Mobile for Development Impact

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Micro-Insurance in Mobile Agriculture

– Case study & takeaways for the mobile industry



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1

Market Opportunity

How can mobile index based insurance change the lives of small holder farmers on a commercially viable model?

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The global opportunity for mobile index based insurance in agriculture

Rainfall variation is an increasing global challenge for smallholder farmers

- Research suggests that marginalised small-holder farmers will be negatively impacted the most from climate change in developing markets as their ability to adapt to volatile climatic conditions may not be sufficient to overcome the magnitude of future hazards.
- The changing climatic conditions present a multi-faceted set of issues for farmers across the agricultural cycle, from planting to pest and disease issues, and up to the harvest stage
- One critical area of concern for the farmer is **germination** which is intrinsically impacted by changing patterns in rainfall

Micro insurance & mobile technology present a way to mitigate against weather shocks

- Index based micro insurance could be used by the farmer to cover small amounts of land (e.g. half acre farm) for a small (micro) premium (e.g. ~$2).
- Such a small premium is made possible by replacing key features and transactions of a traditional insurance model with technology based solutions:
  - ✓ Use satellite weather data to determine the damages to a farm – reduces cost of in-person farm visits
  - ✓ Use mobile technology to locate, register, and pay farmers (via mobile money) – reduces cost of sales teams and payout distribution mechanisms

Rainfall Challenge

> "There is always uncertainty in farming, when there isn't enough rain you can lose everything"
>
> Farmer, Embu – Kenya

What is index based insurance?

> "**Index insurance** is a relatively new but innovative approach to insurance provision that pays out benefits on the basis of a predetermined index (e.g. rainfall level) for loss of assets and investments"
>
> Index Insurance Forum - GIIF

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Mobile micro insurance is evolving, but agriculture services lag behind

The space of mobile insurance services has been maturing

- Within the broader industry of mobile based micro insurance services targeting the Base Of the Pyramid (BOP) users, the last few years have seen a steady rise of live deployments, the majority based in Sub-Saharan Africa – the GSMA is now tracking **100 deployments world wide**
- As of June 2014, the industry had issued more than **17 million** mobile insurance policies, representing the annual growth of 263%
- Many services are integrated with and **led by mobile operators** (**56%**), and are **in partnership with 3rd party implementing partners and insurers** with specific micro-insurance expertise (**64%**)
- However, most insurance in this space covers life or health, **under 10% of services tracked offer agricultural insurance**

But…

<10%
of these services are in agriculture

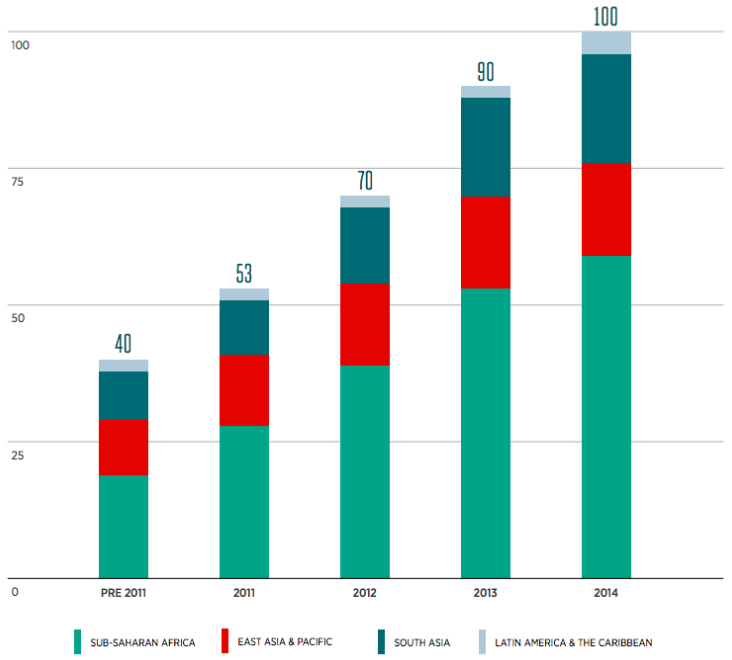
Low
given the proportion of developing world population working in agriculture

17m
Mobile insurance policies issued (June 2014)

