale</i>
Indirect revenue	<ul style="list-style-type: none"> • 3% 	<ul style="list-style-type: none"> • <i>Benchmark from two global platforms (1 and 2) which estimate it at less than 5% of their total revenue. Types of indirect revenues we have encountered include insurance advertising, microfinance advertising, agribusiness advertising, and advertising from raw material suppliers. We chose to maintain the same trend for Niger and assumed 3% for indirect revenues as a percentage of total revenues.</i>

Assumptions for the bundled product offering model

Takeoff rate	<ul style="list-style-type: none"> • 1% 	<ul style="list-style-type: none"> • <i>Level of interest for multiple information products was logically assumed to be higher than interest level for a climate information platform alone.</i>
CAPEX	<ul style="list-style-type: none"> • USD 240,000 	<ul style="list-style-type: none"> • <i>A 20% increase on the CAPEX for the climate information platform was assumed, to take into account the additional platform needs</i>
Utilities	<ul style="list-style-type: none"> • 25% of direct cost 	<ul style="list-style-type: none"> • <i>Estimation based on overhead rate paid to host institutions in the region</i>
Data processing	<ul style="list-style-type: none"> • 5% of total costs 	<ul style="list-style-type: none"> • <i>3% of additional cost out of total costs was assumed to take into account the larger volume of data and the need to segment the larger amount</i>
Price for subscribers	<ul style="list-style-type: none"> • USD 8 per year 	<ul style="list-style-type: none"> • <i>Subscription fee derived from Dalberg survey with farmers in Niger</i>

Gross profit

- Comparison of the 2 product offering options YEAR 1: 2013-2014

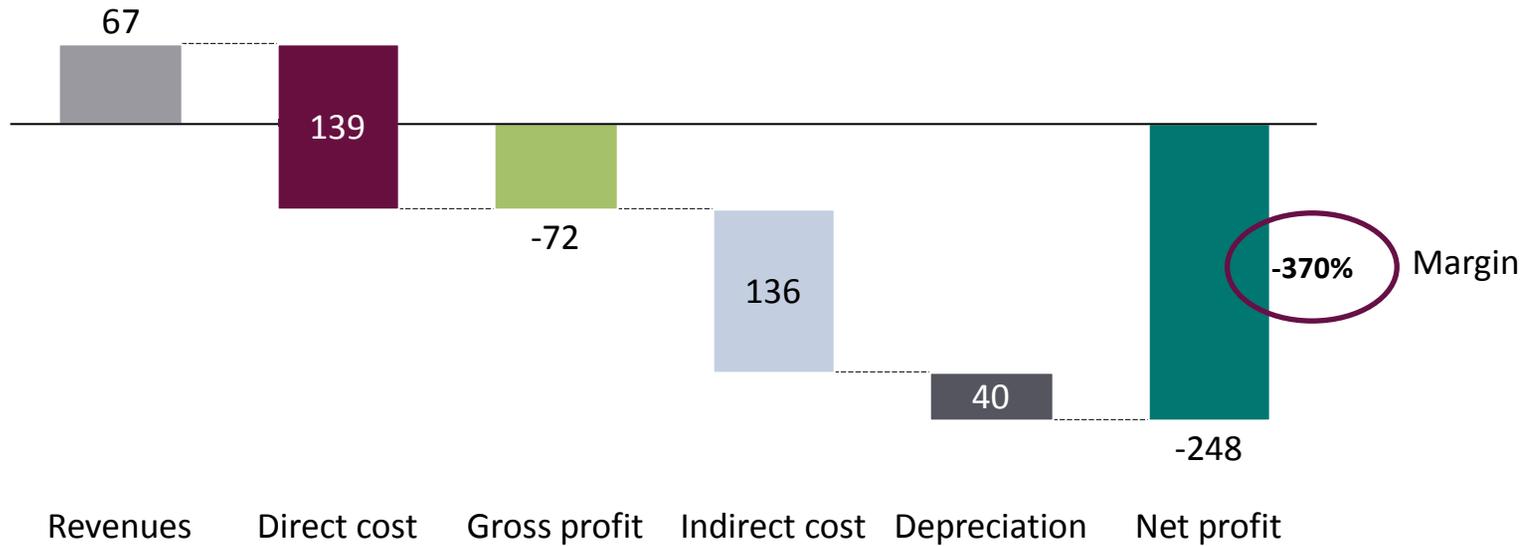


For both product offering options, gross profit is negative for subscribers, while it is positive for Call/SMS users
Profits are eroded by losses recorded on subscription model

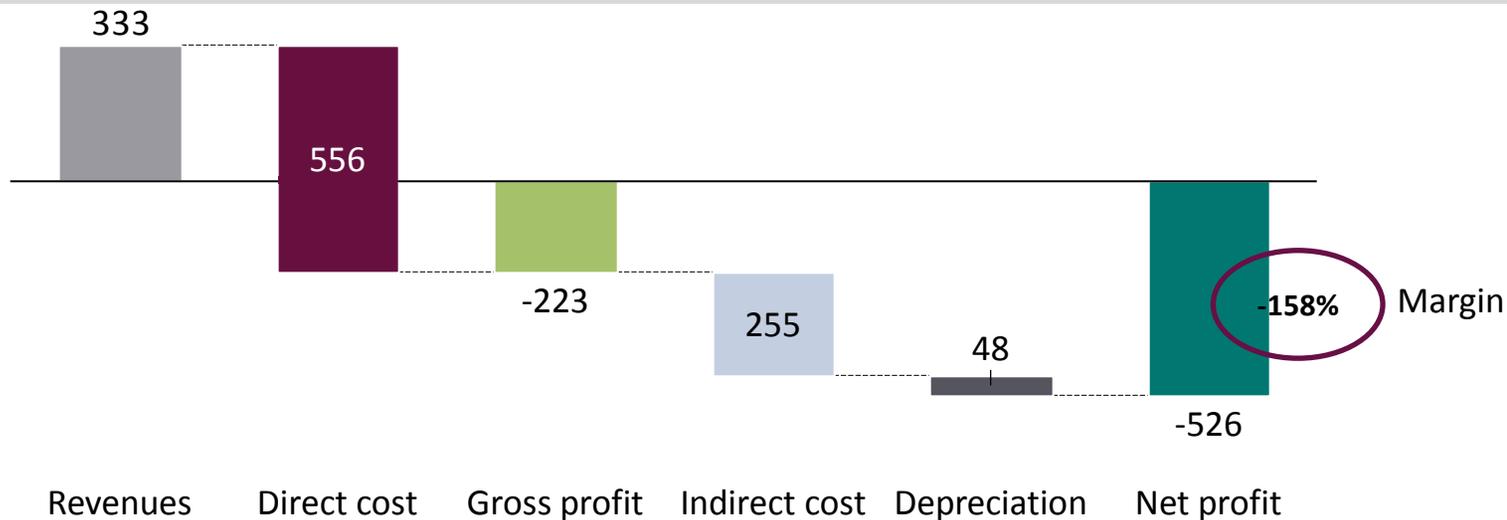
Net Profit

- Comparison of the 2 product offering options YEAR 1: 2013-2014

Product offering 1 (climate information alone): Breakdown of financials ('\$000)



Product offering 2 (climate information bundled with other services): Breakdown of financials ('\$000)

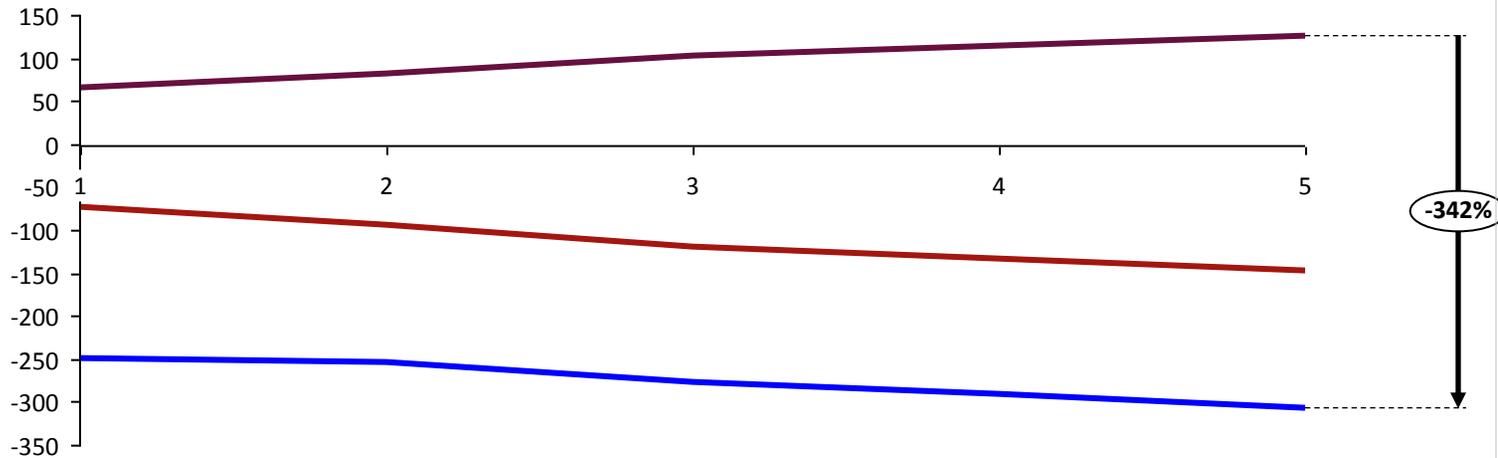


- For both models, gross profits and net profits are negative at inception

Financial trends

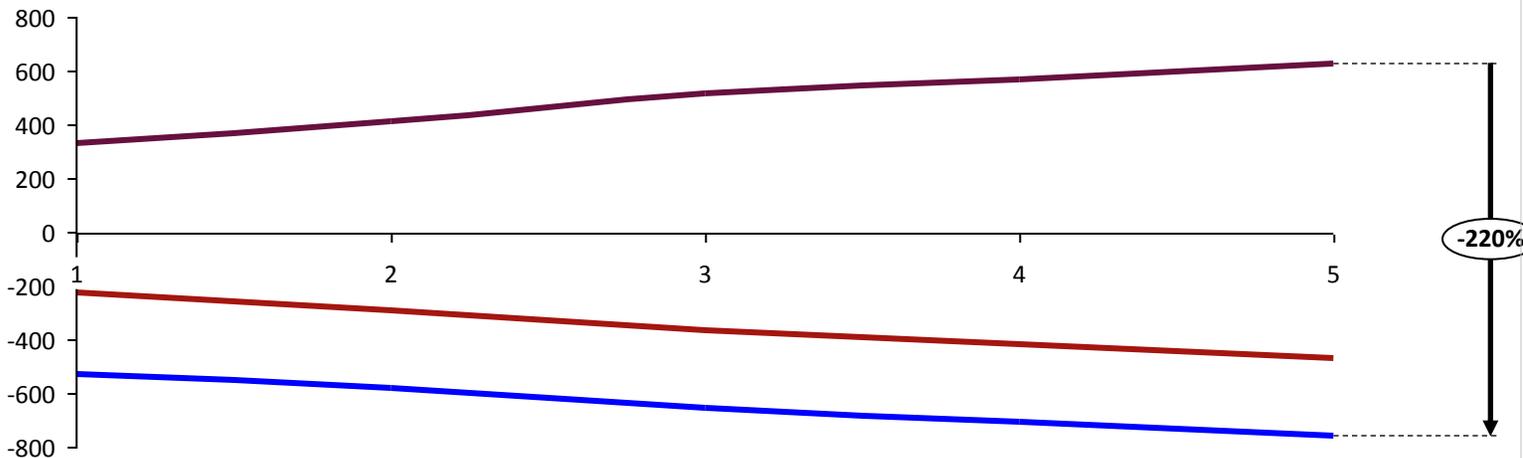
- Comparison of the 2 product offering options

Product offering 1: Trends on Revenue, Gross profit and Net Income over 5 years ('\$000)



Revenues
EBITA
Net income

Product offering 2: Trends on Revenue, Gross profit and Net Income over 5 years ('\$000)



- Even in the long term, trends show that the models are not economically viable
- The main data points that can change the models significantly are the take off rates, and the subscription rates

Key financial ratios of the financial analysis

Model 1: Climate information alone (Figures in \$ 000's)

Initial investment: \$1,000

Discount rate: 7%

Year	0	1	2	3	4	5
Cash flow	(1,000)	(300)	(305)	(332)	(347)	(364)
PV* factor	100%	93%	87%	82%	76%	71%
PV of cash flow	(1,000)	(280)	(267)	(271)	(265)	(259)
Cumulative PV	(1,000)	(1,280)	(1,547)	(1,817)	(2,082)	(2,341)

Key ratios

- **Net Present Value:** (\$2,341)
- **Profitability Index:** -2.34
- **IRR (Internal Rate of Return):** Negative
- **Accounting Rate of Return:** (32.9%)
- **Payback Period:** Not before 5 years

Model 2: Bundled information platform (Figures in \$ 000's)

Initial investment: \$1,000

Discount rate: 7%

Year	0	1	2	3	4	5
Cash flow	(1,000)	(570)	(619)	(702)	(750)	(805)
PV factor	100%	93%	87%	82%	76%	71%
PV of cash flow	(1,000)	(532)	(541)	(573)	(572)	(574)
Cumulative PV	(1,000)	(1,532)	(2,073)	(2,646)	(3,219)	(3,792)

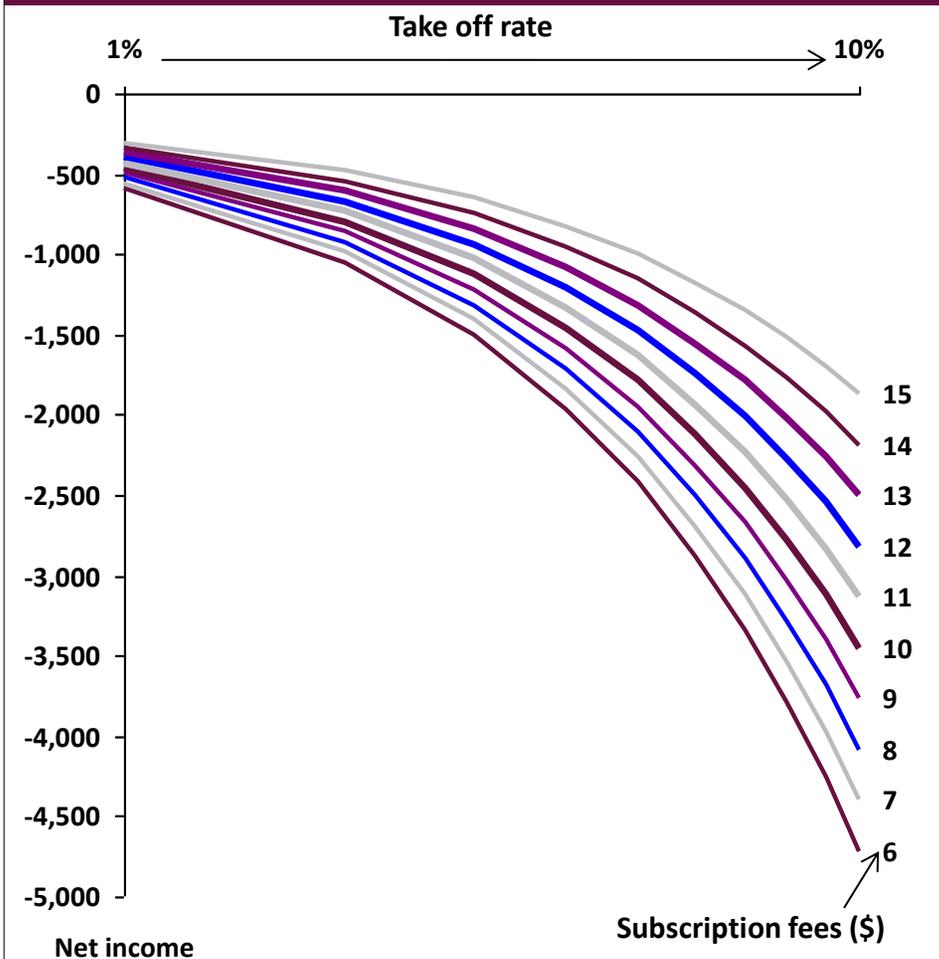
Key ratios

- **Net Present Value:** (\$3,792)
- **Profitability Index:** -3.79
- **IRR (Internal Rate of Return):** Negative
- **Accounting Rate of Return:** (68.9%)
- **Payback Period:** Not before 5 years

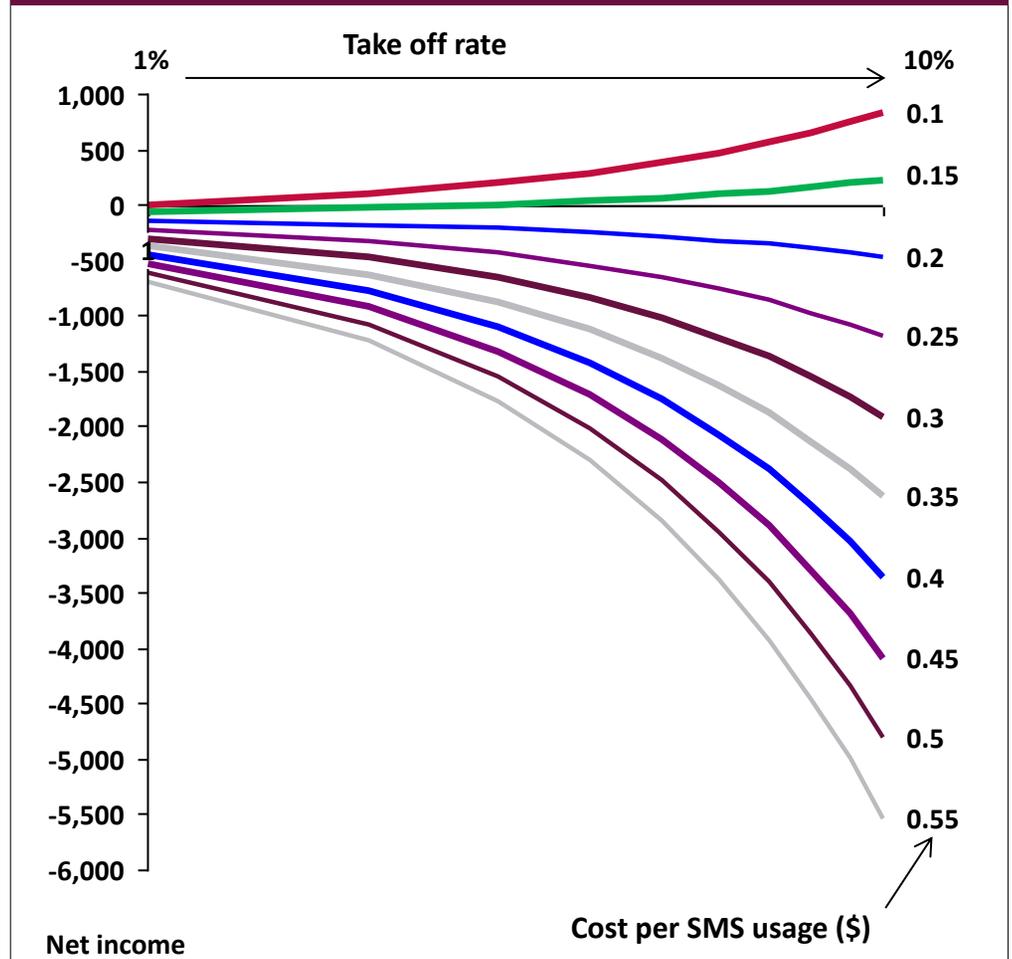
- Additional grant money, and subsidies can render the platform sustainable in the long term
- Over a ten year horizon, the models will still not be profitable as they stand since gross profit margin trends are negative and will continue to trend lower

The net income is sensitive to the « Cost per SMS usage » which should remain less than \$0.16

Sensitivity of net income relative to the variation of both “take off rate” and “subscription fee”



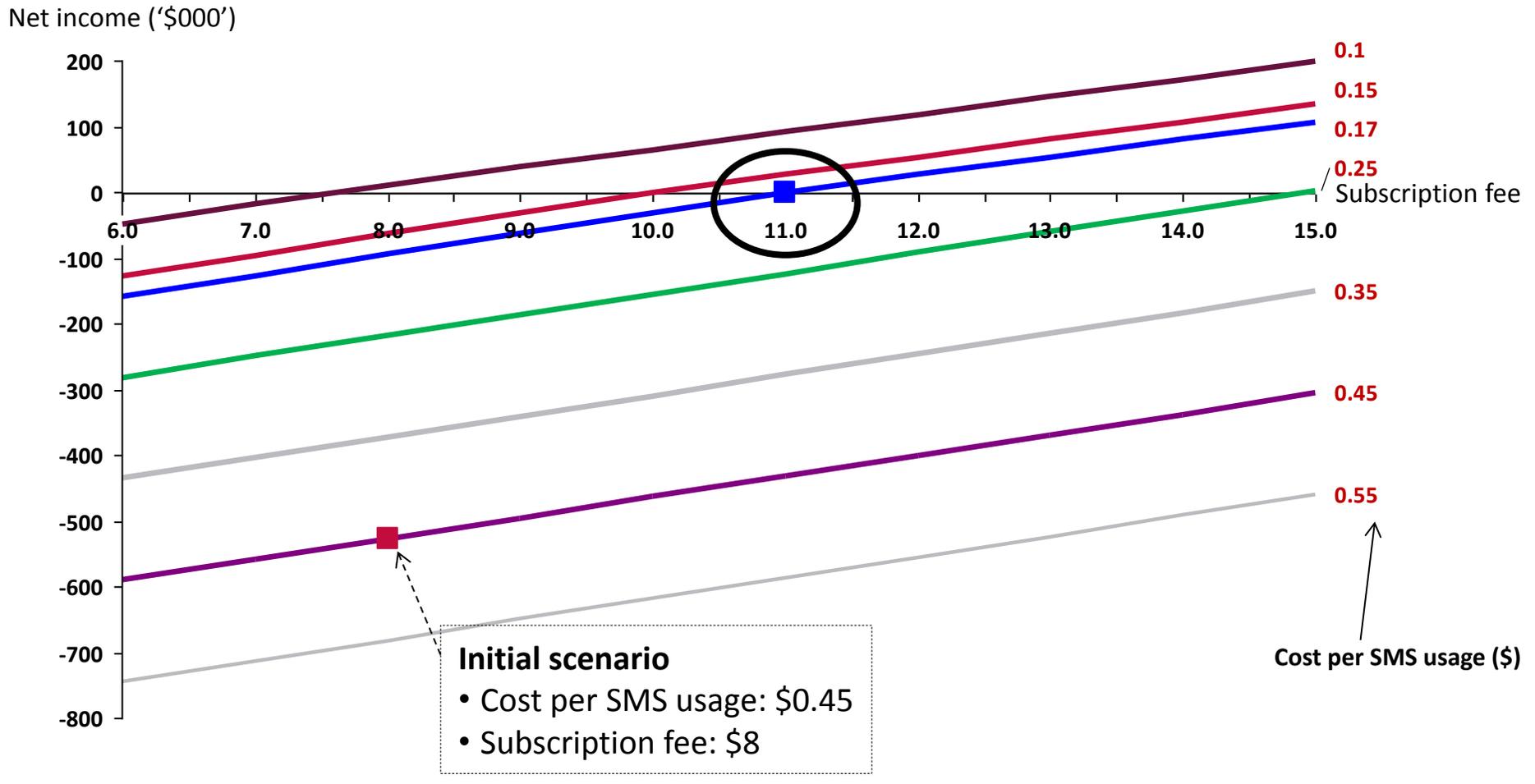
Sensitivity of net income relative to the variation of both “take off rate” and “cost per SMS usage”