56%
of mobile insurance services led by MNOS

64%
Of respondents with mobile insurance services operate through partnership with specialist providers

Number of live mobile insurance employed – Dec 2014



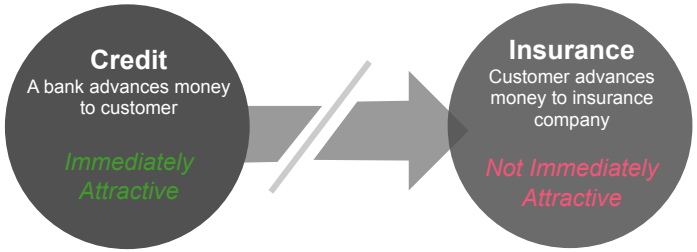
Source: GSMA MMU state of the industry report, MMU product trackers

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“Insurance is sold not bought”, which models can the agri space learn from?

Micro insurance faces a challenging barrier

- Micro insurance (spend now, get pay out later) is a harder sell than micro credit (get money now). In particular, micro insurance product customer awareness is low and providers must invest heavily in customer education to explain how insurance could benefit them

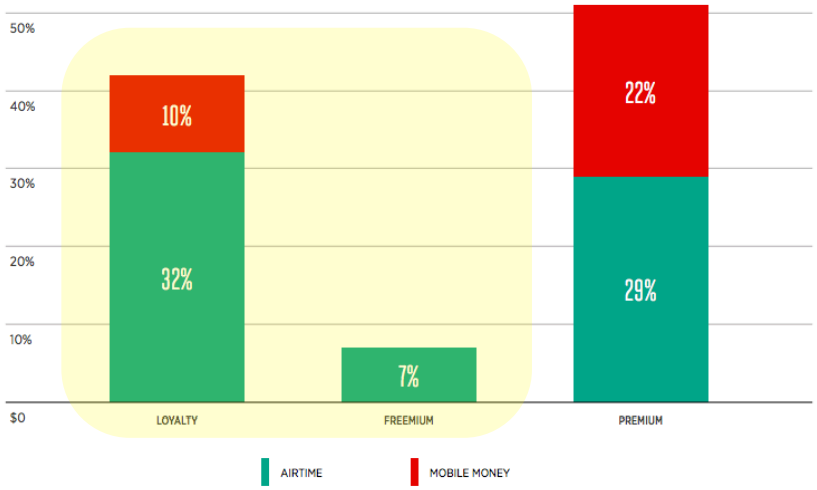


Two successful models have emerged in the micro-insurance space and are starting to gain traction

- Many services are using innovative techniques to overcome the barrier in customer education and uptake. The service examples that have reached ‘scale’ (e.g. services that have provided more than one million policies) appear to take one of two strategies:
  - ✓ **Loyalty** – provide free insurance cover in return for loyalty (e.g., airtime use – customer spends more than a set amount per month)
  - ✓ **Freemium** - basic level of cover free to customers in the hope that some will voluntarily upgrade and pay for more comprehensive cover once the benefit is understood

All 5 of the services reaching scale have been pioneered by specialist solutions providers and use “loyalty” or “freemium” models

Commercial model for mobile insurance employed – June 2014



How can micro-insurance players in the agriculture space learn from and adapt these successful models?

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Source: GSMA MMU, Mobile money state of industry report 2014

Kenyan market in focus – the maize micro insurance market opportunity

The Kenyan market is a good target for mobile micro insurance services for agriculture sector

Maize central to livelihoods

Maize is produced by the majority of Kenya's small holder farmers, with more than 2 million hectares of Kenya's land under maize cultivation, average consumption of Maize provides more than one third of an individual's daily caloric supply.*