- Even if the “subscription fee” and the “take off rate” increased simultaneously, the net income tends to be negative
- The “cost per SMS usage” is the main driver affecting positively and negatively the net income
- In order to be profitable, the “cost per SMS usage” should be minimized

For a “Cost per SMS usage” higher than \$0.16, the “subscription fee” should be at least equal to \$11 to reach the break even point

Sensitivity of net income relative to the variation of both “cost per SMS usage” and “subscription fee”



- The profitability of the model depends mainly on two variables: the “cost per SMS usage” and the “subscription fee”
- The model will be profitable by either decreasing the “Cost per SMS usage” or increasing the “subscription fee”

A commercially viable climate information platform is not yet feasible in Niger. However, the opportunity to complement revenue shortfalls through grants should be explored

Conclusions

- The bundled information product package is the better option to implement, as it can raise more interest among farmers and provide more value across the agricultural value chain – this is all dependent on the ability of the platform to raise grants or very low cost funding
- Another reason to support Option 3 lies in the fact that as it provides more value, it may command much higher take off rates than those assumed, especially in light of the high interest farmers have shown for all the information products contained in the information bundle
- Take off rates and subscriptions rates are assumptions and can change the profitability of the models significantly
- While the models with current subscription assumptions are not profitable, a pilot platform could inform on the likely takeoff rates, and acceptable subscription rates for farmers in Niger, and allow to recalibrate models

Mitigations strategies

- Additional grant money , and subsidies can render the platform sustainable in the long term, as commercial viability is not ensured at inception
- More resources from additional donors involved in Niger need to be identified
- Impact investors may be interested in investing in the platform in Niger, in spite of the low revenues at inception
- Private sector actors are willing to consider contributing funds to the platform as part of their CSR portfolio
- Additionally, more donor support can be secured if potential impact is seen as greater than mere climate information
- Take off rates may be higher, and subscription rates may need to change to include only one SMS per subscriber/month
- Alternatively, the subscription model can be eliminated altogether and the platform can start operations only on a call/sms basis

Table of contents

Executive summary

Objectives of the study and methodology

Niger context and overview

Study findings and implications for design

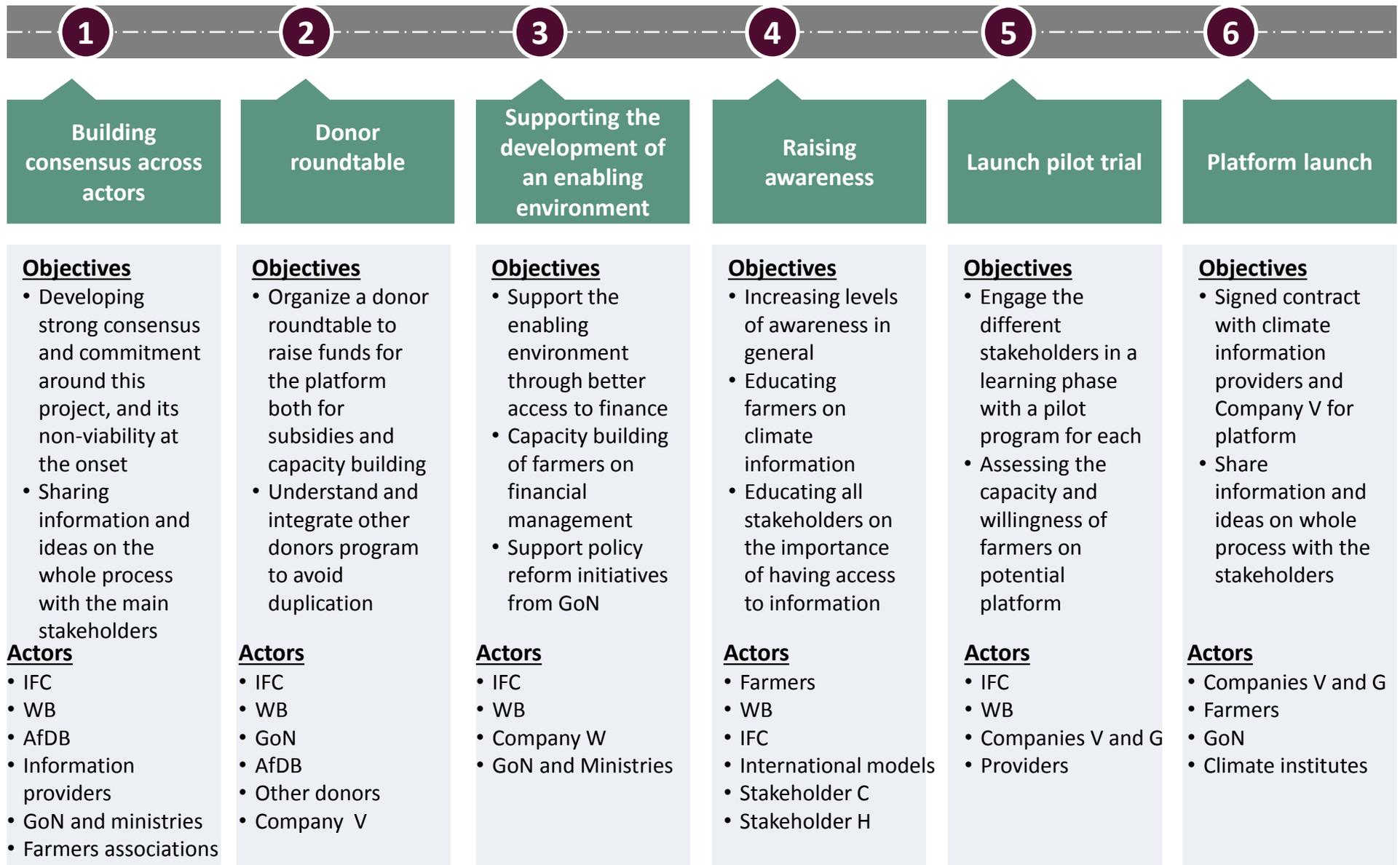
Analysis of options

Platform design

Financial analysis

Implementation plan

Implementing the climate platform will require six major steps in the following order



Building a strong consensus across stakeholders will be crucial for the success of the climate platform



Building consensus across actors

- **Lead:** Cabinet of Prime Minister, Ministry of Planning, WB, AfDB, Stakeholders C and D.
- **Timing:** 7 months
- **Starting date:** October 2012
- **Due date:** May 2013

It's important at the beginning of the implementation phase to have the commitment/adhesion of all key actors in order to support the project. After the validation workshop, IFC should produce a memorandum that would be shared with all the stakeholders in preparation of actual field visits. The objective of such a visit will be to reach a final consensus with all actors in Niger and sign an MoU.

- Objectives**
- Developing a strong sense of commitment around this concept
 - Sharing information and ideas on the whole process to the main stakeholders
- Actors**
- IFC
 - WB
 - AfDB
 - Gov and ministries
 - Farmers associations

Activity	2012			2013				
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Develop a memo	█							
Share Memo with stakeholders		█						
Receive feedback			█					
Integrate feedback			█					
Share final memo				█				
Confirm a date for meeting with stakeholders				█				
Draft MOU				█				
Prepare field visit in Niger					█			
Meet Farmers/Organizations						█		
Meet stakeholder A and D						█		
Meet Company V						█		
Meet the GoN: Ministry planning, Agriculture						█		
Meet WB, AfDB						█		
Write field visit report							█	
IFC internal debrief								█
Finalize MOU							█	
Signed MOU with stakeholders								█

Engaging current and potential donors is necessary in order to raise additional funds



Donor roundtable

- **Lead:** World bank, AfDB, UNDP, BID, JICA, other donors
- **Timing:** 16 Months
- **Starting date:** January 2013
- **Due date:** May 2014

Holding this session will help to bring together public and private donors to: 1) share information on existing funding programs, 2) consider Niger’s funding needs for climate information and management efforts, 3) discuss alternatives for filling gaps in funding. IFC will have to involve all donors current and potential for more success

- Objectives**
- Organize a donor roundtable to raise funds for the platform both for subsidies and capacity building
 - Understand and integrate other donors program to avoid duplication
- Actors**
- IFC
 - WB
 - GoN
 - AfDB
 - Other donors

Activity	2013												2014				
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Preparing a teaser based on the report	█																
Sharing with the potentials donors				█													
Setting date for the donor roundtable					█												
Agree on date and time						█											
Prepare the logistics							█										
Launch Conference										█							
Write final report on next steps and MOU												█					
Follow-up with donors and investors													█				

The IFC also needs to engage the GoN on key areas to adequately support the enabling environment....



Supporting the development of an enabling environment

- Objectives**
- Support the enabling environment through better access to finance
 - Capacity building of farmers on financial management
 - Support policy reform initiatives from GoN
- Actors**
- IFC
 - WB
 - Company W
 - GoN and Ministries

- **Lead:** WB, Cabinet of Prime Minister, IFC, AfDB, GoN
- **Timing:** 15 months
- **Starting date:** March 2013
- **Due date:** June 2014

Supporting the enabling environment through A2F, Capacity building and Policy reform will facilitate the implementation of the project. IFC can lead some of the activities (A2F, SBA), and trigger the process for policy reform with other international organization such as the World bank. This component requires skills in negotiation and time management for stick to the deadlines and objectives.

Activity	2013										2014					
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Conduct assessment for Business lines	█															
Meet A2F actors for potential product		█														
Elaborate A2F status in Niger																
Define support propositions for A2F			█													
Sharing with WB current project Prodex					█											
Find an agreement to support A2F with WB						█										
Hold discussion with Farmer organizations			█													
Detailed farmers' needs in term of capacity building					█											
Elaborate a capacity building plan							█									
Discuss the policy reform needed with GoN									█							
Elaborate a policy reform planning support												█				
Share planning with the GoN															█	
Validate the final version																█

...While also raising the awareness of actors to allow for true ownership of the platform



Raising awareness

- **Lead:** Stakeholder H, E, D, NGOs, Ministry of Planning
- **Timing:** 7 months
- **Starting date:** December 2012
- **Due date:** June 2013

Consensus on meaning of climate information and its relevance will support ownership of the concept and a better understanding of its usage. IFC with the support of communication actors runs an education campaign for all stakeholders. This component requires a personalized approach to use from simple to more complex content depending on the stakeholder.

- Objectives**
- Increasing levels of awareness in general
 - Educating farmers on climate information
 - Educating all stakeholders on the importance of having access to information
- Actors**
- Farmers
 - WB
 - IFC
 - International models
 - Stakeholder C
 - Stakeholder H

Activity	2012		2013							
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Setup an awareness raising program	████████████████████									
Work with farmers on better ways to disseminate information					████████████████████	████████████████████	████████████████████			
Meet NGO s on Environment/Agriculture					████████████████████	████████████████████	████████████████████			
Define potential support from NGO s/ Farmers Org.						████████████████████	████████████████████			
Build a roadmap for educating farmers							████████████████████	████████████████████		
Define workshop period to share information								████████████████████	████████████████████	
Hold workshop sessions (2 workshops)									████████████████████	████████████████████
Hold first discussion with global models					████████████████████					
Define ways and timing of involvement							████████████████████	████████████████████		
Hold an exchange sessions with researchers										████████████████████

Launching the pilot test will give more insights on the technical feasibility and clear orientations on the expectations



Pilot program launch (Test)

- **Lead:** Company V, Stakeholders D and H
- **Timing:** 26 months
- **Starting date:** October 2013
- **Due date:** December 2015

Launching a pilot phase will allow to assess technical feasibility and identify potential issues early. It's a way for IFC to evaluate the best ICT platform based on their performance. The pilot test phase should involve a sample of farmers from different region and crops for a better result.

- Objectives**
- Engage the different telecom companies in a learning phase with a pilot program for each
 - Assessing the capacity and willingness of farmers on potential platform
- Actors**
- IFC
 - WB
 - Companies G and V
 - Providers

Activity	2013			2014									2015																		
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov					
Prepare TORs for launching pilot phase	█																														
Invite Company V	█																														
Set agreement on the 1 year ICT platform test			█																												
Define partnership with Stakeholder D, Farmers,...					█																										
Launch the one year pilot phase									█																						
Midterm evaluation															█																
Hold workshop for sharing results																					█										
Reach consensus on the best platform model																							█								

Annexes

Annex A: Overall approach

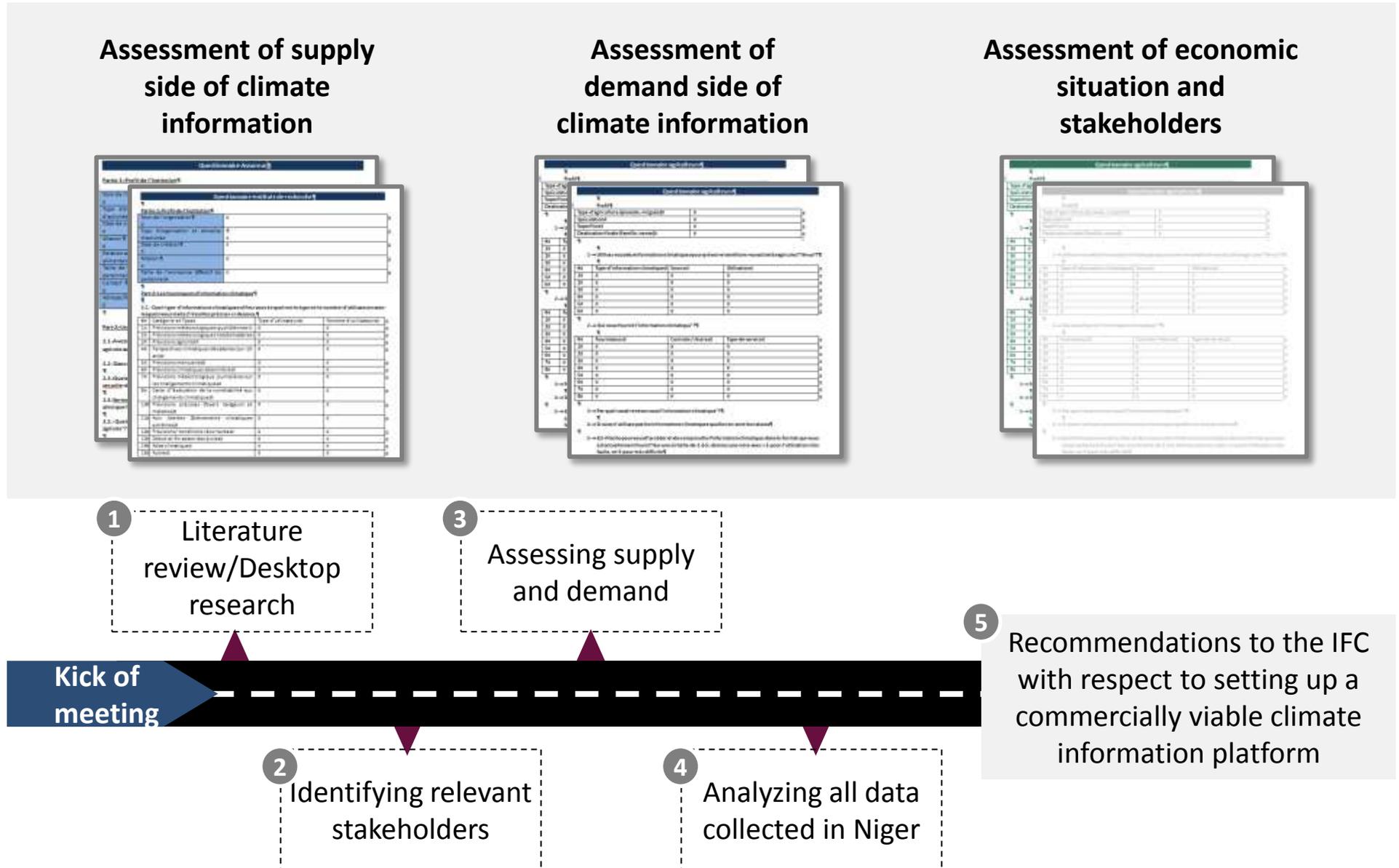
Annex B: Niger context

Annex C: Additional supply and demand charted data

Annex D: Study of global models of climate information platforms

Annex E: Additional supporting data for options proposed

We conducted a market study as well as a study of the enabling environment to assess the commercial viability of a climate information platform



Dalberg followed a systematic process to solicit input from stakeholders

Approach

- Conducted extensive desktop research and literature review before, during, and after data collection trips
- Conducted 2 country visits to Niger to:
 - Assess demand for Climate Information
 - Evaluate supply of Climate Information
 - Make recommendations on way forward
- Conducted in-depth interviews with 500 individuals [IFC notes that the number of interviewees is stated as 414 in other slides.]
- Completed with non-farmer surveys in Niger
- Amongst other data points we will look at satisfaction level, level of interest in climate information, and capacity of providers
- We also conducted a benchmark study of global models that could be applicable to Niger in order to identify best practices and common constraints
- After proposing models for Niger, we also conducted a thorough feasibility analysis and presented the revenue model for such models

Annexes

Annex A: Overall approach

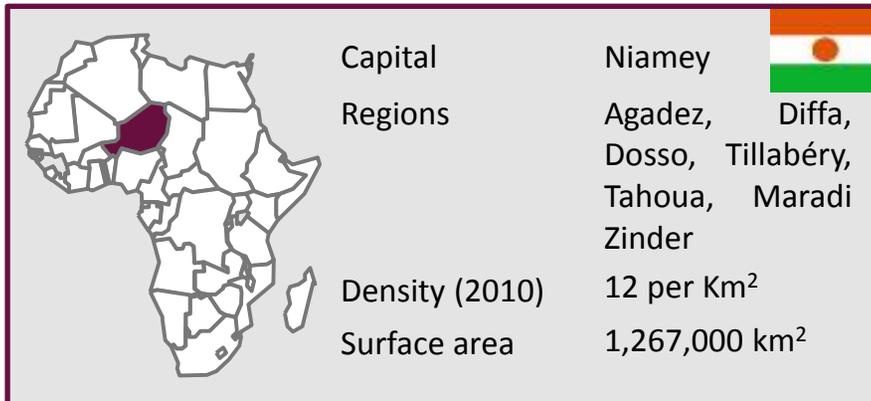
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A landlocked nation nested between the Sahara and the rest of the Sahel, Niger's economy is dominated by agriculture



Country Profile - Indicators

Population	16 M
GNI per capita, PPP (2011)	\$720
GDP growth (annual % 2011)	2.30%
Rural population (%) (2010)	83.53%
Mobile cellular subscriptions (2010)	4 M
Literacy >15 can read and write	28.70%
Below poverty line (% of population 2007)	59.50%
Agriculture Labor force	90.0%

Some facts

Enabling Environment

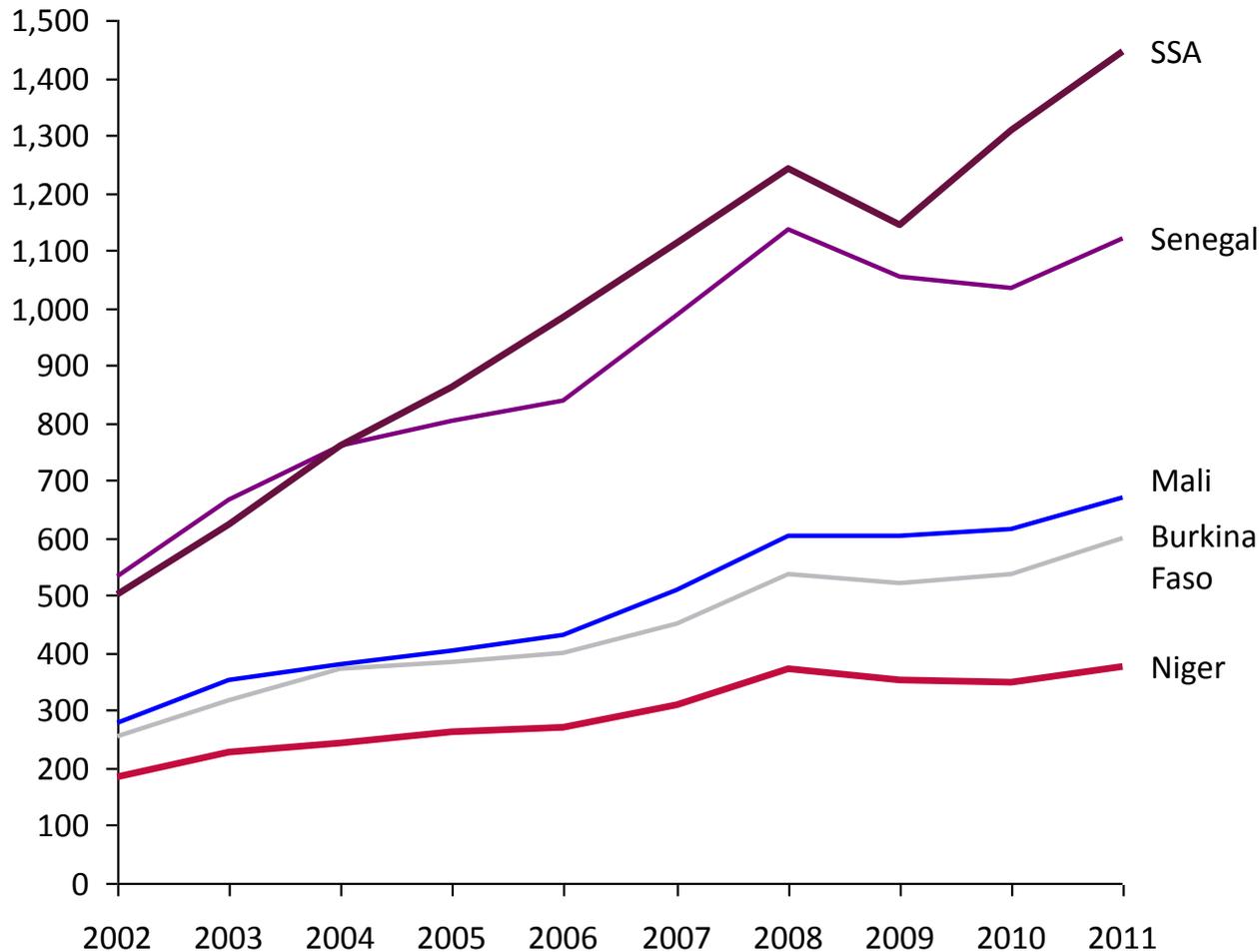
- **Next election:** 2016
- **Doing business:** 173 over 183, made no progress in nearly all the indicators
- Democracy and constitutional rule were restored in 2011 with new national constitution
- Niger low income include weak institutions, poor access to credit and difficulty registering property

Agriculture Structure

- The agricultural sector remains the livelihood of most people in Niger, serving as source of employment for about 80 percent of the population
- The Agriculture sector also accounts for about 40 percent of GDP
- Food security, however, remains a problem in the northern part of the country
- Lower agricultural yields in recent years have been a result of adverse climate conditions
- There is a 14 percent gap in Niger's seasonal cereal needs which could be reduced by improving the resilience of the agricultural sector

Niger boasts the lowest GDP per capita across compared countries with 60% of the population living below the poverty line