Failed germination an issue

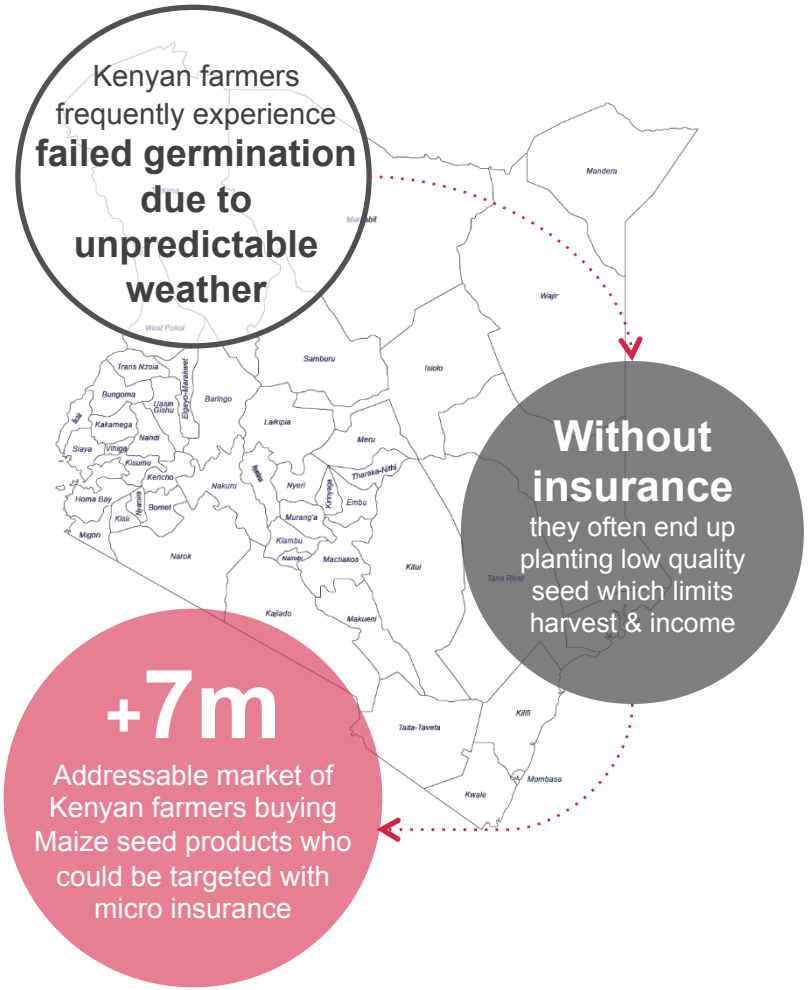
Many farmers experience failed germination due to unpredictable weather. Changing rainfall patterns & drought risk mean seed selection is top of mind for farmers

A mobile ready market

The Kenyan market has a high proportion of unique mobile subscribers (**42.53%**)** and offers the ability to integrate mobile insurance based products into a mature mobile payment system, which has strong rural reach, and an existing base of customers whose technical literacy with mobile money is high – **these are optimum conditions for an Agri MFS (Mobile Financial Service) to scale quickly**

Large addressable market

We estimate the total addressable market for farmers who buy Maize seeds, and could be targeted with bespoke micro insurance service to mitigate against weather shocks at **+7 million farmer households*****



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*Source: CGIAR Research Program on MAIZE 2014 & FAO, 2011
**Source: GSMA Intelligence, 2014
***Source: M4D Impact & Altai analysis – assumptions based on households involved in Maize production, and conservatively assume one buyer per household

Can a tough insurance sell be replaced by a loyalty incentive?

A model which focuses on loyalty for agribusinesses, and reduces the barrier to customer adoption by increasing affordability, is based on similar logic to existing scaled services

- Maize seed companies aiming to respond to farmer needs increasingly offer "drought resistant seed", and ensure their brand and reputation is top of mind for farmers – but just as MNOs have issues with customers churning between networks, seed companies must fight to differentiate their products and keep customers loyal
- The successful loyalty based model (typically applied to mobile network operators) can be applied to seed companies who face similar challenges – i.e. in return for loyalty, the farmer's insurance premium is paid for by the agribusiness, which reduces one key barrier to adoption



(above) Various seed varieties shown

Last year I bought Pannar, but I saw Duma at a field day and they said it can mature in just 75 days. I will try Duma this year
Farmer, Kitui

Model 1

Insurance a tough sell for farmers…

Insurance
Customer advances money to insurance company

Not Immediately Attractive

?
How can seed companies keep customers and build loyalty around their brands?

Model 2

Insurance
Seed company advances money to insurance company

Immediately Attractive

No upfront insurance sell for farmers needed..