GDP per Capita (current US\$)

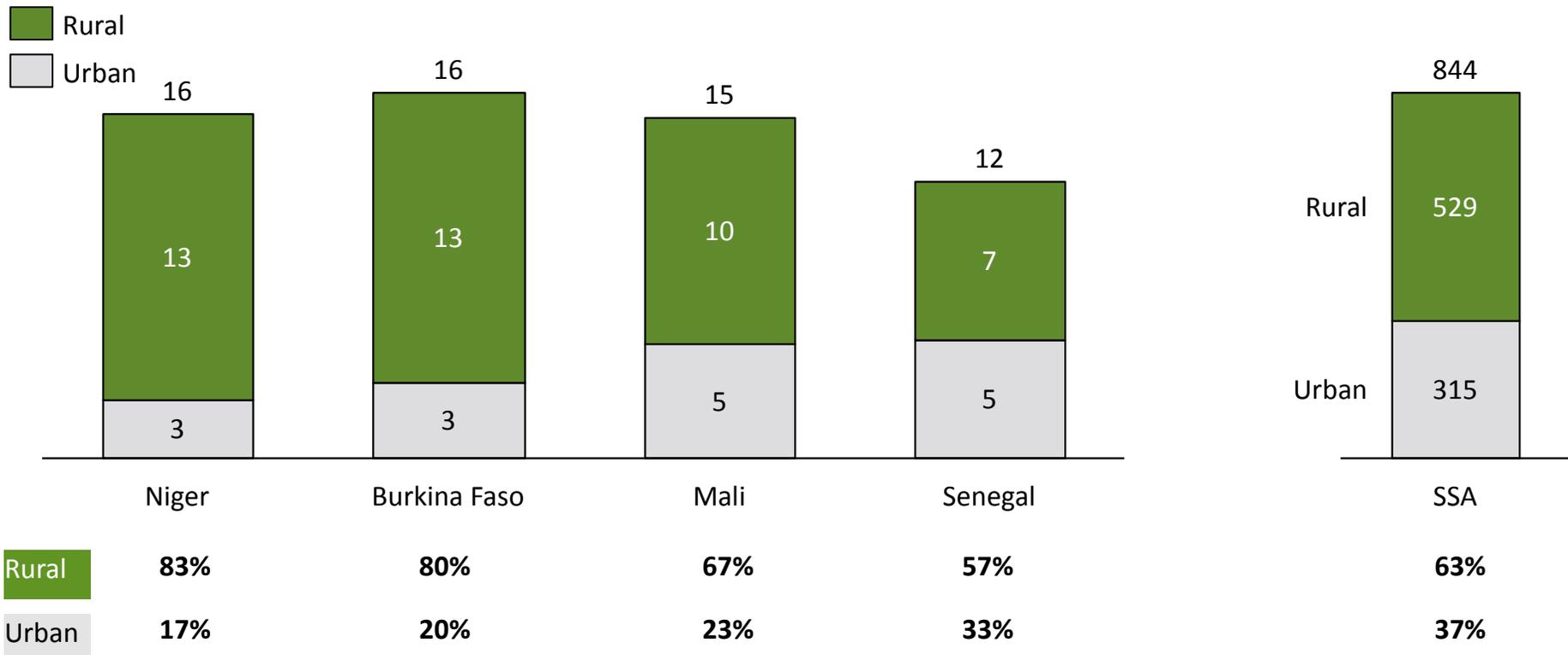


Observations

- Niger GDP growth exceeds the average, but stays volatile
- Niger is classified as part of the low income countries
- About 60% of the population are below the poverty line
- Niger is ranked 186 out of 187 countries in the United Nations Human Development Index.

Niger's agriculture sector is pivotal to the country's economy, amounting to roughly 28% of GDP

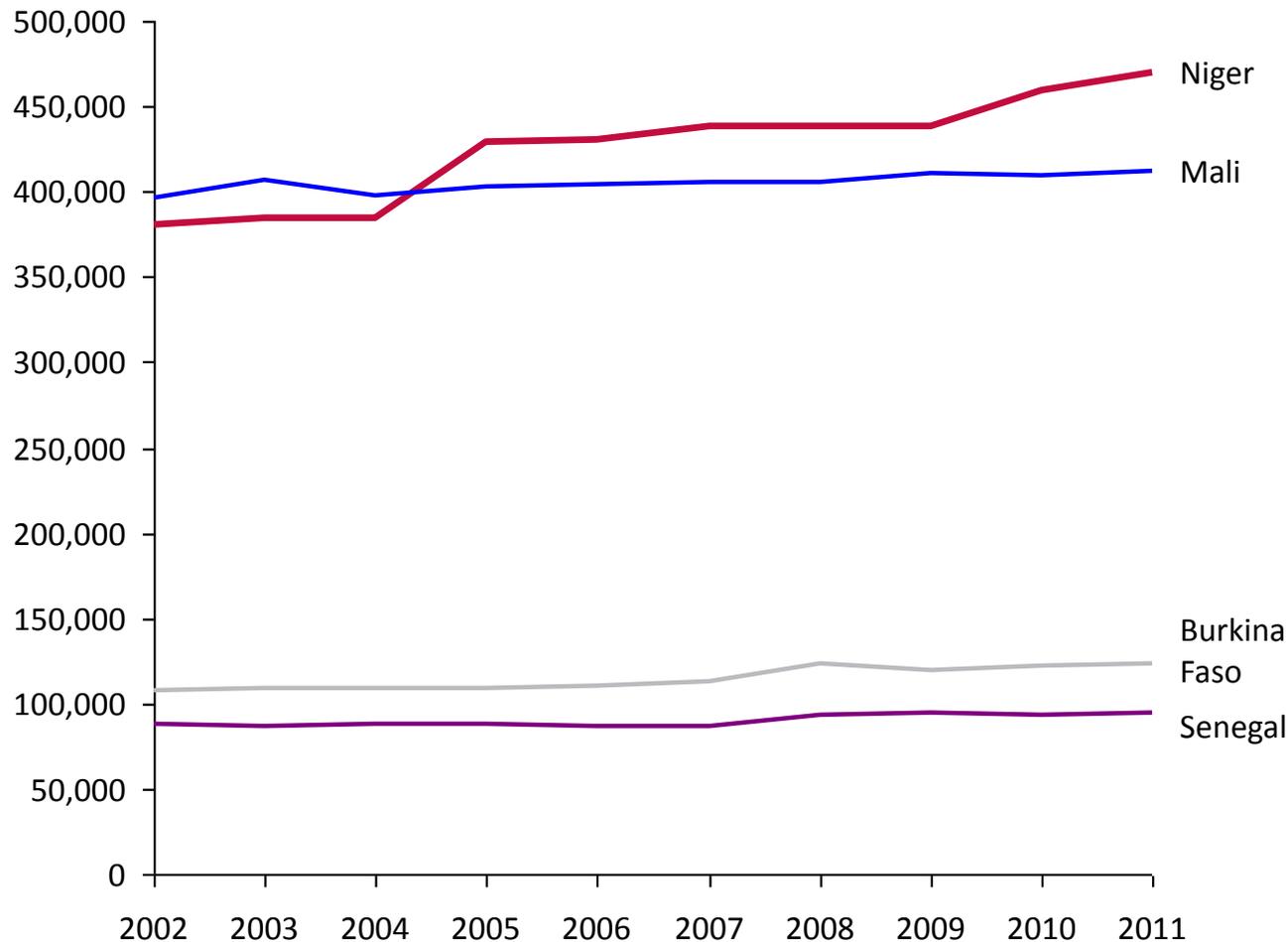
...and 80% of the population living in rural areas...



- The majority of the population in Niger lives in the rural areas
- Niger boasts the highest birth rate of any country and the second highest population growth rate in the world (3.6%); at this rate the population will double every 20 years
- Given that Niger is a landlocked country that depends on agricultural, agro-pastoral, and pastoral livelihoods, this rapid population expansion will place increasing stress on limited natural resources

.....relying on agriculture for their livelihood, thus, it is critical to increase and agricultural resilience to tackle poverty

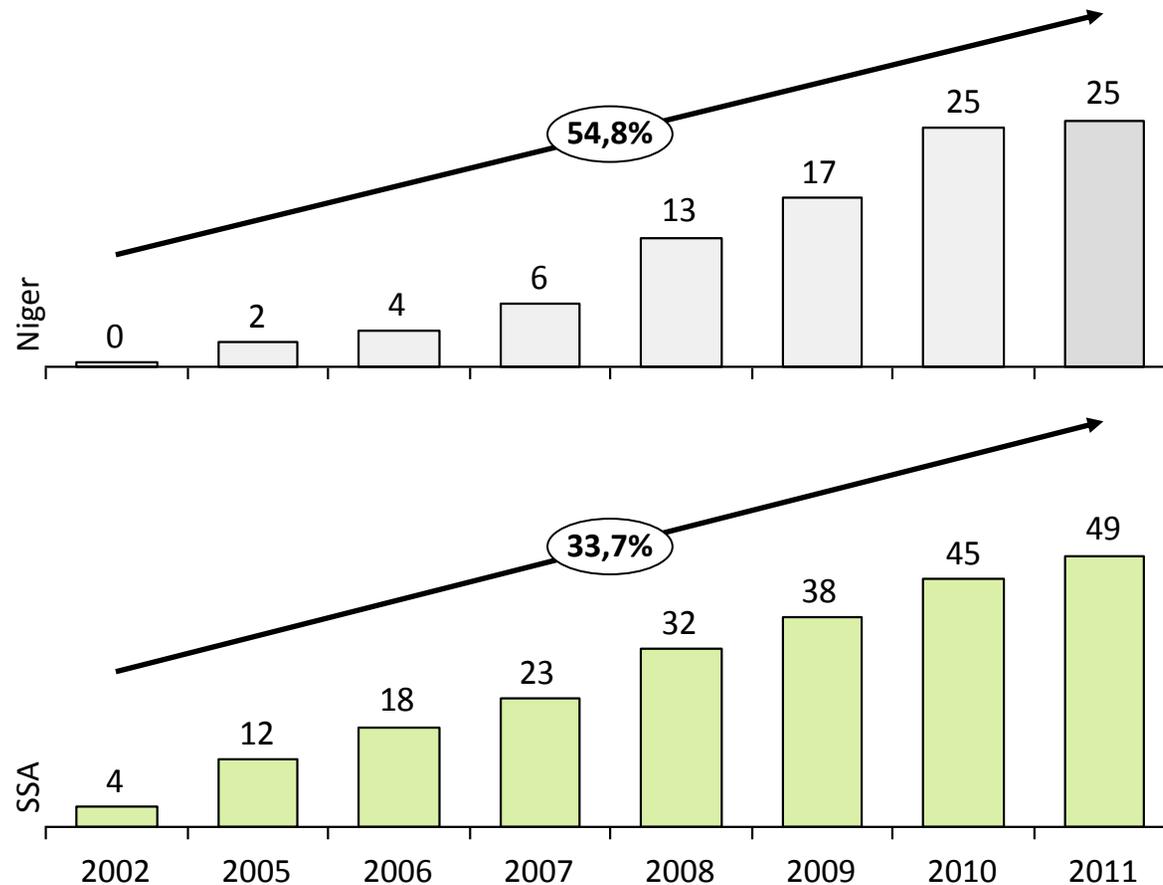
Agricultural land (sq. km)



Over 85% of Niger's land is covered by the Sahara desert, leaving only 15% of arable land for food production. This agricultural land is located along the southern border, where rainfed cultivation is the main agricultural production model

Growth of telecommunications especially mobile in Niger is still on its early stage with now three main telecom firms in competition

Mobile subscribers per 100



Observations

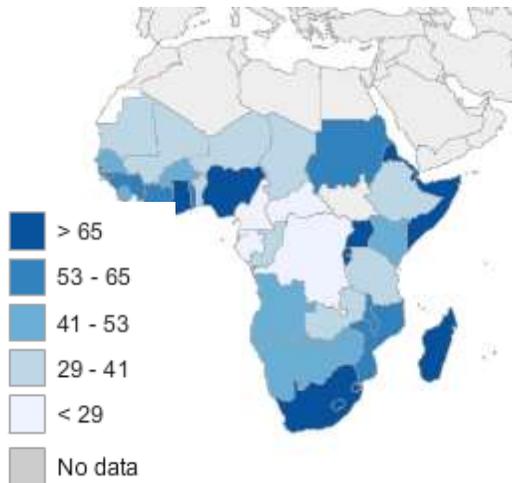
- Niger has the highest growth rate of the using of mobile phone during the last years
- Three main companies are involved in Niger: Airtel, Moov, and Orange

The telecom sector despite the low penetration rates number show a high rate of development during the last 10 years

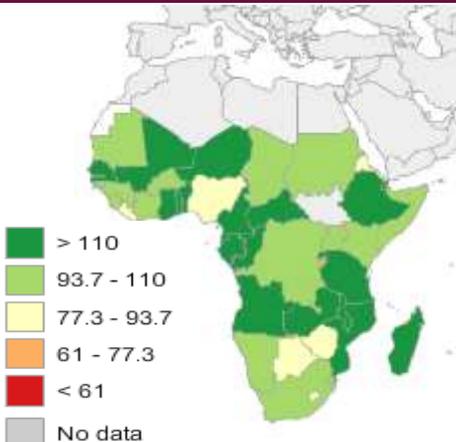
Agricultural land in Niger is scarce, and crop production continues to witness wide variations from year to year

Key takeaways

Agriculture land use (%)



Crop production index

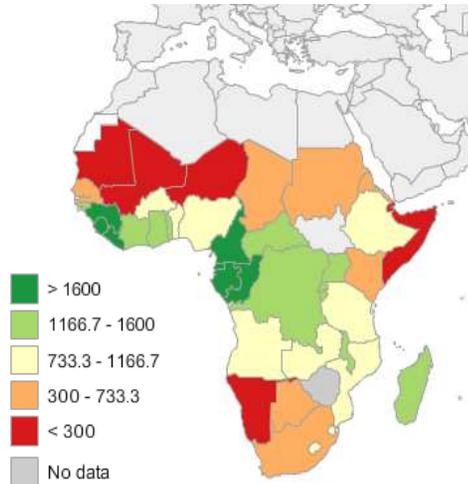


- Agriculture land use in Niger is low since as much as 85% of the country is covered by the Sahara desert
- As much as 90% of agricultural land is concentrated in the « Sahelo-Sudanian » in the south of the country
- Low levels of irrigation have hampered the extension of agricultural land beyond this southern region
- Crop production index shows agricultural production for each year relative to the base period 2004-2006
- Niger belongs to a group of countries with highly inconsistent indices, with large fluctuations in production from year to year
- This situation renders planning activities more difficult in the agricultural sector at large, as needs may vary widely from one year to the next

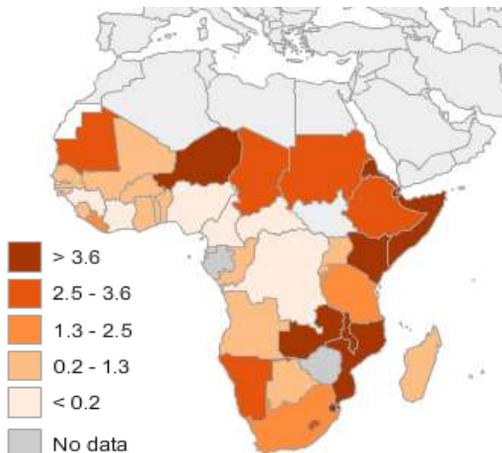
Rain inconsistency, coupled with extreme risks like floods, and droughts have plagued Niger during the last ten years

Key takeaways

Average precipitation in depth (mm per year)



Droughts, floods, extreme temperatures (% Pop.)

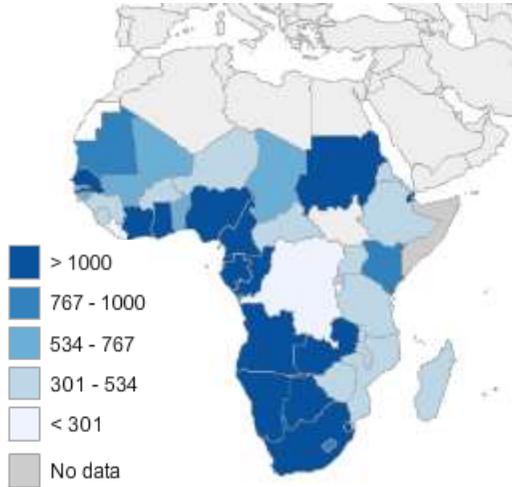


- Average precipitation reaches its maximum in Niger during the months of May, June, and July, with the remaining months being completely dry
- At best, precipitation levels reach 170 mm during a good season, while other years it can plateau and not go beyond 60 mm

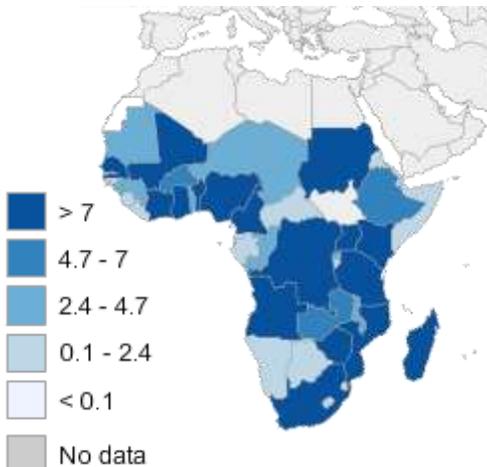
- Occurrences of drought have frequently hit Niger over the past ten years with precipitations levels falling under 50 mm during the rainy season
- Extreme temperatures are not unusual in Niger with median temperatures in July ranging from 45 to 50 degrees Celsius
- Floods are occasional, but when they happen have a devastating effect on agricultural production in Niger

Mobile penetration rates in Niger as well as GDP per Capita remain low in Niger

GDP per Capita (USD)



Mobile subscribers (Million)



Key takeaways

- In 2010, the GDP per Capita in Niger stood at \$ 350, placing Niger at the bottom of the World's countries in this respect
- However, GDP per Capita has steadily grown above global and even regional averages
- As a low income country, dearth of internal resources must be taken into account in program design to ensure viability
- Niger boasts one of the lowest mobile penetration rates in the region and the world, with a mere 25%
- This rate is however, rapidly rising, and Niger should be on par with most of its more connected neighbors in about 7 years, given current market growth
- Opportunities afforded by mobile technology in developing countries can be leveraged in Niger as well, as there exists no regulatory barrier to expansion of mobile services

Annexes

Annex A: Overall approach

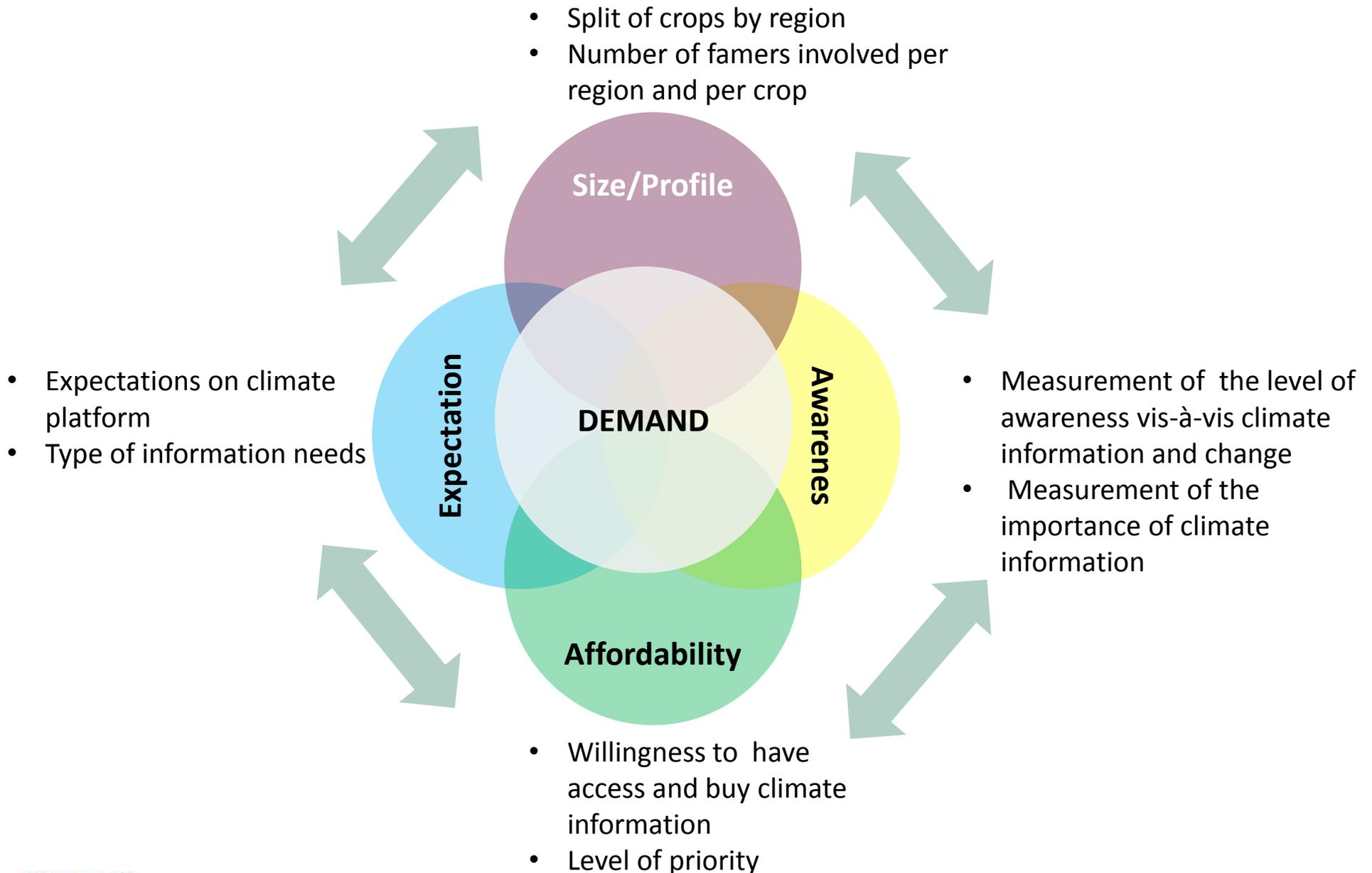
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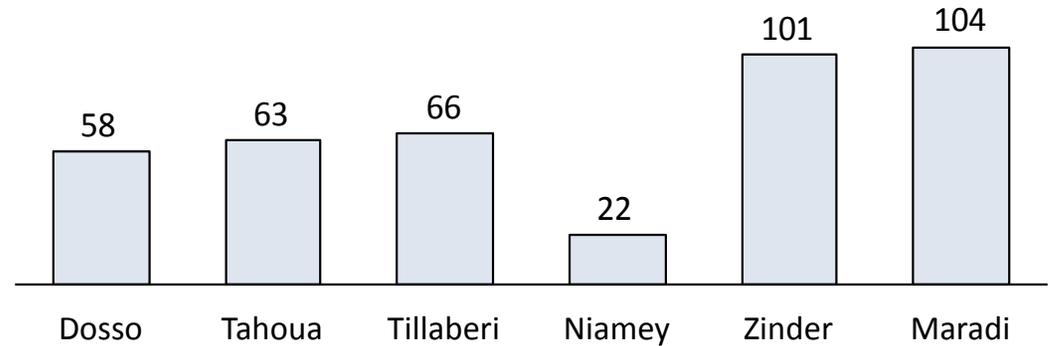
We assessed demand taking into consideration four main dimensions