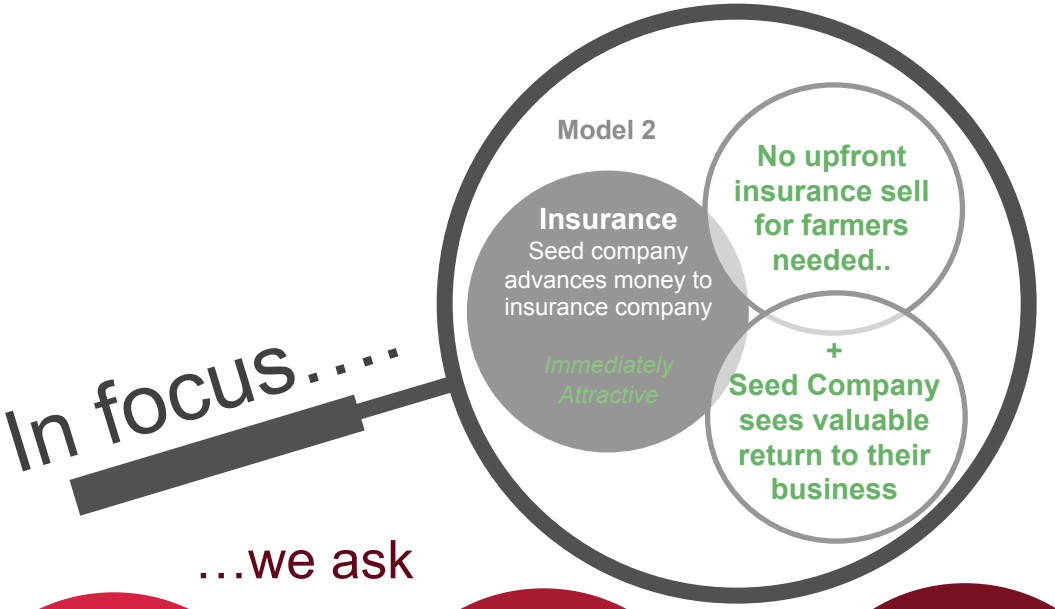
+

Seed Company sees valuable return to their business

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Our study evaluates an agri service that explores this 'loyalty' model

We examine a mobile based index insurance service offered by **Acre Africa** that explores the model of partnering with a mobile operator and an agribusiness to deliver insurance for farmers



…we ask

- How does the service work?
- How is it working in practice?
- How can it be made sustainable?
- How can it be scaled and replicated?

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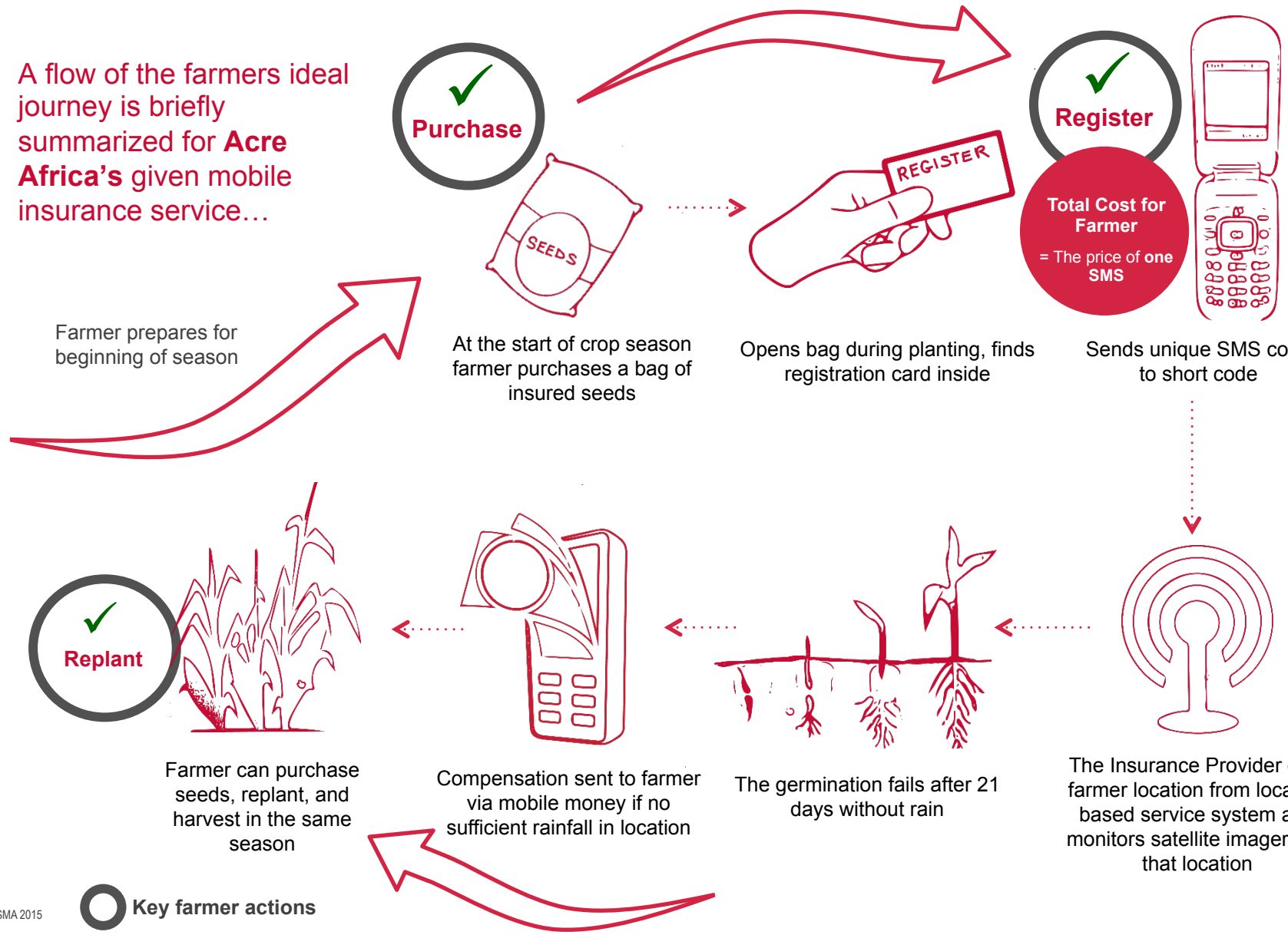
Agricultural micro insurance – a case study

We examine one service & how it should ideally work for farmers, seed companies, and mobile operators

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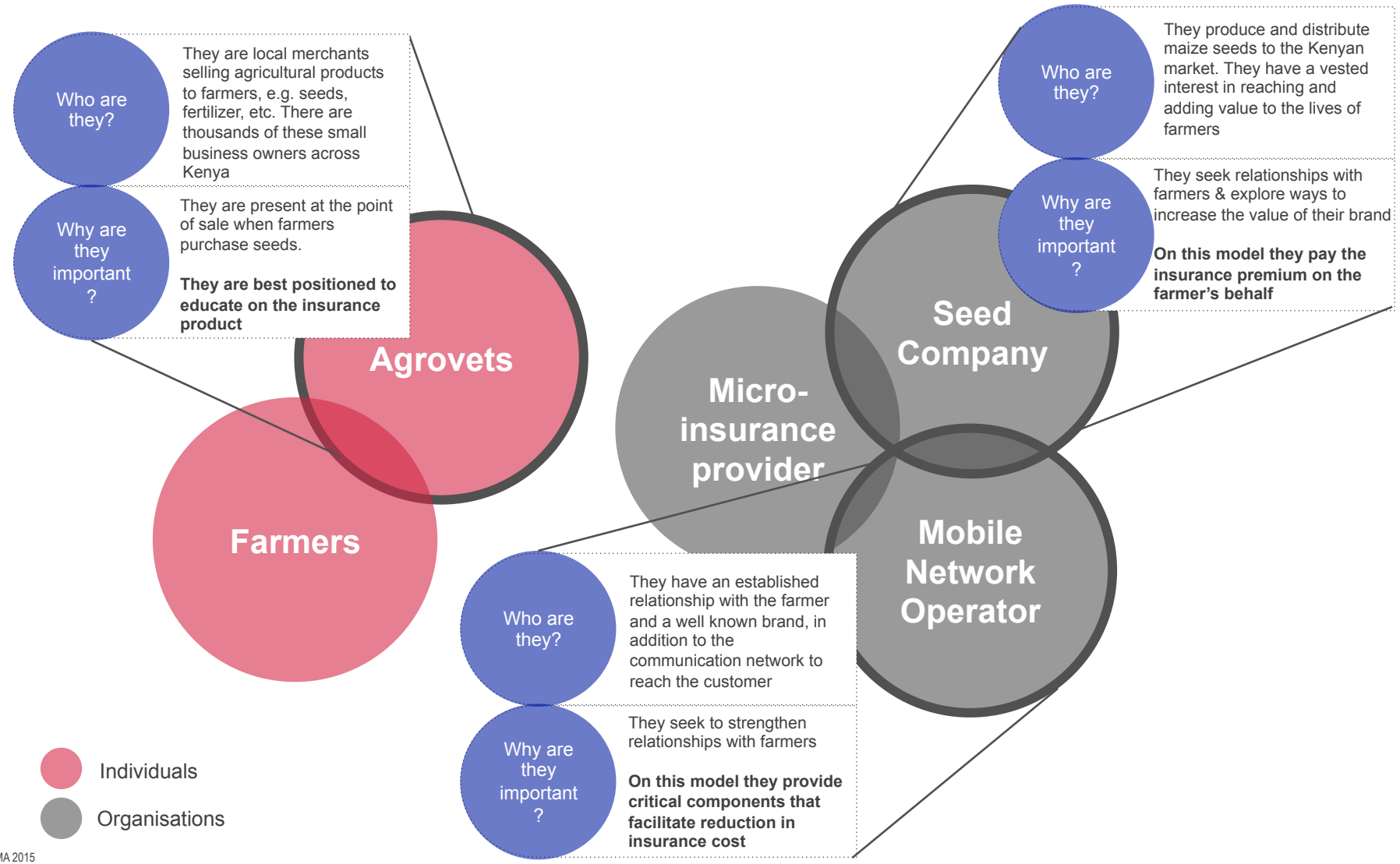
How does the service work?