Our analysis on demand was based on the geographic location and the type of crops

We obtained some key insights from farmers association across main agricultural regions and crops

Interviews per regions



	Millet	Sorghum	Niébé	Peanuts	Rice	Veg/Fruits.	Total
Dosso	28	4*	19	3	-	4*	58
Tahoua	30	10*	14*	2*	-	7	63
Tillaberi	33	6*	15*	-	10	2*	66
Niamey	7*	6*	5*	1*	3	-	22
Zinder	34	26	18	4	-	19	101
Maradi	42	25	28	6	-	3*	104
TOTAL	174	77	99	16	13	35	414

Average

29

13

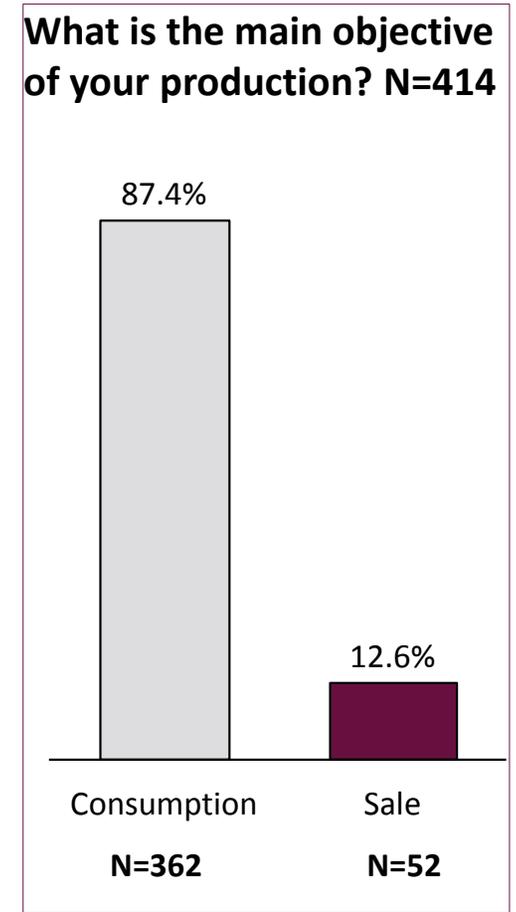
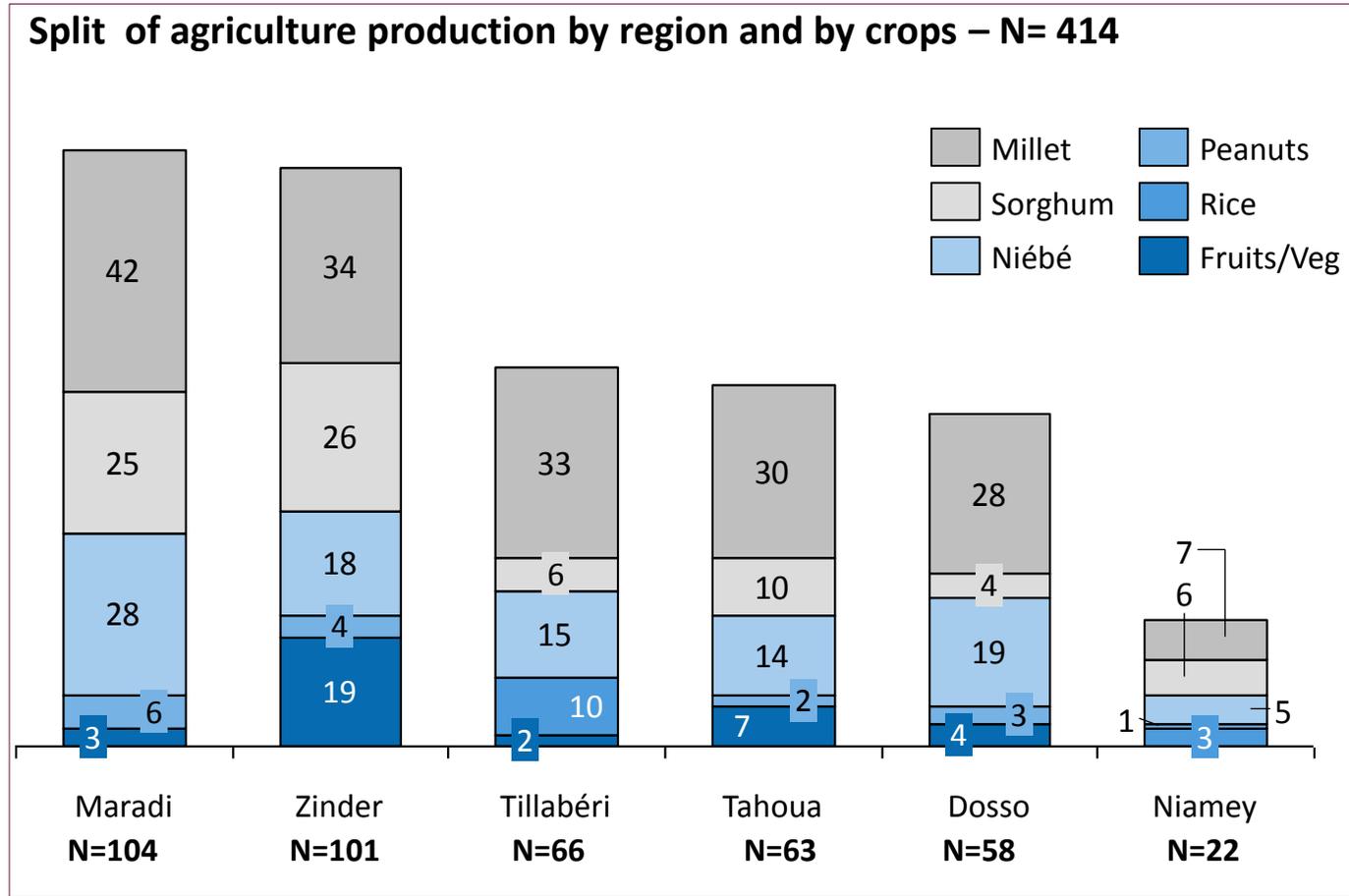
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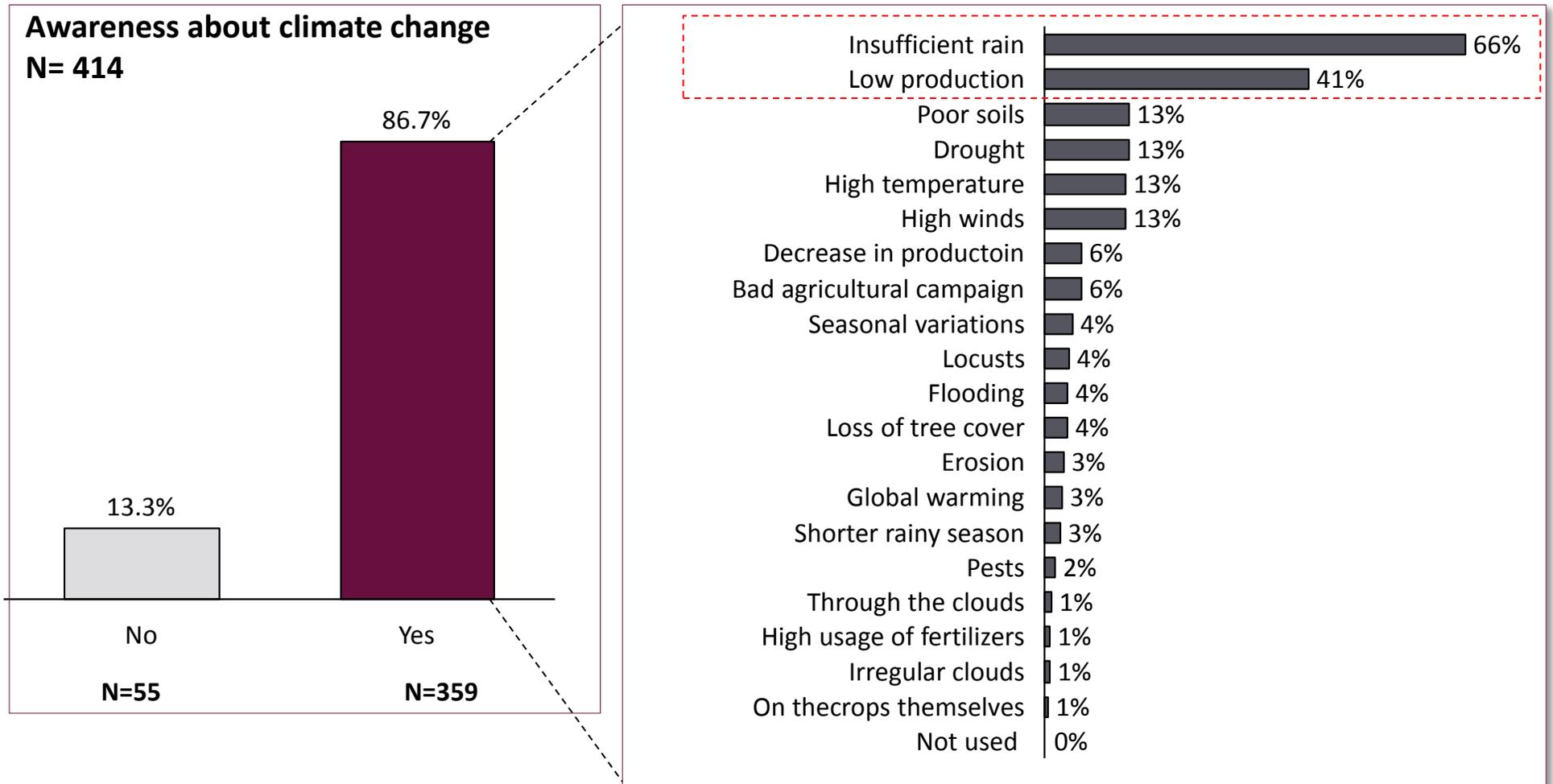
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Millet and sorghum dominate agriculture in terms of crop selection, and 88% of the production is destined to domestic consumption



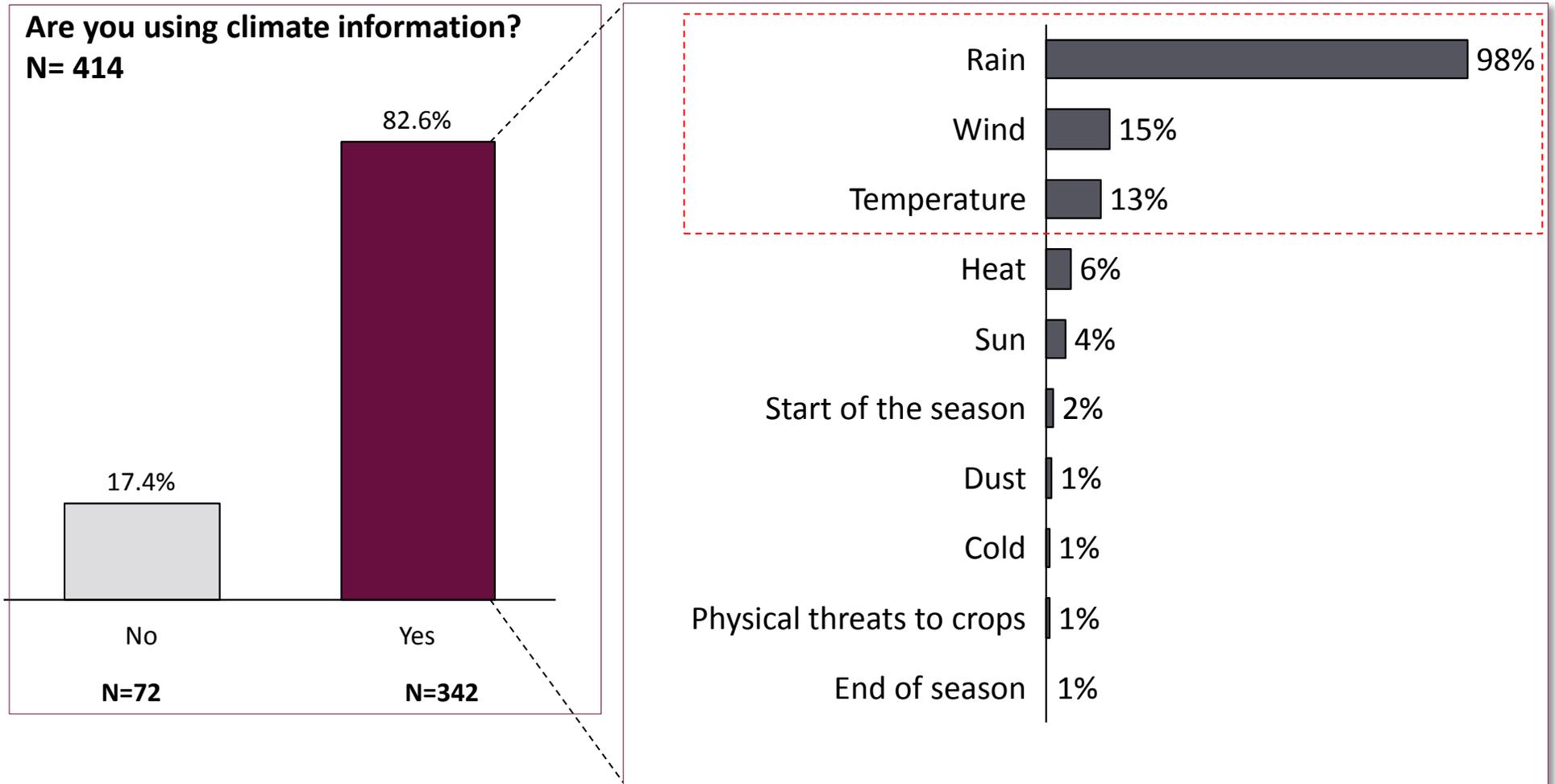
- Millet and sorghum account for more than 40% of the total production as they continue to represent the main staple food in Niger and the Sahel region at large
- Rice production is mainly concentrated on the river banks of the Niger due to lack of access to irrigation in most of the country: the low level of irrigation constitutes one of the main reason why farmers are still reliant on weather

87% of the farmers understand the meaning of climate change and recognize its impact through decreasing rainfall and production



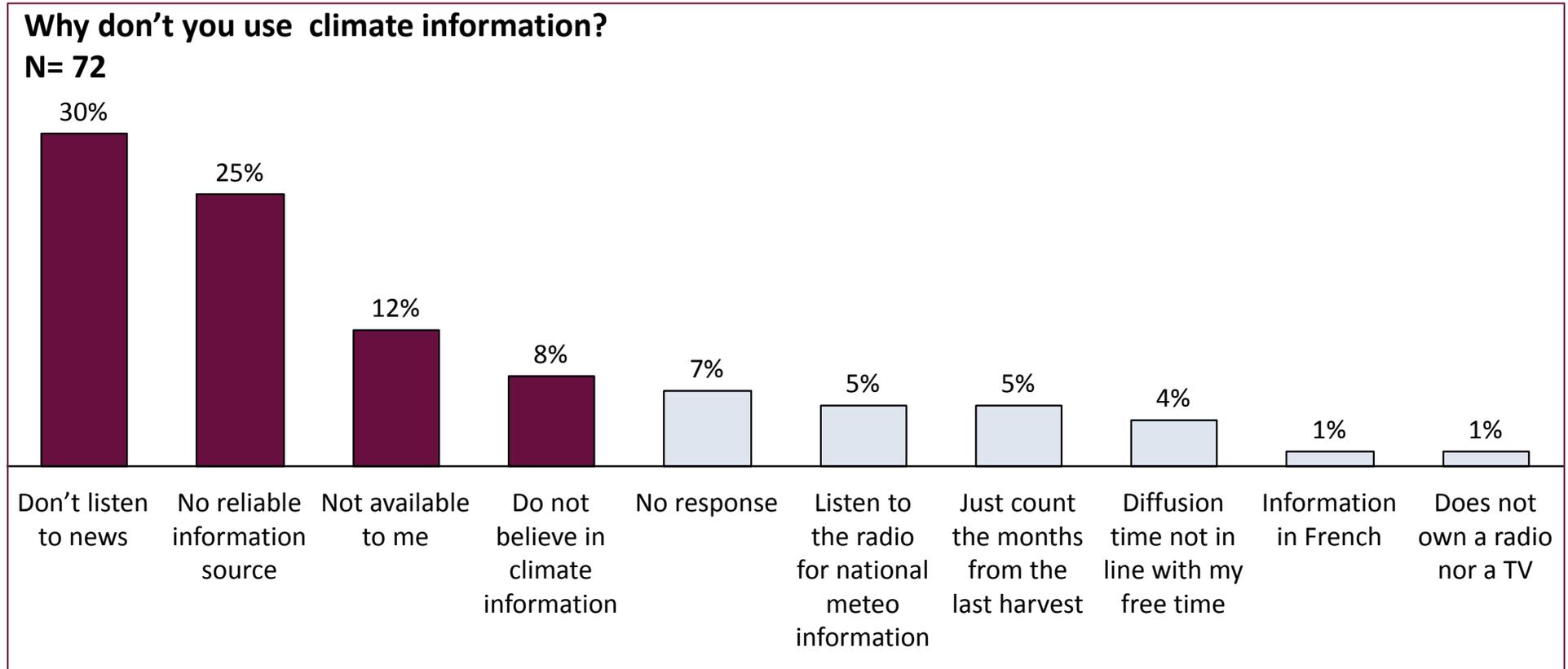
- Insufficient erratic rains and lower production levels are the most often cited reasons by farmers surveyed as evidence of climate change

About 83% of farmers are using climate information but mostly as baseline weather information such as rainfalls, wind, and temperature



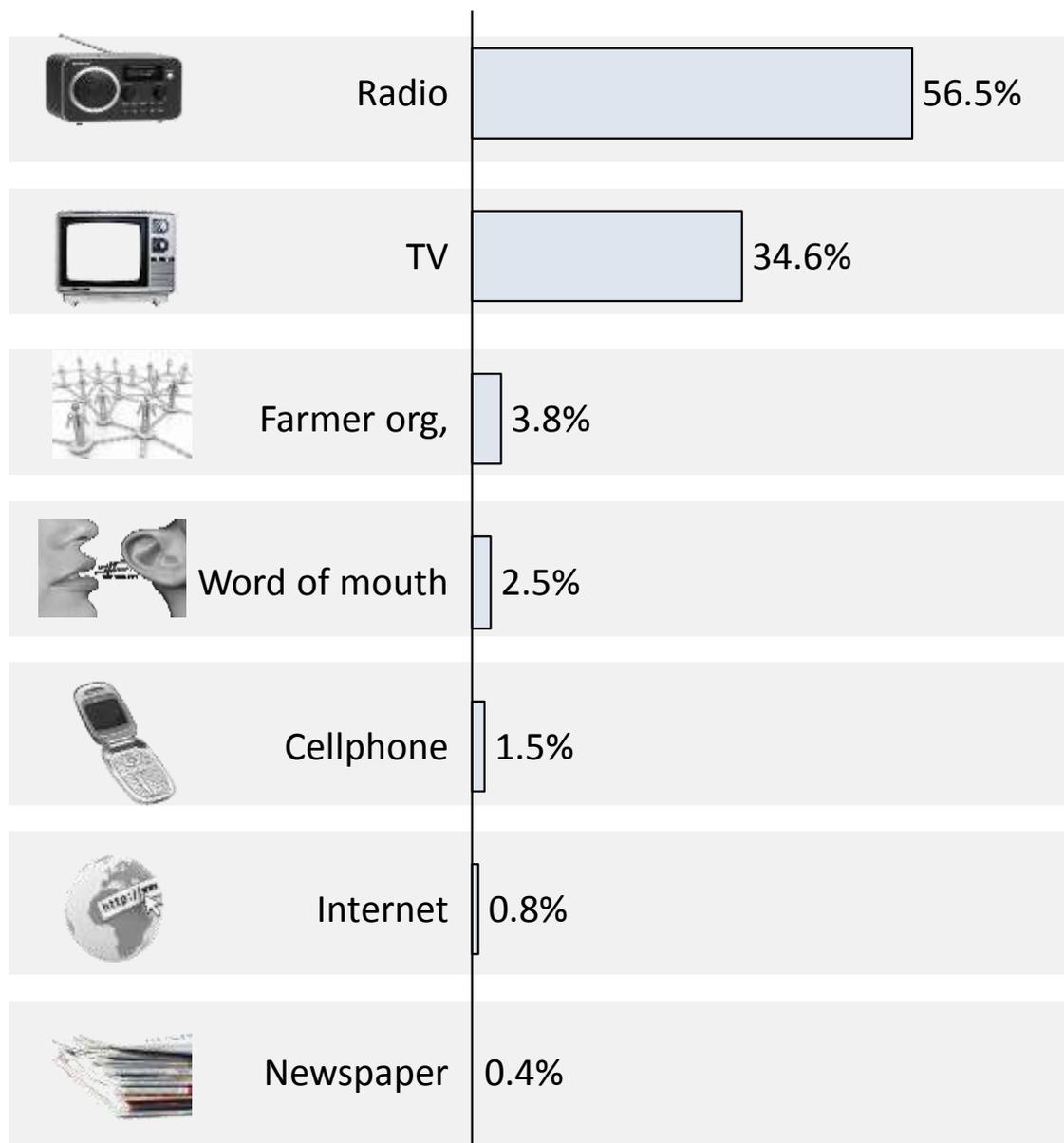
- Farmers showed interest for information other than rain, albeit in lower numbers, but this information is not available to them

18% of farmers do not use climate information and give reasons mostly related to the availability and the reliability of the data



- Often, not using climate information is less related to farmer unwillingness to use such information, than to their level of confidence in the information available
- Having one provider and leaving no alternative choice to farmers
- There is a strong correlation between the low level of confidence in stakeholder A, and the low level of capacity of the stakeholder

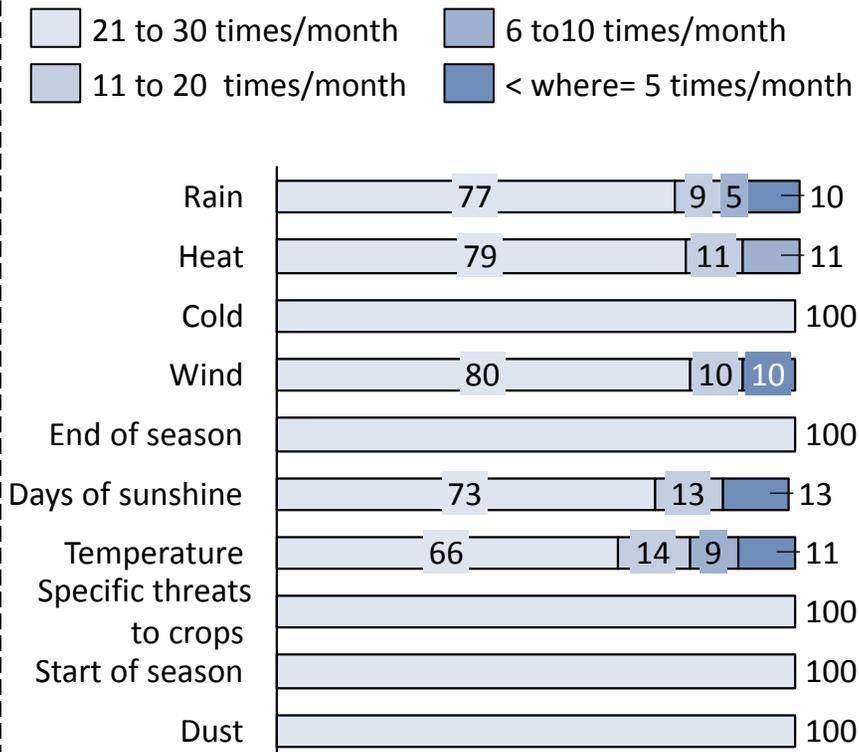
Farmers mostly use TV and radio to access climate information