A flow of the farmers ideal journey is briefly summarized for **Acre Africa's** given mobile insurance service…



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There are key actors aside from the insurance provider & farmer



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The service must fit into existing farmer behaviors & routines



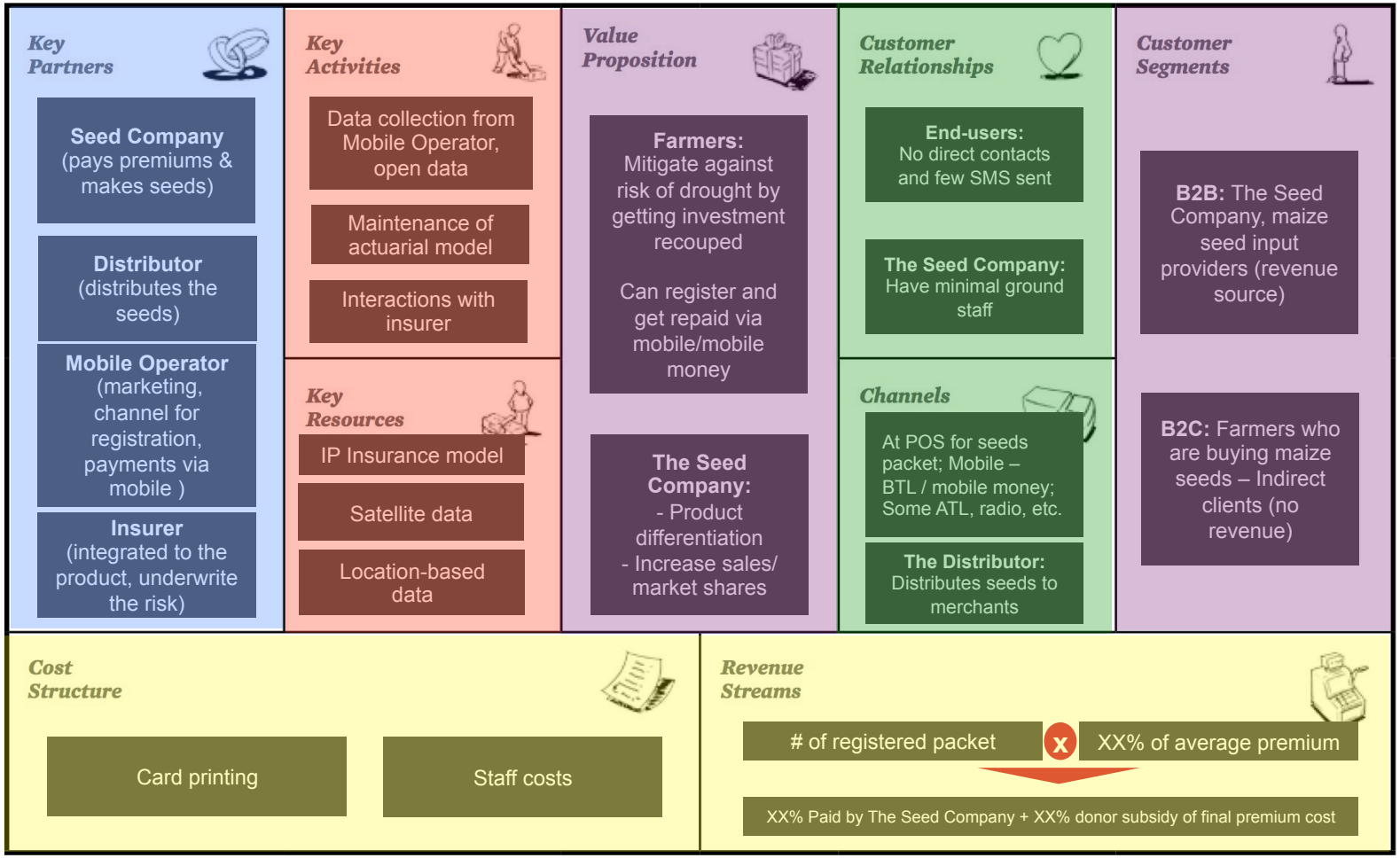
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In the ideal use case, key actions on behalf of the farmer are required



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To rigorously evaluate the service we detail its underlying business model



Partners | Cost/Rev structure | Key activities & resources | Marketing & channel access | Customer Value Proposition

Note: the business model canvas is a well known framework for representing the business model of a given organisation, further details here https://en.wikipedia.org/wiki/Business_Model_Canvas

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Operations are dependent on key Seed Company & MNO partners

1 3 key partner types…

Seed provider

- **Bundles** the service with seed packets
- **Pays** for a percentage of the insurance cost (the donor pays the remaining amount using a subsidy model)

Mobile operator

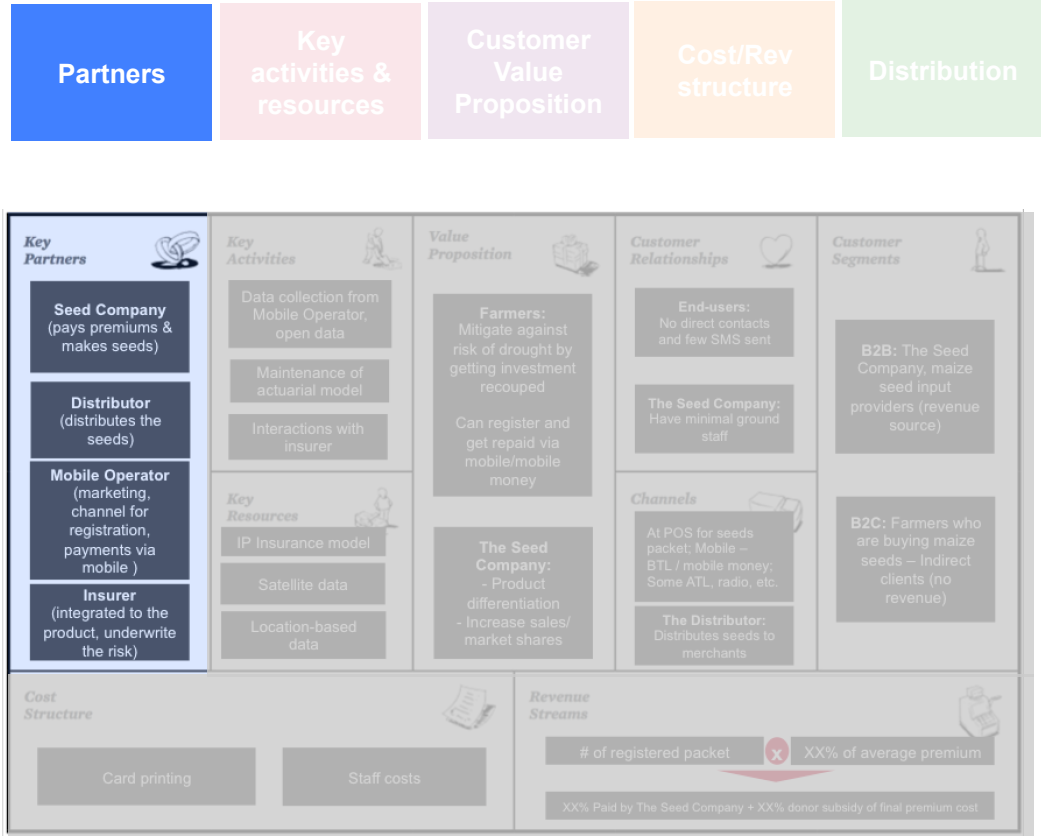
- Provides **location-based** data
- Makes the payout possible via **mobile money**