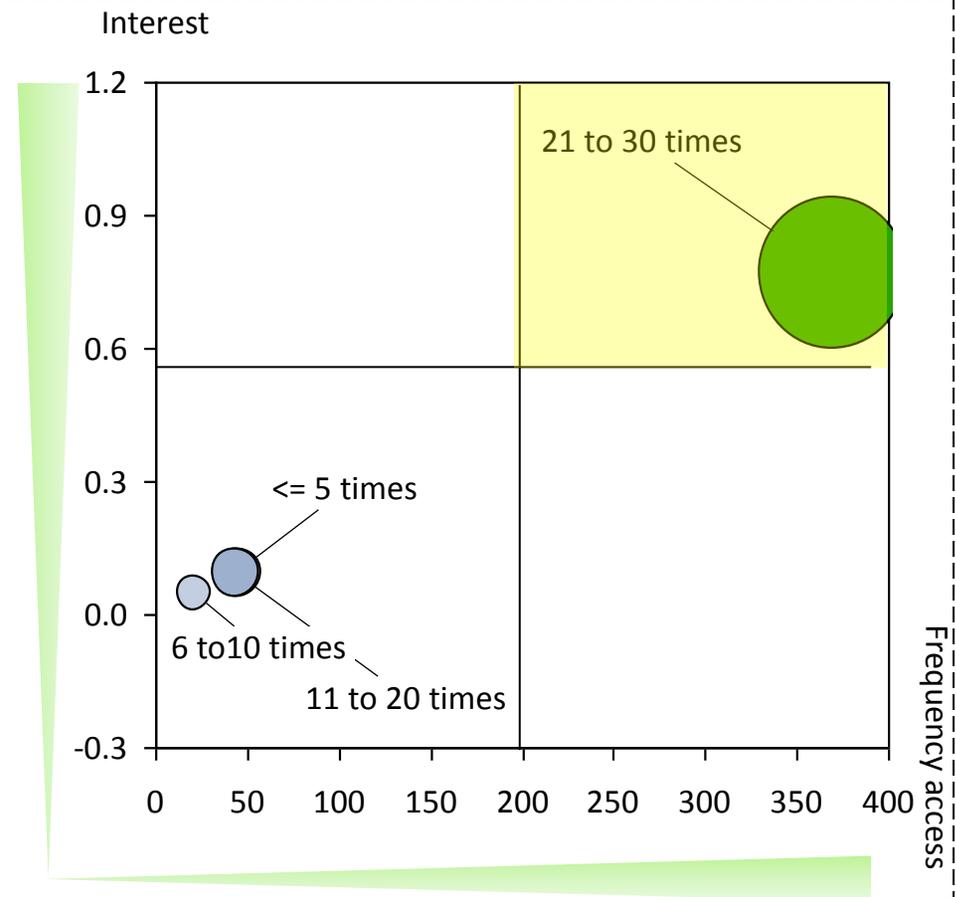
- With TV and radio, farmers' organizations constitute another way of accessing information, while printed literature and the internet are rarely used
- One main constraint lies in the fact that commercial information may not be easily channeled through radio and TV
- Internet and mobile penetration rates are low in Niger (25% -2011/WBI) and rank below even other Sub-Saharan African countries (amongst the lowest penetration rates in the world)

We also found out that their preference was for daily updates on climate information

Farmers' frequencies preference of receiving climate information (%)



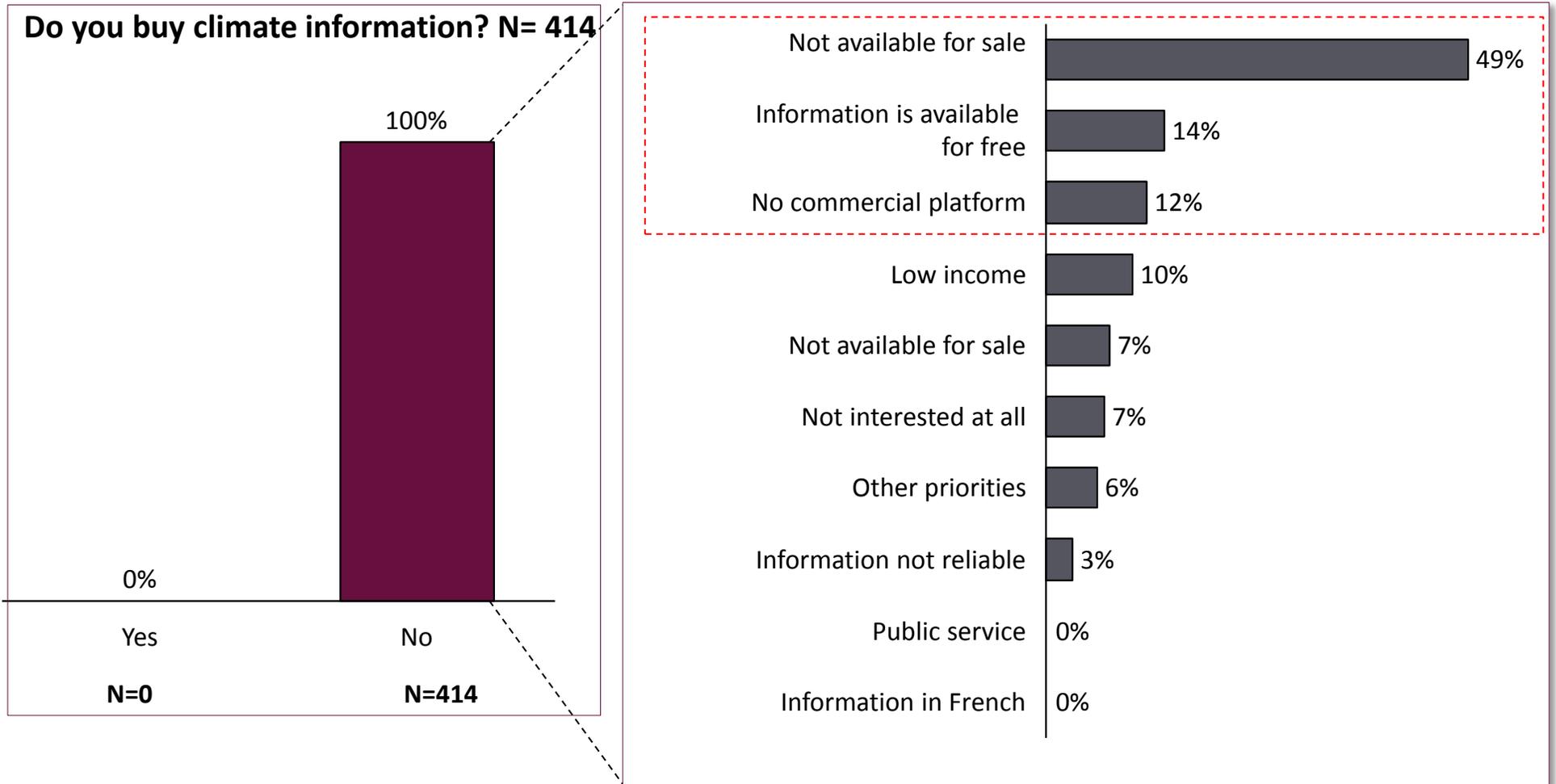
Level of interest Vs frequency of access



- A majority of farmers would like to have information on climate every day, which is not the current case in Niger, where information may be received weekly

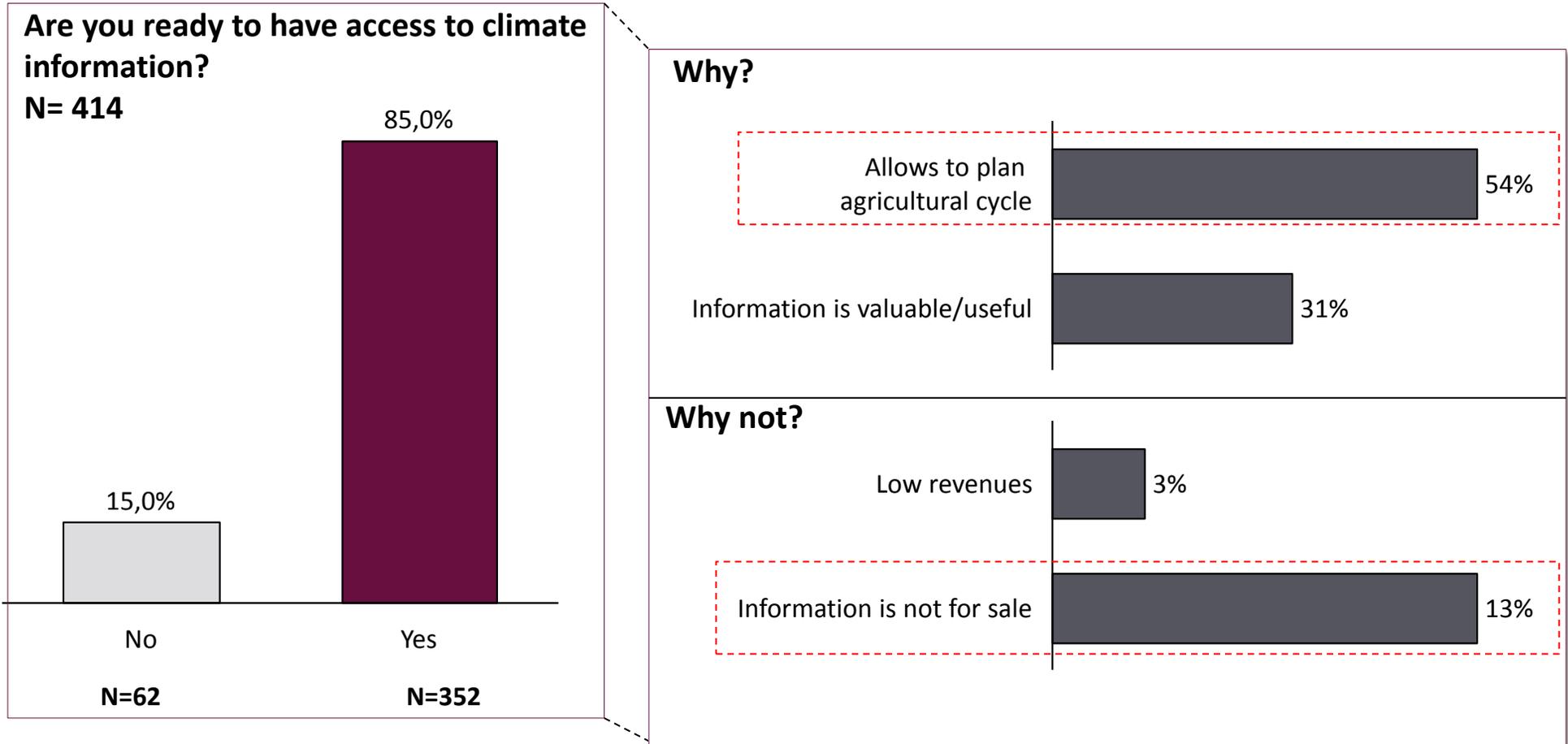
- The preferred frequency of access expressed by the farmers reinforces the idea that there is a strong demand, as there is a strong correlation between interest level and frequency of access preferences

None of the farmers surveyed buy information due to the inexistence of a commercial platform making such information available to them



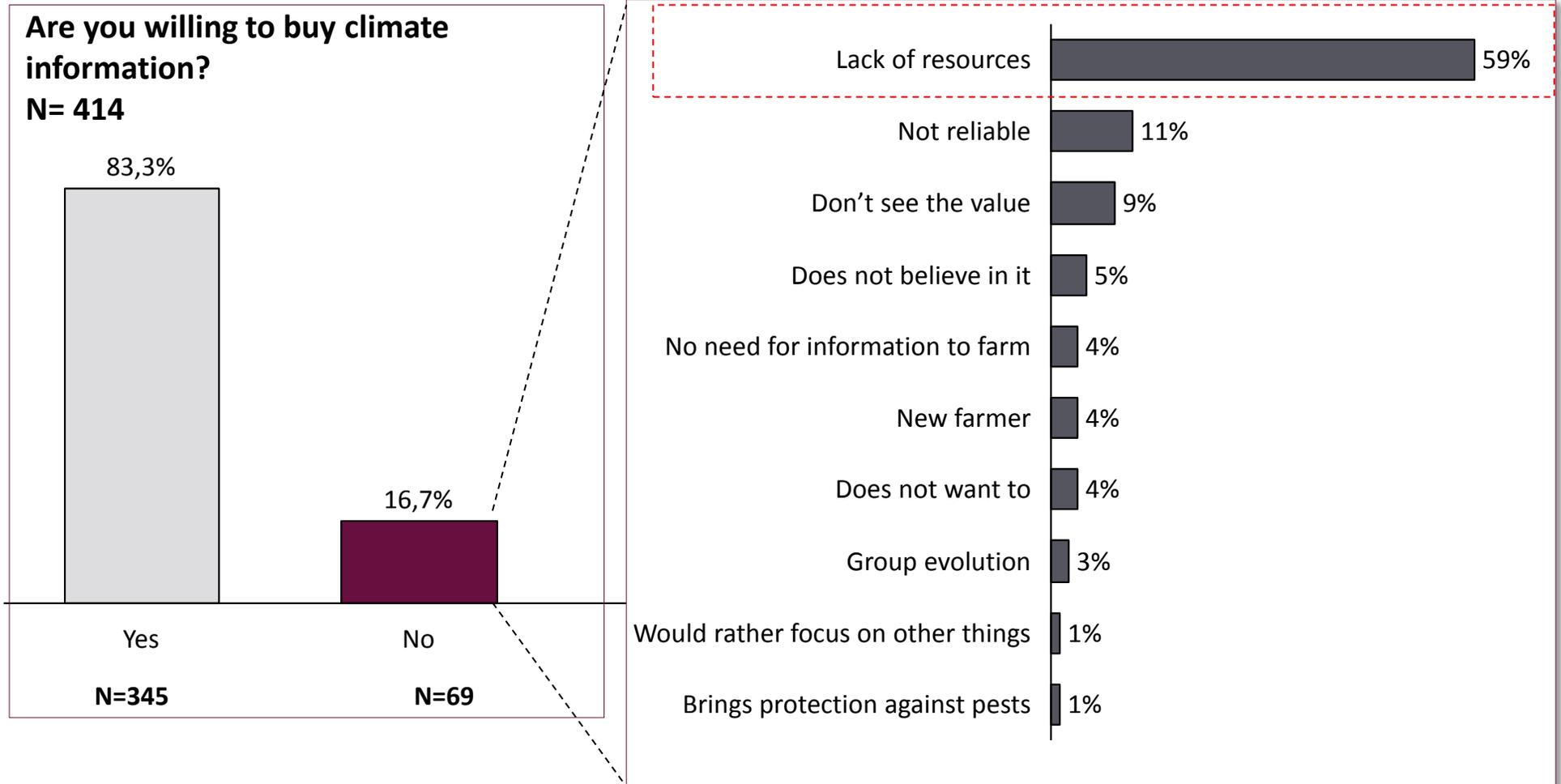
- The surveyed farmers perceived that there is limited choice for meteorological information. The latter can't afford it because of the none existence of a commercial platform

85% of the farmers are ready to have access to climate information in order to better plan and boost production



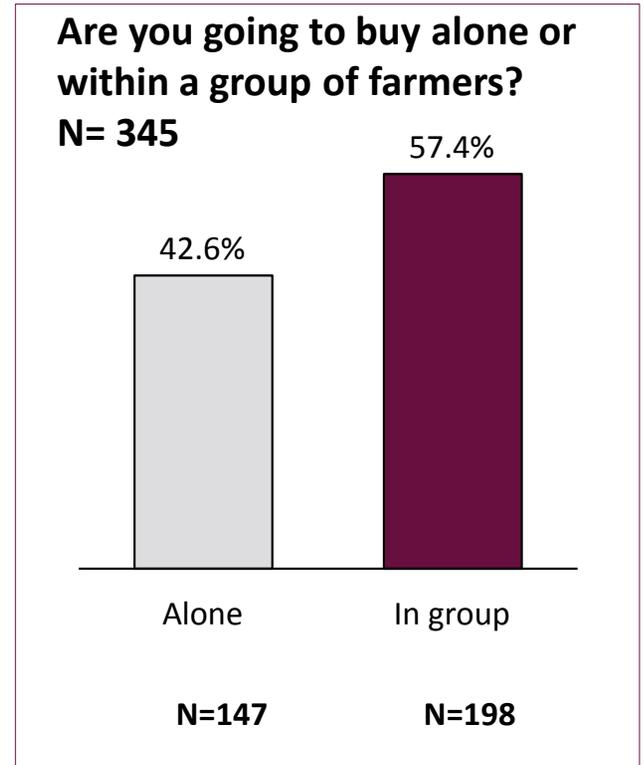
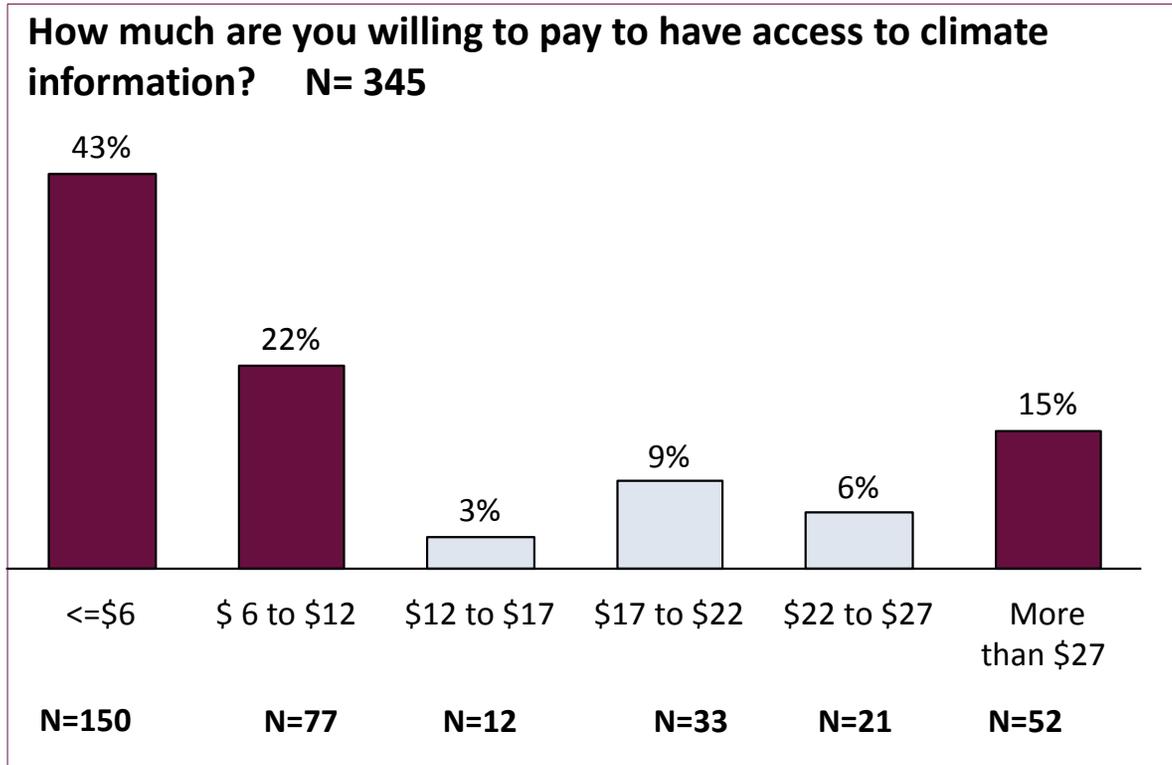
- Farmers do associate better climate information with a better agricultural cycle that will allow them to secure their production based on climate forecasts
- This supposes a certain level of understanding about climate change but also an acknowledgement that coping mechanisms exist that can be deployed to build climate resilience

83% of the farmers are willing to buy climate information while the remaining farmers can't, citing affordability as a main driver



- Most farmers in Niger are willing to buy climate information, yet few say they are able due to the lack of resources.
- An additional 20% are dubious of its use, or distrust the reliability of such data to help in agricultural planning

Farmers are willing to pay to access climate information but as many as 65% of those surveyed established a ceiling of \$12 per year

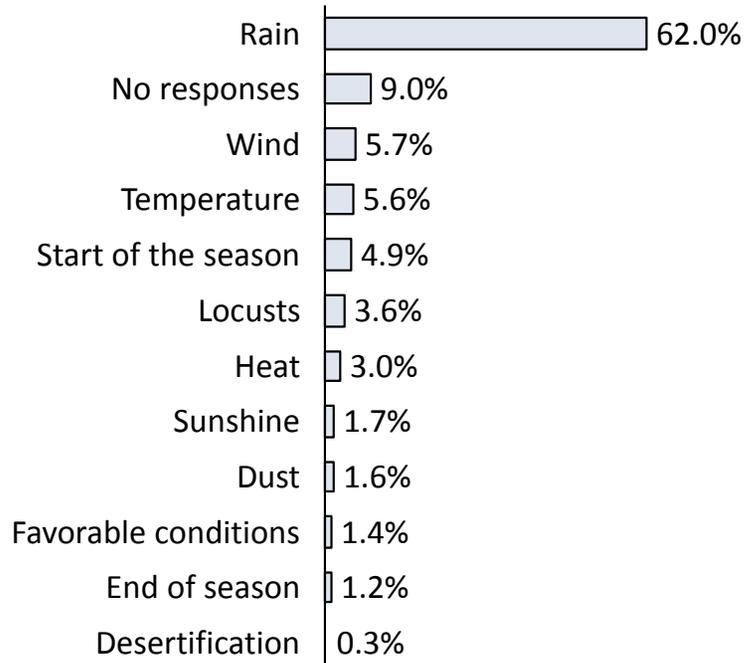


- 43% could not access the information if it were sold beyond \$6/year
- Interestingly, this is precisely the price of climate information through product 1, a model we have extensively researched
- We anticipated a much wider gap in preferences between individual payments and collective payments, but the results turned out pretty balanced allowing the opportunity to hold trial with both methods

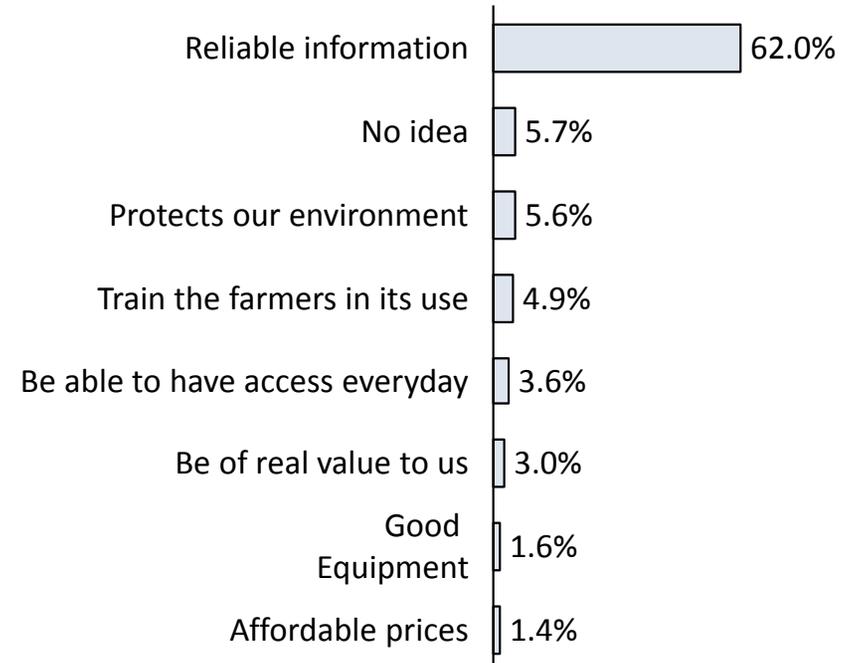
Farmers have very precise information needs and are mostly interested in the reliability of the information provided



What kind of information are you looking for?

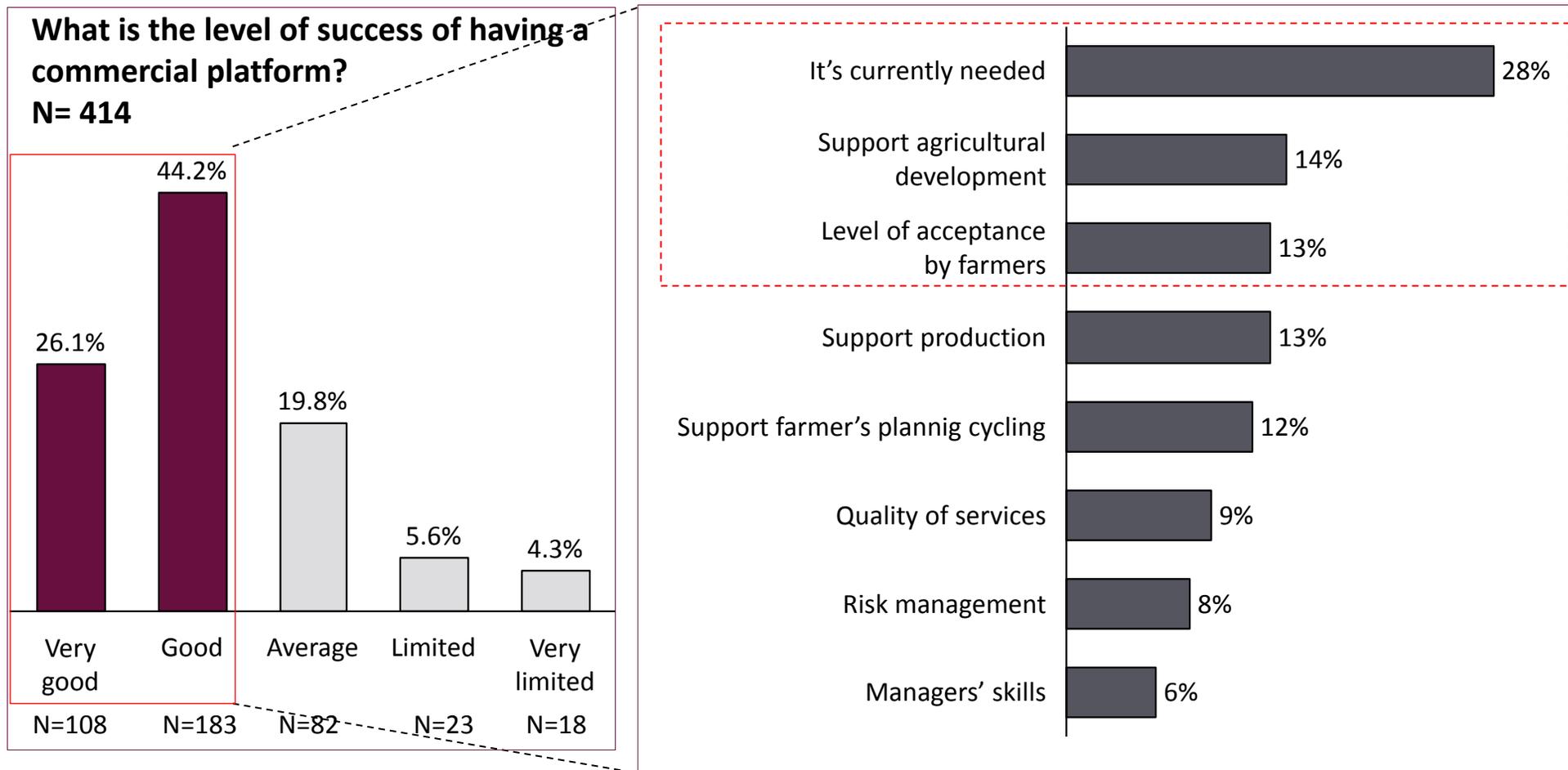


What type of climate platform you would like to see?



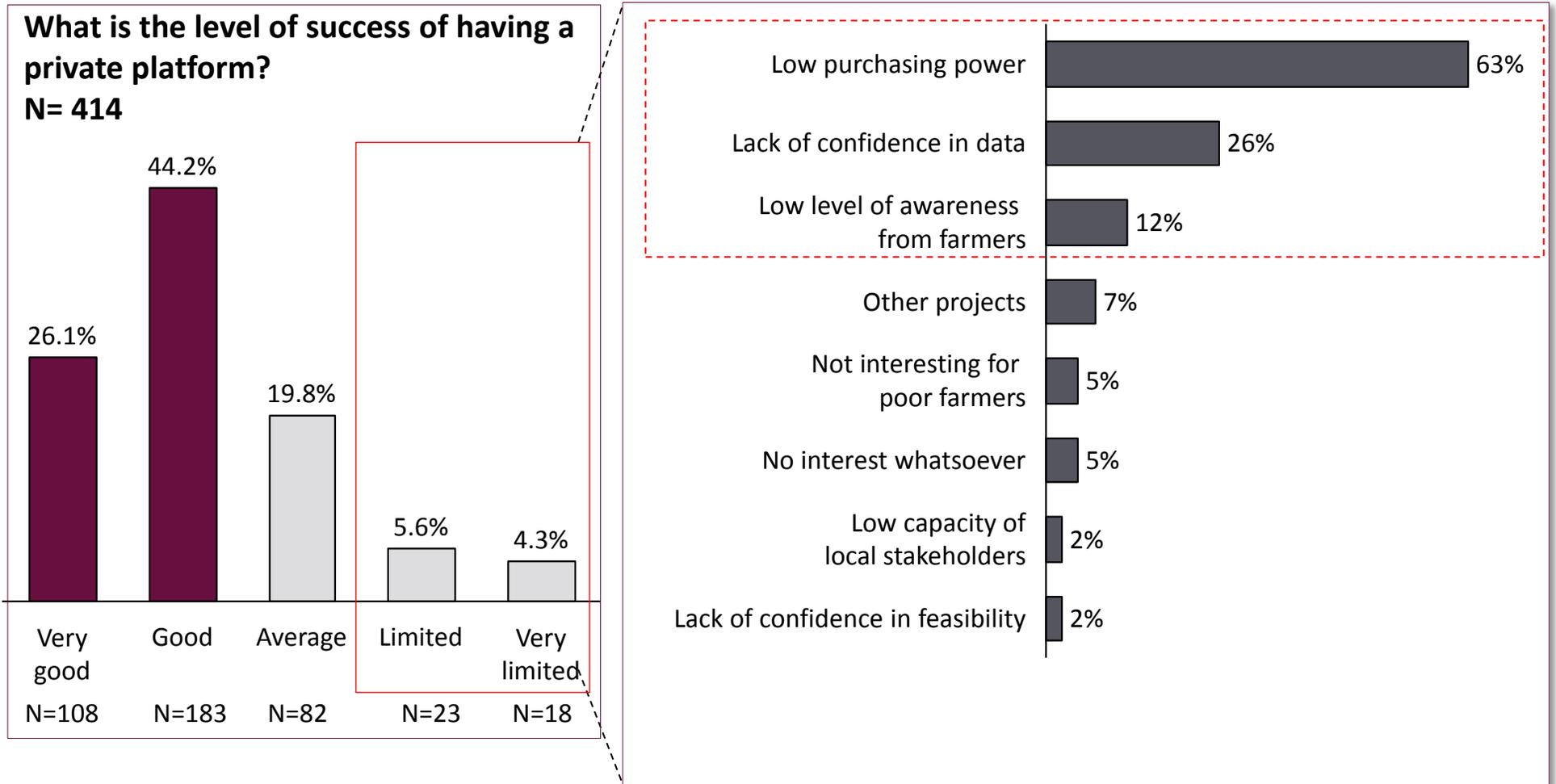
- About 62% of the farmers are interested in information about rain due to the characteristic of their crops and low capacity in terms of irrigation
- They are marginally interested in a few other indicators such as temperature, wind, or pests that they deem complementary
- In general, when asked about expectations reliability is identified as a main driver of their buying criteria, and the most important element according to farmers

About 70% of the farmers believed the climate platform would be successful mainly on the premise that they needed such a tool



- Most of the farmers are seeing the climate information platform as part of their «raw inputs» to prepare their season, and increase annual production
- But they insist on the quality of service, the level of competency of managers, and the level of understanding of farmers needs

10% contested and believed the platform would fail because of low purchasing power and farmer lack of confidence in the information

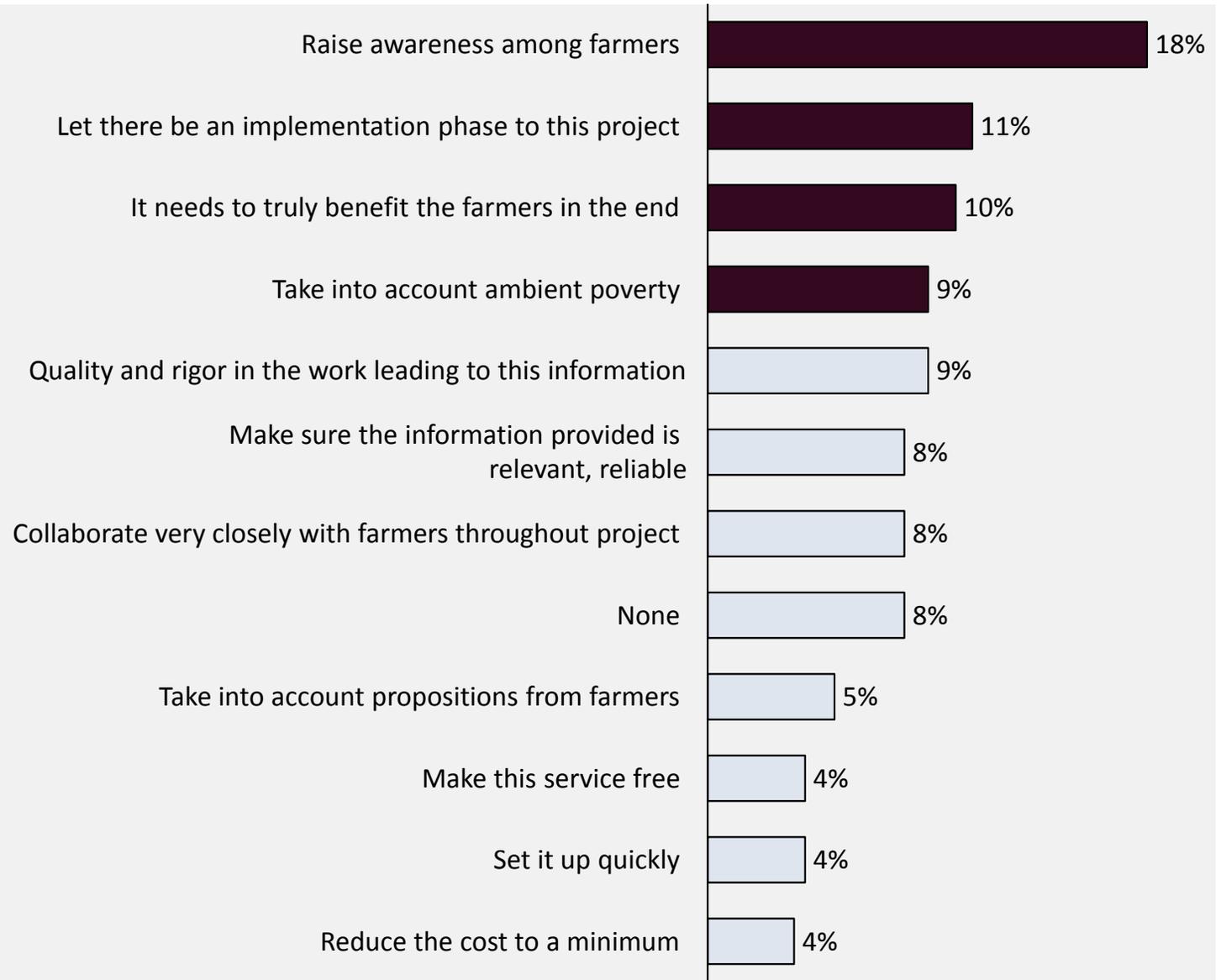


- Purchasing power, and lack of confidence in data being the main drivers behind some farmers 'pessimism, it will be important to think of ways to mitigate the effects of low capacity in meteorological institutes, as well as tackling the issue of affordability, by ensuring enough financial resources are made available throughout the ecosystem

Most of the farmers' recommendations focus on awareness raising, ensuring affordability, and quality of services



Main suggestions from farmers



In summary, some of our most important findings while studying demand are outlined below

Main takeaways

Size and Profile

- Extrapolating from our sample size, we can confirm that there is a large demand for improved climate information amongst Niger's farmers
- As much as 83% of farmers are willing to buy improved climate information

Awareness

- Niger's farmers generally show some knowledge of climate change and its effects, not least because they have endured the consequences of climate change over the past decade
- As many as 87% of all farmers understand the meaning of climate change and recognize its impact through decreasing rainfall and production

Affordability

- Niger's farmers show low levels of affordability, and it is reflected in the resources they are willing to extend for climate information
- As many as 65% of farmers admitted to not being able to pay more than \$12/year
- Many farmers surveyed expressed the view that reliability constituted the main challenge but also the main measure of whether this platform would work
- They also expressed their wish to see costing be kept to a minimum to allow them access to the information as nearly 60% cited affordability as a potential

Expectations

- A large demand for climate information exists in Niger
- The challenge lies in reconciling the high interest from farmers with their low levels of disposable income, in addition to ensuring data quality and reliability, likely through capacity-raising of information providers

We assessed supply taking into consideration four main dimensions

Sub-Section

1

Current stakeholders

- A description of each actors In order to better understand the system and set up the platform
- Stakeholders are split into four main components: Sponsors, Producers, Channel of diffusion, and End-Users

2

Key indicators

- Indicators will support the performance measurement of the stakeholders
- Indicators will help to answer questions around the Capacity (financial and technical), Engagement and Knowledge

3

Stakeholders assessment

- Overall pictures of the stakeholders capacities across the different assessment criteria
- The description of the active stakeholders' capacity will bring a clear perspectives on the possibility to integrate a platform

4

Actors to consider on the model

- Based on their capacities assessment , relevant stakeholders will be listed
- Listed stakeholders will constituted the potential members of the climate platform

Outputs

Current actors around the climate system

There is an institutional apparatus to support the improvement of the agriculture sector and climate information acquisition

Category	Actors	Roles
Sponsors	Ministry of Agriculture, Ministry of Environment, etc.	Policy support, funding, etc.
Producers	Smallholder farmers, Agribusinesses, etc.	Production, distribution, etc.
Channel of diffusion	Extension services, NGOs, etc.	Information dissemination, training, etc.
End-Users	Consumers, Retailers, etc.	Market access, etc.

Key indicators of the assessment

The capacities of "producers" of climate information range, but overall require some strengthening to meet the needs of users

Indicator	Measurement Method	Frequency
Capacity (financial and technical)	Surveys, Interviews	Quarterly
Engagement	Focus groups, Interviews	Bi-annually
Knowledge	Surveys, Interviews	Quarterly

Assessment of current stakeholders

Delivery of the information will play a critical role in the ultimate impact of the climate product delivery

Current main challenges

- Limited capacity of stakeholders to access and use digital information
- Limited engagement of stakeholders in the assessment process
- Limited knowledge of stakeholders on digital information

Challenges

- How to improve the capacity of stakeholders to access and use digital information
- How to improve the engagement of stakeholders in the assessment process
- How to improve the knowledge of stakeholders on digital information

Actors to consider on the model

The current key actors need support to build their financial and technical capacities to fill gaps and meet requirements

Actor	Current main challenges	Support needed
Ministry of Agriculture	• Limited capacity to access and use digital information	• Support to improve capacity
Ministry of Environment	• Limited engagement in the assessment process	• Support to improve engagement
Smallholder farmers	• Limited knowledge on digital information	• Support to improve knowledge

There is an institutional apparatus to support the improvement of the agriculture sector and climate information provision

Cabinet of the Prime Minister	Ministry of Planning	Ministry of Transport/ Meteorology	Ministry of Agriculture/ Partner institutes	Partners
<ul style="list-style-type: none"> Involved at the highest level as witnessed by the participation of the Cabinet of the Prime Minister in implementing the PPCR (Pilot Program for Climate Resilience) 	<ul style="list-style-type: none"> Invested in the PPCR's success. In fact, their officers serve as PPCR focal points for the IFC. Participated financially and in terms of human resources in scaling the PPCR, and making sure it is taken into account within policy making 	<ul style="list-style-type: none"> Similar to a few neighboring countries, the National Meteorological Services are housed within the Ministry of Transport. This may be an issue that needs to be resolved. National Meteorological Services should become an autonomous agency 	<ul style="list-style-type: none"> Partnering institutes and the Ministry of Agriculture take the lead in formulation and implementation of agriculture-related policies 	<ul style="list-style-type: none"> Launched ClimDev-Afrique to support climate information development and integration (15 millions de \$US) AFdB support against desert encroachment and drought and part of the PPCR program

The sponsors show a strong commitment to their current role to support initiatives related to climate resilience with of USD 110 million program. But they need capacity building support to really get the necessary skills to push different initiatives at the expected level

We assessed supply taking into consideration four main steps

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1

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Outputs

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IFDC

Key indicators of the assessment

The capacities of "producers" of climate information range, but overall require some strengthening to meet the needs of users

IFDC

Assessment of current stakeholders

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IFDC

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IFDC

The key indicators that drove our evaluation

Before assessing capacity from information providers, we chose the key indicators that would best drive our evaluation

Financial capacity

- Financial capacity is without a doubt the most important indicator, as it tends to greatly affect all other indicators. It was important for us to know whether providers surveyed boasted high or low capacity in this regard, in order to better correlate it to their performance elsewhere

Technical capacity

- Technical capacity often derives from financial capacity, which allows greater technical means. However, technical capacity can be enhanced by high levels of human capacity, where able professionals are able to deliver great results by being more creative, in light of low technical capacity levels

Experience in climate

- Has the actor been involved in climate service/product provision in the past? How extensive or marginal is this experience?

End-user portfolio

- Access to a large base of potential customers

Experience in similar projects

- Similar to experience in climate although it supposes experience with multi-stakeholder projects in developing nations

We assessed supply taking into consideration four main steps

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IFDC

Sponsors' main role will be to make sure financial resources are available across the ecosystem

Favorable ● Limited ○

Sponsor (s)

Finance



Experience in climate



End-user portfolio



Experience in similar projects



Current and potential sponsors

- IFC
- World Bank
- AfDB
- BOAD

Challenges

- Consensus on a holistic approach between all interested donors to tackle climate resilience in Niger in general, and this project in particular
- Making financial resources available across the entire ecosystem to provide for all actors involved

Mitigation strategy

- Specific donors take the lead on specific financing needs, i.e. the World Bank supports national climate information providers, while the IFC supports the private sector distributors, and other donors support the government in its efforts to subsidize access to the information
- Interested donors might need to meet several times before the donor roundtable to agree on common strategy to move forward

Content providers' main role will be to guarantee the reliability of the final information product

Favorable ● Limited ○

Content developer/provider(s)

Finance



Experience in climate



End-user portfolio



Experience in similar projects



Current and potential providers

- Stakeholder A
- Stakeholder B
- Stakeholder C
- Stakeholder D

Challenges

- Addressing stakeholders A's and C's low technical capacities as it may affect the overall quality of the product in the end
- Leveraging each organization's key strengths and reducing the impact of its limitations on the final product

Mitigation strategy

- Creating a central hub where all institutions share knowledge and resources pertaining to this project, after having themselves drafted a strategic note on collaboration methods
- Making sure national institutes have access to additional financial and technical resources to keep up with their regional counterparts who have access to more resources

The supply of climate information requires an approach inclusive of several suppliers, collaborating towards a comprehensive product offering to address farmer needs (1/2)

	Type of information provided	Collection method	Packaging and distribution	End users
Stakeholder D	<ul style="list-style-type: none"> Provision of weather and climate information and promotion of sustainable development in the fields of agriculture, water resources, health, and public safety 	<ul style="list-style-type: none"> Uses satellite imagery to collect additional data, as well as a network of 10 scientists in Niamey to analyze these inputs 	<ul style="list-style-type: none"> Monthly newsletters on specific climate issues Workshops, roundtables, and other professional gatherings 	<ul style="list-style-type: none"> Policymakers (national authorities, multilateral partners) NGO community Academic community Regional and International Organizations
Stakeholder A	<ul style="list-style-type: none"> In charge of making baseline climate information available to the general public 	<ul style="list-style-type: none"> Information is collected through one hundred agents in total, including 44 at the central level and 56 at the decentralized level 	<ul style="list-style-type: none"> National Radio National TV Twice a day 	<ul style="list-style-type: none"> Rural population Farmers General public Policymakers
Stakeholder E	<ul style="list-style-type: none"> Market information and reports on fluctuations on market prices across different locales in Niger including cross-border markets 	<ul style="list-style-type: none"> Information is collected on the ground through 13 surveyors in Niamey, and 100 in the remaining regions of Niger 	<ul style="list-style-type: none"> Biweekly newsletter Periodic text messages 	<ul style="list-style-type: none"> Agro-processing companies Truckers Farmers

The supply of climate information requires an approach inclusive of several suppliers, collaborating towards a comprehensive product offering to address farmer needs (2/2)

	Type of information provided	Collection method	Packaging and distribution	End users
Stakeholder C	<ul style="list-style-type: none"> In charge of conceiving and implementing all agronomic research programs in Niger 	<ul style="list-style-type: none"> Information is collected through 482 employees including 80 national researchers spread across regional research centers 	<ul style="list-style-type: none"> Primarily print Agronomic research white papers 	<ul style="list-style-type: none"> Policymakers (national authorities, multilateral partners) NGO community Academic community
Stakeholder G	<ul style="list-style-type: none"> Extreme climatic conditions, early warnings for adverse conditions. Large focus on the identification, prevention, and reduction of risks 	<ul style="list-style-type: none"> Information is collected through the national focal points and a staff of 16 throughout the country 	<ul style="list-style-type: none"> Information newsletter once every bi-monthly Community radios 	<ul style="list-style-type: none"> Rural population Farmers General public
Stakeholder B	<ul style="list-style-type: none"> Scientific and technical information in the areas of food security, water control and the fight against desertification in the Sahel 	<ul style="list-style-type: none"> Information is collected through the national focal points and a staff of 16 throughout the country 	<ul style="list-style-type: none"> Monthly newsletters Special bulletins on biomass, rainfall, water requirements, crop needs, soil and water reserves, etc. Special bulletins to alert against risks like locust invasions 	<ul style="list-style-type: none"> Policymakers (national authorities, partners) NGO community Farmers

Delivery of the information will play a critical role in the ultimate impact of the climate product devised

Favorable ● Limited ○

Distributor/Delivery

Finance



Experience
in climate



End-user
portfolio



Experience
in similar
projects



Current and potential distributors

- Telecom companies
- Agribusiness companies
- Insurance companies
- Banks and microfinance institutions

Challenges

- Involving agribusiness or insurance companies represent more of a challenge than involving telecom companies, which command more financial resources, and a wider customer base
- Low bank penetration rates, low mobile phone penetration, low usage of insurance products, low integration of agribusiness companies with local agricultural production

Mitigation strategy

- Chose only one channel of distribution and/or delivery
- Prioritize the mobile platform option, and delve deeper into mobile companies' needs
- Support the improvement of access to finance

TV, radio, and farmers organizations are the main channels used by farmers to access climate information today

	Radio	TV	Word of mouth	Newspapers
Reach	<ul style="list-style-type: none"> 57% of all farmers surveyed use the national radio 	<ul style="list-style-type: none"> 35% of all farmers surveyed use national TV 	<ul style="list-style-type: none"> Only 2.5% of farmers use Farmer's organizations Limited network 	<ul style="list-style-type: none"> 0.4% of farmers use newspaper Literacy rate of 28.7% Number of sale
Timeliness	<ul style="list-style-type: none"> Twice a day 	<ul style="list-style-type: none"> Twice a day 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> 6 times/week
Accuracy	<ul style="list-style-type: none"> Low However, data is translated in local language 	<ul style="list-style-type: none"> Medium Data well transmitted but end user can misunderstand 	<ul style="list-style-type: none"> Information can be changed/lost through transmission 	<ul style="list-style-type: none"> High, it is just copy and past from the source
Feasibility of charging fees to end-users	<ul style="list-style-type: none"> Not feasible, due to the free access of that channel and its public nature 	<ul style="list-style-type: none"> Not feasible, due to the free access of that channel and its public nature 	<ul style="list-style-type: none"> Not feasible, due to the free access of that channel and its public nature 	<ul style="list-style-type: none"> Feasible, but limited to the number of literate people

- Radio/Television as main diffusion modes constitute a challenge as they are good means of diffusing open-source information, but not necessarily commercial one
- E-Mobile platforms may be a better choice in terms of disseminating personalized information for sale

Feedback loop from end-users will allow constant monitoring and evaluation of the platform to better address the needs of customers

Favorable ● Limited ○

End-Users

Finance



Experience in climate



End-user portfolio



Experience in similar projects



Current and potential End-Users

- Farmers
- Agribusiness
- Other industries linked to food security

Challenges

- Level of awareness while higher than expected may still be brought up, as it will benefit the final impact the information
- Low levels of affordability as shown by the prices most farmers are willing to pay
- Monitoring and Evaluation of preliminary results after launch of product

Mitigation strategy

- Awareness raising amongst farmers must be an integral part of any initial rollout plan for this project, although it constitutes an additional cost driver
- Affordability may be addressed by providing government subsidies that would cover part of the total cost of accessing the information
- Although a costly procedure, M&E initiatives must be launched a year after implementation

The current key actors need support to build their financial and technical capacities to fill gaps and meet requirements

	Current status	Needs
Sponsor(s)	<ul style="list-style-type: none"> • IFC and the World Bank are currently major donors of the PPCR • AfDB and BOAD expressed interest in getting more involved in agriculture 	<ul style="list-style-type: none"> • Multiple donors supporting all actors whether private or public; taking some of the financing load allowing each to focus on its strengths
Content provider(s)	<ul style="list-style-type: none"> • Most content providers suffer from poor capacity across the board • However, two current providers boast more capacity than the others 	<ul style="list-style-type: none"> • To raise technical capacity of these actors by providing additional financial resources, or additional equipment
Distributor/Delivery	<ul style="list-style-type: none"> • Distribution channels are still a challenge as preferred methods from farmers are not necessarily the most convenient for a commercial platform 	<ul style="list-style-type: none"> • To ensure that the distributor has access to an extensive customer base within the farmer community
Potential intermediary	<ul style="list-style-type: none"> • So far, we have retained several actors as potential intermediaries • Telecom companies are the best positioned intermediaries 	<ul style="list-style-type: none"> • Needs will vary according to the intermediary ultimately used • Agribusiness, and insurance will have different needs than telecoms
End-Users	<ul style="list-style-type: none"> • End-users have never had access to the information that is currently being proposed to them 	<ul style="list-style-type: none"> • Continued awareness raising is needed to not only to increase the target population, but also to improve farmers' current understanding

We assessed supply taking into consideration four main steps

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IFDC

Key indicators of the assessment

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IFDC

Assessment of current stakeholders

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IFDC

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IFDC

Some active stakeholders can support the climate platform

	Current Stakeholders	Potential Stakeholders
1 Sponsor(s)	<ul style="list-style-type: none"> • International Finance Corporation • World Bank • African Development Bank 	<ul style="list-style-type: none"> • UNDP • FAO • Others
2 Content developer/provider(s)	<ul style="list-style-type: none"> • Stakeholder D • Stakeholder A • Stakeholder B 	<ul style="list-style-type: none"> • Stakeholder C • Stakeholder G • Stakeholder I
3 Distributor/Delivery	<ul style="list-style-type: none"> • Agribusiness companies • Content developer • Telecom companies 	<ul style="list-style-type: none"> • Telecom companies • Insurance companies • Microfinance companies
4 End-Users	<ul style="list-style-type: none"> • Farmers • Farmers organizations 	<ul style="list-style-type: none"> • Agribusiness companies • Transportation companies • Mining companies • Development community

In summary stakeholders involved in the current system need support to build a new sustainable and reliable climate information platform

	<i>Needs</i>	<i>Challenges</i>	<i>Recommendations</i>
Sponsor	<ul style="list-style-type: none"> Knowing and understanding policies Technical and financial support 	<ul style="list-style-type: none"> Implementing plan and roadmap Decision process 	<ul style="list-style-type: none"> More proactive and dedicated institutions More financial and technical support
Producers	<ul style="list-style-type: none"> Focal point for all providers Primary data collection Contributes to the final analysis of partner institutes 	<ul style="list-style-type: none"> Low technical capacity with obsolete equipment to analyze and gather sufficient and data 	<ul style="list-style-type: none"> More financial and technical support Sharing experience with international institutions
Channels of diffusion	<ul style="list-style-type: none"> Access to all end-users Existence of technical capacity 	<ul style="list-style-type: none"> Difficulty to personalize information Not able to stock data 	<ul style="list-style-type: none"> More personalized channel with possibility to stock data
End-users	<ul style="list-style-type: none"> Increasing the number of end-users Increasing their productivity 	<ul style="list-style-type: none"> Different frequencies of usage Low levels of income Multiple means of access 	<ul style="list-style-type: none"> Personalized and reliable data Awareness raising on importance of climate information

Annexes

Annex A: Overall approach

Annex B: Niger context

Annex C: Additional supply and demand charted data

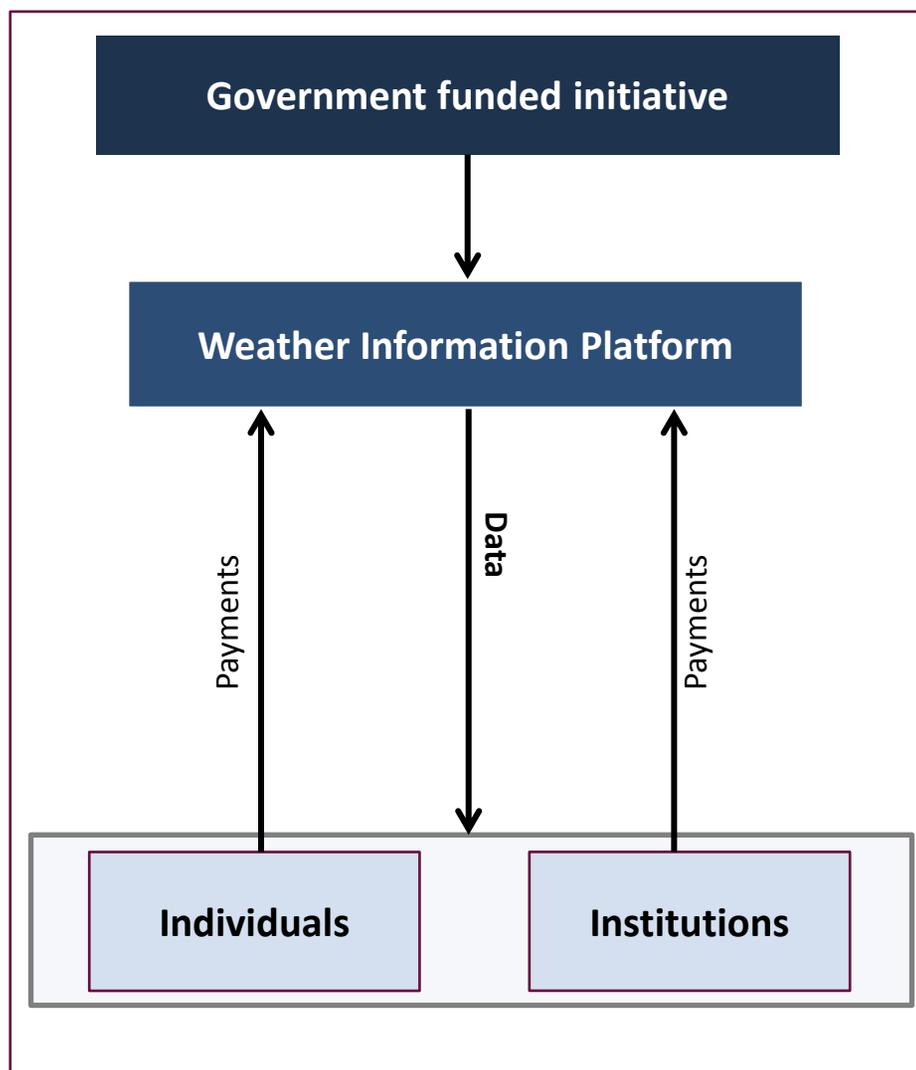
Annex D: Study of global models of climate information platforms

Annex E: Additional supporting data for options proposed

Niger can learn from other climate information platforms that have been established around the world



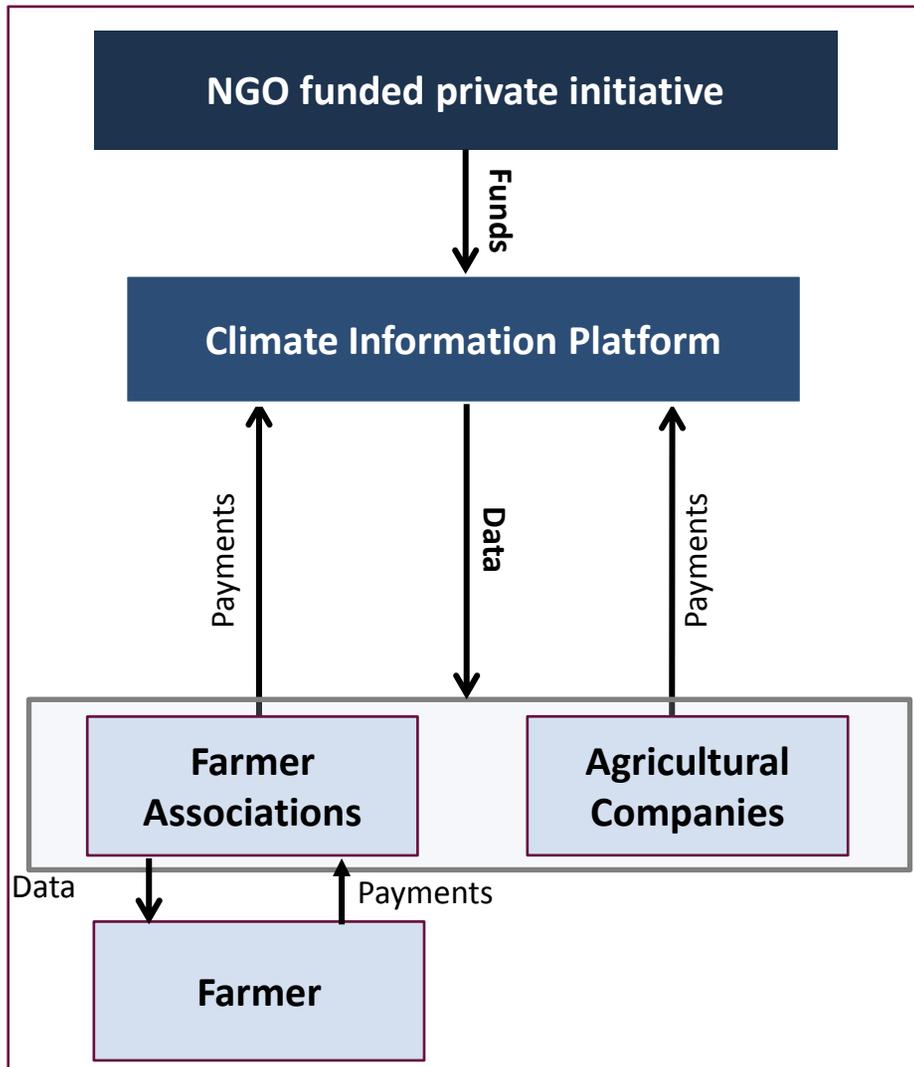
Switzerland – Meteoswiss



- **Mandate:** To reliably define and forecast the weather and climate of the Swiss plateau as well as of the country's mountainous regions
- **Business model:** Sale of industry-specific weather and climate information to individuals and institutions
- **Data collection method:** Uses high-performance computers and meteorological research. Also obtains some information from other national meteorological institutions
- **Revenue Model:** Sale of weather forecasts priced according to sector (i.e. agric, energy) and customer (professional or private) ; Some financing is provided by the Swiss Government
- **Data Packaging :** Forecasts are sold as one, two or three month subscriptions and available via mobile telephone, fax or landline
- **Partnerships:** Swiss Federal Administration, Universities, National Meteorological Services (throughout Europe)

The technical performances and efficiency of the Swiss model are worth emulating, but this model also commanded large resources, which may not be available for Niger

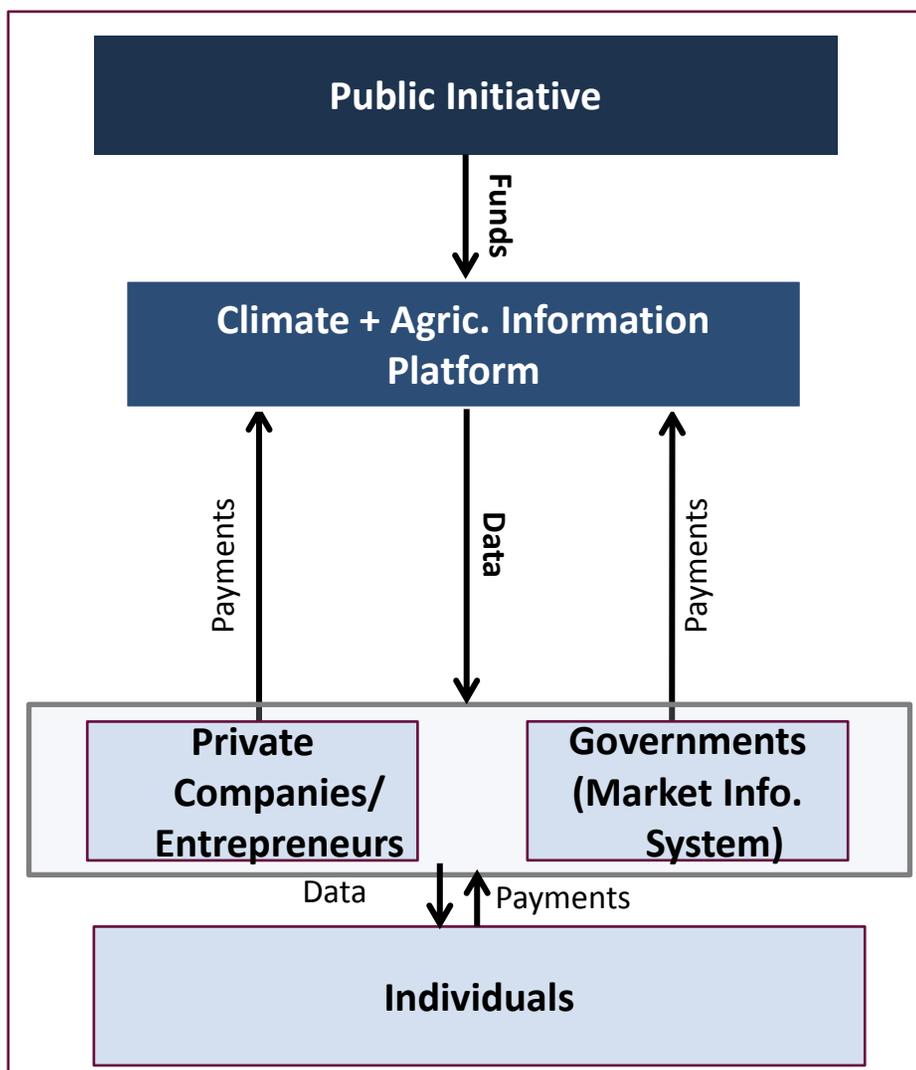
Ghana – IGNITIA



- **Mandate:** To commercialize the use of the most advanced satellite and radar information and by complex modeling, create a weather forecast in West Africa
- **Business model:** Sale of customized weather forecasts to farmer associations and agricultural companies for an annual fee
- **Data collection method:** Uses weather sensor equipment and specially designed, high-resolution, numerical weather prediction models
- **Revenue Model:** Sale of daily weather forecasts to farmer associations and agricultural companies for a yearly fee
- **Data Packaging:** Automatically generated, daily text messages, tailored to the farmer's specific location by GPS coordinates. (~\$2 per farmer/yr.)
- **Partnerships:** Uppsala University Department of Economics, Ghana Meteorological Agency

Raising technical /human capacity would be necessary to be able to take advantage of advanced technologies such as satellite and radar information, and complex modeling

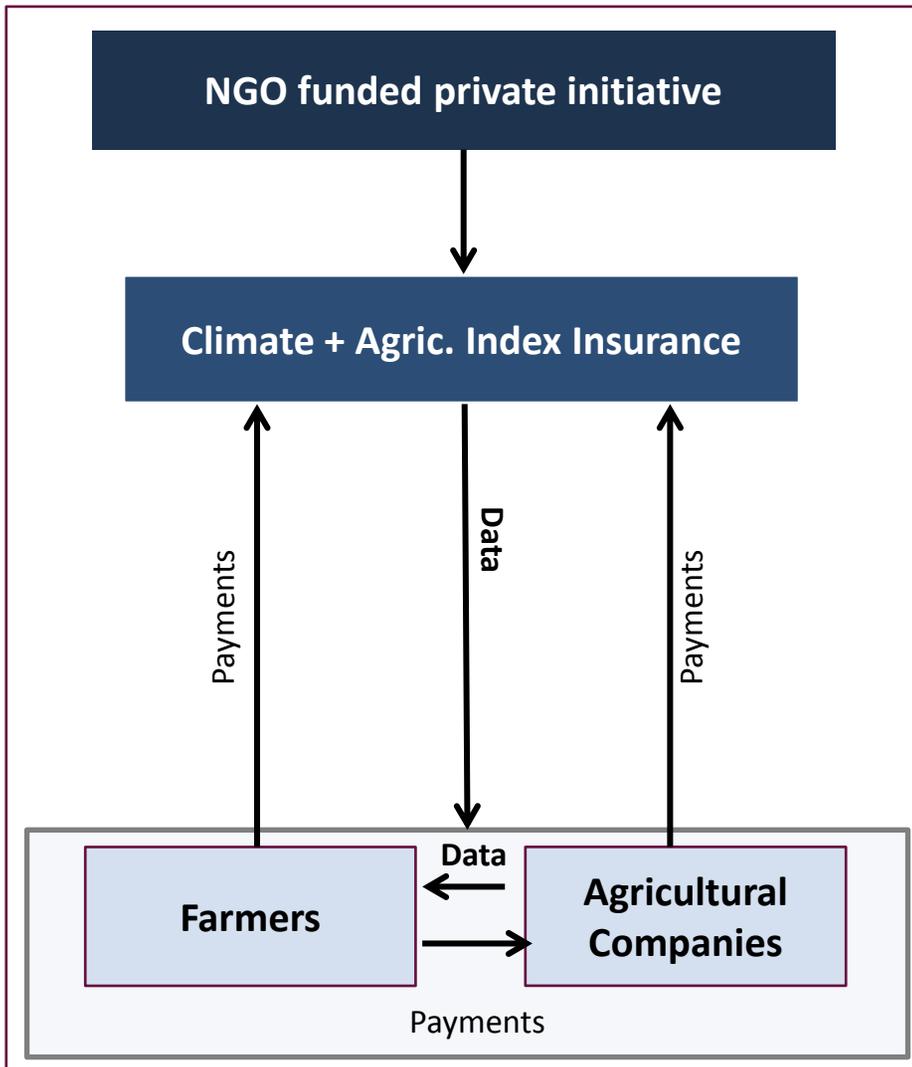
Multiple African Countries – ESOKO



- **Mandate:** To give agribusiness and projects the opportunity to share information quickly and affordably, creating a free flow of information in and out of rural areas
- **Business model:** Sale of a range of climate and agricultural information in English, French, Arabia and Portuguese
- **Data collection method:** Uses climate information from local and international sources
- **Revenue Model:** Sale of access to information platform
- **Data Packaging:** Automatic and personalized price climate and agricultural information
- **Partnerships:** Public Partnerships (USAID, IFC); Private Partnerships (MTN-Ghana, Johns Hopkins University, Soros Foundation)

ESOKO is especially interesting as it has been tested, and is now available as intellectual property that may be shared and implemented in any other country in Africa

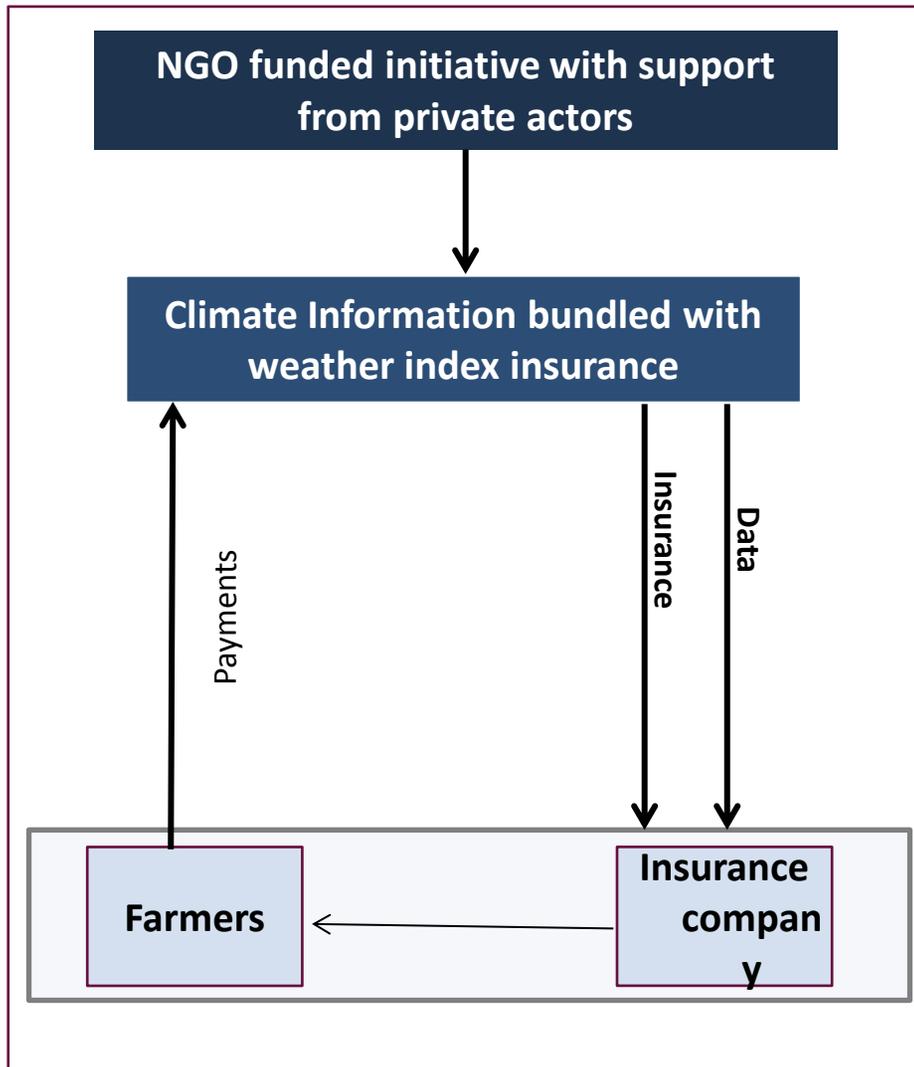
Kenya – Syngenta Foundation “Kilimo Salama” Insurance



- **Mandate:** To provide farmers affordable insurance
- **Business model:** Weather Index Insurance is bundled together with an agricultural loan and sold directly to farmers
- **Data collection method:** Foundation has set up automated weather station to collect rainfall data and uses info from local weather stations
- **Revenue Model:** Sale of insurance packages
- **Data Packaging :** Agricultural insurance products sold to farmers through an agro-dealer in their area or over the phone
- **Partnerships:** Telecommunications (Safaricom) ; Agribusiness Companies (Syngenta East Africa Limited, MEA); Insurance Companies (UAP)

This model is particularly interesting because it features a bundling of several services including insurance, a model that could be replicated in Niger to raise the level of interest of farmers, who also cite other needs

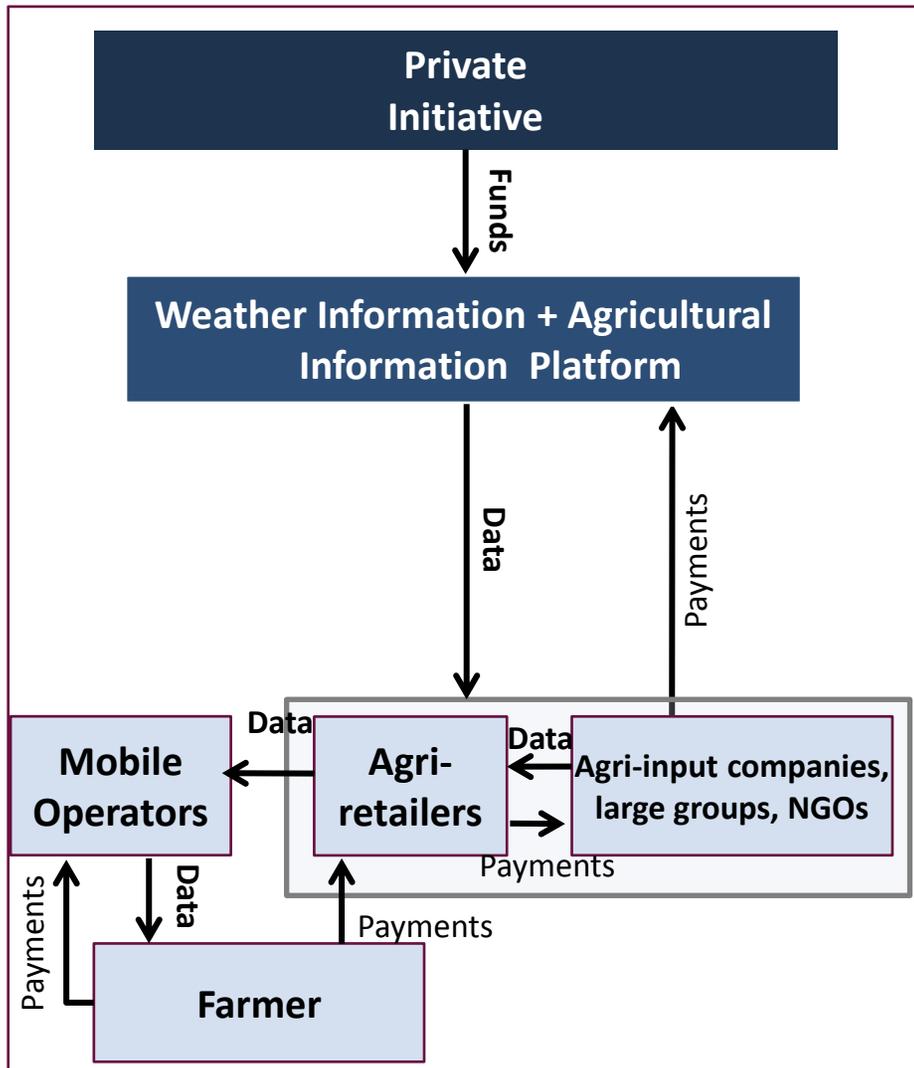
Oxfam America Horn of Africa Risk Transfer Adaptation (HARITA)



- **Mandate:** To address the needs of smallholder producers through a mix of risk reduction, drought insurance, credit, and climate information
- **Business model:** In-kind premium payment model whereby farmers obtain insurance and climate information through their labor
- **Data collection method:** Uses climate information from local weather stations
- **Revenue Model:** Supported by funding from government and private donors and sale of agricultural insurance
- **Data Packaging :** Farmers enrolled have the option to work extra days beyond those required for their normal payments to earn an insurance certificate or pay for insurance package out-of-pocket
- **Partnerships:** Oxfam America (OA), Swiss Re, the Relief Society of Tigray (REST), the International Research Institute for Climate and Society (IRI), Nyala Insurance

Bundling insurance with climate information is a sensible option, increasing the attractiveness of the value proposition by addressing not one but two priorities of farmers surveyed

India – Reuters Market Light



- **Mandate:** To help farmers achieve better yields by disseminating timely, accurate and personalized information across their key regions
- **Business model:** Sale of industry-specific weather, agriculture, and climate information in local languages
- **Data collection method:** Local and international sources
- **Revenue Model:** Sale of daily weather forecasts and agricultural info. to farmers and agric. companies
- **Data Packaging :** Information is sold to farmers through agri - retailers (RML Direct); bulk sales to agri input companies/NGOs/large groups; and bulk sales to mobile operators. Subscription can be bought for a period of three, six or 12 months at a price of ~US\$3 per month
- **Partnerships:** Mobile Network Providers (Nokia) ; Service providers (Biostadt India) ; Data/ Content Providers (Idea Network Cellular; Airtel)

The prices applied to this model in India, as well as data packaging and revenue models informed much of our survey research in Niger

The models each respond to specific needs within their context (1/2)

Data collection

- The models utilize three main methods of climate and weather data collection. They either obtain the information directly using their own expertise and infrastructure, or obtain the information from local and/or international meteorological institutions

Financing/Revenue Model

- The models studied all generated revenue through the sale of products. Some models depend on profits from these sales to sustain their initiatives, while others obtain outside financing and are able to provide their products to individuals who were are able to pay for it

Services/Products

- The models studied provide climate information services, agricultural insurance, or weather-index insurance

Clients/ Customers

- The models studied provide products and services to three main types of customers: individuals , private and public institutions

Data packaging

- All models surveyed sell their services and products through subscriptions, directly to end users through a pay-per use scheme, or a unique blend of both methods

The models each respond to specific needs within their context (2/2)

Dissemination Method

- In all the models analyzed, data was disseminated directly to end-users via SMS, internet, telephone or fax, or through intermediaries which were either agricultural product companies or farmer associations

Partnerships

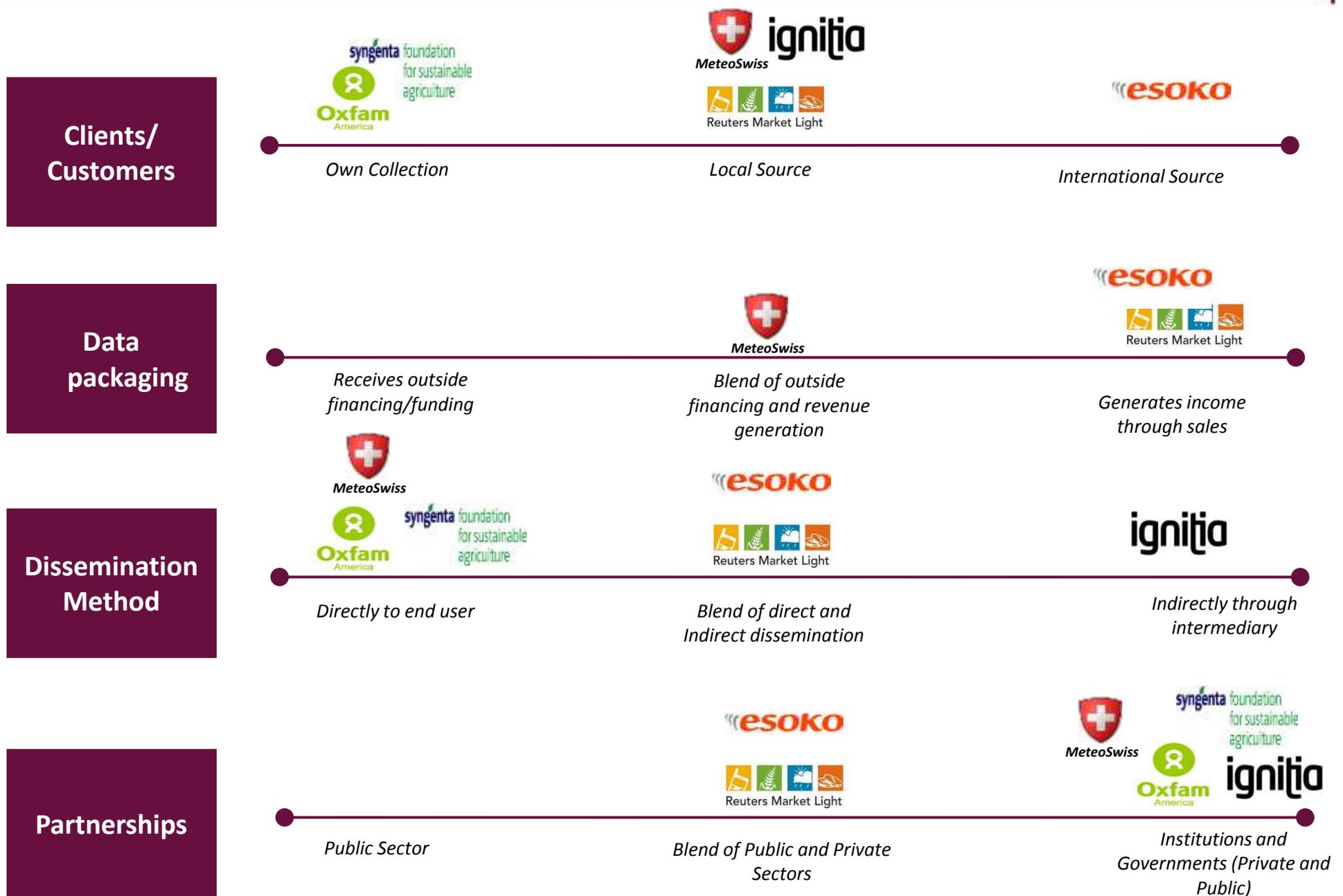
- Partnership models include partnerships with Private Enterprises who played a role in the dissemination or acquisition of data (ex. Telecommunication companies, Data Service Providers, Universities); partnerships with public enterprises who provided financing and capacity building resources (Governments and Government Agencies); as well as a blend of public-private partnerships

The Niger platform will need to take into account the specific needs of the country's market and its different features

The models are broad in terms of their structure, methodologies and product portfolio



Subscriptions are the preferred method, and partnerships are common to the models considered



An organization's position on each dimension presents certain trade-offs (1/3)

	Models	Benefits	Constraints
Data collection method	<p>Own collection</p> <ul style="list-style-type: none"> • Local source • International source 	<ul style="list-style-type: none"> • Data is more easily customized, more precise, and location-specific and thus, more reliable • Data is obtained more cheaply as many national meteorological centers provide climate information for free • Accurate and reliable 	<ul style="list-style-type: none"> • Requires more funding, capital and infrastructure maintenance costs • Accuracy and reliability is not always certain as many local meteorological stations do not have or utilize modern, sophisticated and accurate technologies • Expensive; may not have location-specific information
Financing/ Revenue Model	<ul style="list-style-type: none"> • Receives outside funding/Financing • Blend of outside financing and revenue generation • Generates revenue through product sales 	<ul style="list-style-type: none"> • Able to provide services/products cheaply or free to customers since costs are paid for • Able to cater to customers who are both able to afford products and unable to do so ; Eliminates need for start-up capital • Stable source of income; compels organizations to provide quality products to attract more customers and by extension, more profits 	<ul style="list-style-type: none"> • Funding may not be consistent or may dry up and render the business model useless • Difficult to reconcile the missions and mandates of various stakeholders • Costs of products/ services may need to rise with increasing operating costs

An organization's position on each dimension presents certain trade-offs (2/3)

	Models	Benefits	Constraints
Services/ Products	<ul style="list-style-type: none"> • Weather/ Climate Forecasts • Bundled forecast information other data service • Agricultural/ weather index Insurance 	<ul style="list-style-type: none"> • Able to provide customers with accurate, specialized, information • Customers get a one-stop-shop experience • Provides climate information to clients while protecting them economically from the deleterious effects of climate change 	<ul style="list-style-type: none"> • Unable to provide other agriculture related information that can be beneficial to end-users (especially farmers) • Customers who want, or can only afford one product are unable to purchase bundled products/services • Requires partnerships with other entities (i.e. insurance companies)
Clients/ Customers	<ul style="list-style-type: none"> • Individuals (private) • Blend of Individuals and Institutions • Institutions (private and public) 	<ul style="list-style-type: none"> • Able to easily tailor products to individual preferences • Services and products reach a broader customer base • Able to provide information en masse and charge higher prices 	<ul style="list-style-type: none"> • May need to create a variety of products to suit individual needs • Requires greater financial and technical capacity • Requires greater financial and technical capacity

An organization's position on each dimension presents certain trade-offs (3/3)

	Models	Benefits	Constraints
Data Packaging	<ul style="list-style-type: none"> • Pay-per -use • Mix of pay-per - use and subscriptions • Sold as Subscriptions 	<ul style="list-style-type: none"> • Affordable; easily disseminated to end-user. • Provides customers with variety and choice • Customer loyalty is locked –in for a longer duration 	<ul style="list-style-type: none"> • Difficult to lock-in customer loyalty. • Must create a variety of products to suit customer preferences for both methods • Might deter economically disadvantaged customers from buying products
Dissemination Method	<ul style="list-style-type: none"> • Directly to end user • Blend of direct and indirect dissemination • Indirectly through intermediary 	<ul style="list-style-type: none"> • Able to easily tailor products to end user's preferences; able to circumvent increased cost of product by using intermediaries. • Able to reach a broader population • Cost is shared among end-users and products can be sold for a cheaper price 	<ul style="list-style-type: none"> • Requires end users to have technological resources which may be unattainable or expensive • Requires greater technical capacity • Requires a larger number of customers and strong organization as in the case of farmer associations
Partnerships	<ul style="list-style-type: none"> • Private Sector • Blend of Public and Private Sectors • Public sector 	<ul style="list-style-type: none"> • Better access to financing • Synergies between public and private institutions add value and increase efficiency through the integration and cross transfer of public and private sector skills, knowledge and expertise • Products and services are more likely to have a social impact 	<ul style="list-style-type: none"> • Priorities can change quickly and continued support can be hard to predict • Difficult to reconcile the missions and mandates of many stakeholders • Priorities can change and continued support can be difficult to predict

Global models lessons learned that we may apply to Niger across all these dimensions

These global models are interesting insofar as they inform the potential good practices below that are applicable to Niger

Financing/Revenue model

- As for many models globally, the Niger platform will likely depend, at least initially on a blend of revenue generation and outside financing. Multilateral partners must be willing to support the platform financially, even though the platform may ultimately become self-reliant, and commercially viable with limited engagement from donors

Services/Products

- Many models feature several products bundled with climate information. This is especially applicable to Niger as surveyed farmers have overwhelmingly cited other priorities alongside climate information. Insurance, and market data may prove good additions to climate information, and render the whole package more attractive

Clients/Customers

- The main lesson from global models as it relates to clients is the propensity of the best models to personalize information for the final end user. It proves the importance of personalization in reaching the quality standard wished by farmers. Fortunately, in Niger, a pilot platform can focus on only the farmers

Data packaging

- Overwhelmingly, the subscription method has appeared as one of the preferred methods across all global models studied. We posit, this is because, subscriptions keep the total transaction costs down, and is simply a more efficient method to deliver data to a large customer base. The latter is the main indicator here to watch

Dissemination

- Our recommendations were inspired by the fact that many global models use a blend of dissemination methods, including direct delivery to the customer, and through an intermediary. It seems both present opportunities and tradeoffs

Actors' position across these key dimensions may be leverage to support the potential platform

	Data collection	Financing/ Revenue Model	Services/ Products	Clients/ Customer	Data packaging	Dissemination Method	Partnerships
 MeteoSwiss	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Annexes

Annex A: Overall approach

Annex B: Niger context

Annex C: Additional supply and demand charted data

Annex D: Study of global models of climate information platforms

Annex E: Additional supporting data for options proposed

At the onset, we considered four key actors to play the role of distributor in the models we proposed

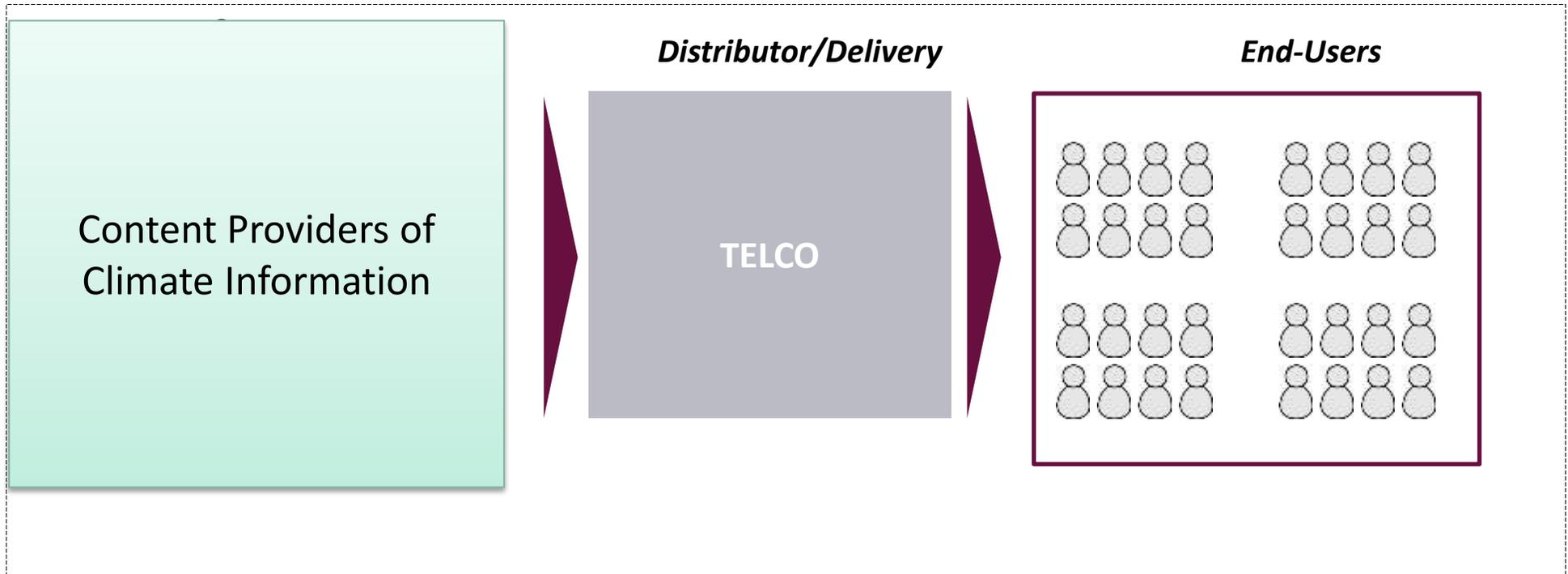
1	Mobile Telecommunications Provider	2	Agricultural Input Provider	3	Insurance Provider	4	Microfinance Provider
	<p>With increasing cellular penetration rates, increasing competition for licenses, and decreasing ARPU, cell phone companies are keen to find new growth prospects , and one way they have been doing so is by diversifying their offerings beyond traditional text and voice, to more value added products</p>		<p>Although there are few private sector companies in this field in Niger, they may be a reliable option, as their proximity with the farmer community is already an asset. However, apart from three structure we are closely studying , many others would not have the technical and financial capacity to embark on such an ambitious project</p>		<p>The insurance sector is particularly interesting to consider in the context of bundling several products/services to make the offer more attractive. Indeed, farmers are likely to be more interested in an offering where they could get not only improved climate information but an insurance policy, or market information bundled with it</p>		<p>Microfinance institutions cater to rural populations and farmers in a way traditional banks can't so they have developed a long lasting relationship with the farming community</p>

Each of these distributors present strengths that can be leveraged for the distribution model

We considered these key indicators to assess the distributors

<i>Indicators</i>	<i>Description</i>
Finance	<ul style="list-style-type: none"> • Financial capacity • Payback control system
Data	<ul style="list-style-type: none"> • Ability to meet financial obligations, and to extend financial resources • Ability to collect payments
Access	<ul style="list-style-type: none"> • Control of quality • Automatic process • Push technology
Experience	<ul style="list-style-type: none"> • Possibility to perform direct queries on platform • End-User easy to reach out • Easy to scale in the country • Affordable • Geographic spread and related challenges • Information sold at a price that makes it possible for end-users to buy information • Previous experiences with distributing data packages and/or dealing with climate information product/service • Previous experience working on project with similar features

Mobile based platforms provide both great opportunities and challenges with respect to Niger, and possibly hold the greatest promise



- Mobile based platforms could be the best entry point although challenges such as, low penetration rates, and a lack of access to technology remain
- However, it must be noted that Niger knows exponential growth in mobile phone penetration and is likely to boast similar rates as its neighbors in only a few years (5-7 years)
- Specific provisions might be needed in the case of Airtel because of their overexposure with IFC