Insurer

- **Underwrites** the service
- Makes the **payouts**

…whose participation is key

- The **failure** of one partner can have a **strong negative impact** – i.e., the service fails to work without the full co-operation of all of these key actors



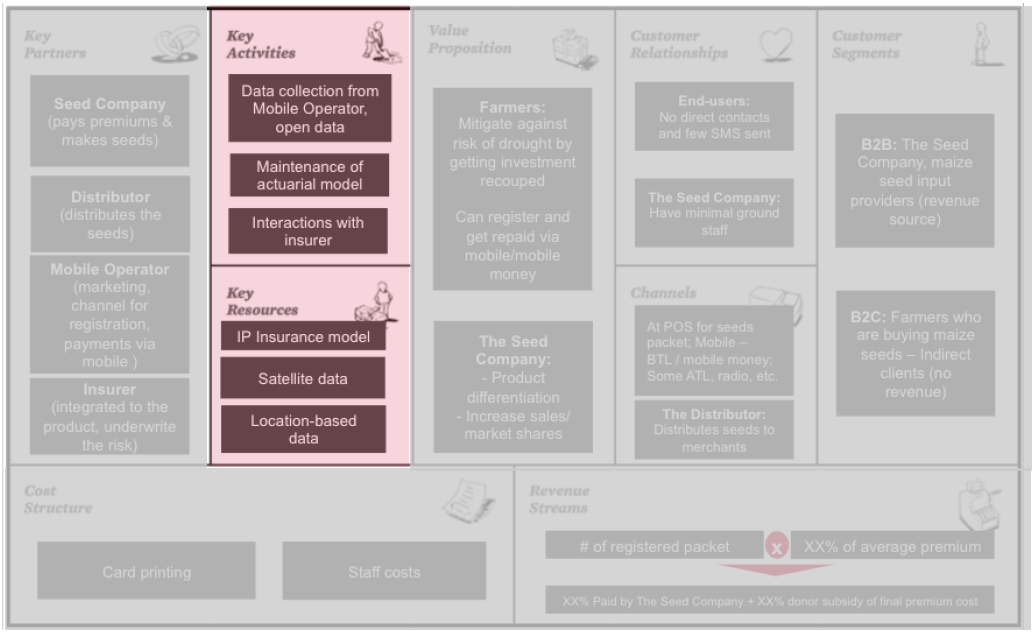
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The actuarial model uses various key data sets

2 Acre Africa relies on key data sets to deliver the product

Partners	**Key activities & resources**	Customer Value Proposition	Cost/Rev structure	Distribution

- **Customer location data** is critical, and is provided by the **MNO***
- **Satellite weather data** (past and current) is used to assess precipitation per area, according to the planting date. It is provided by a US based public research institute
- The **IP is the actuarial model** leveraging the two datasets above. It is used to calculate the pure premium (based on the location and planting date) before insurer's validation



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*This location data is not GPS, but is generated from the triangulation of three mobile cell towers. Accuracy of this information can become more challenging in rural regions with low cell tower coverage. However, it represents the best location data source available for the majority of farmers in rural areas in Kenya at the present time

Value to farmers is clear, value to Seed Company must be explored

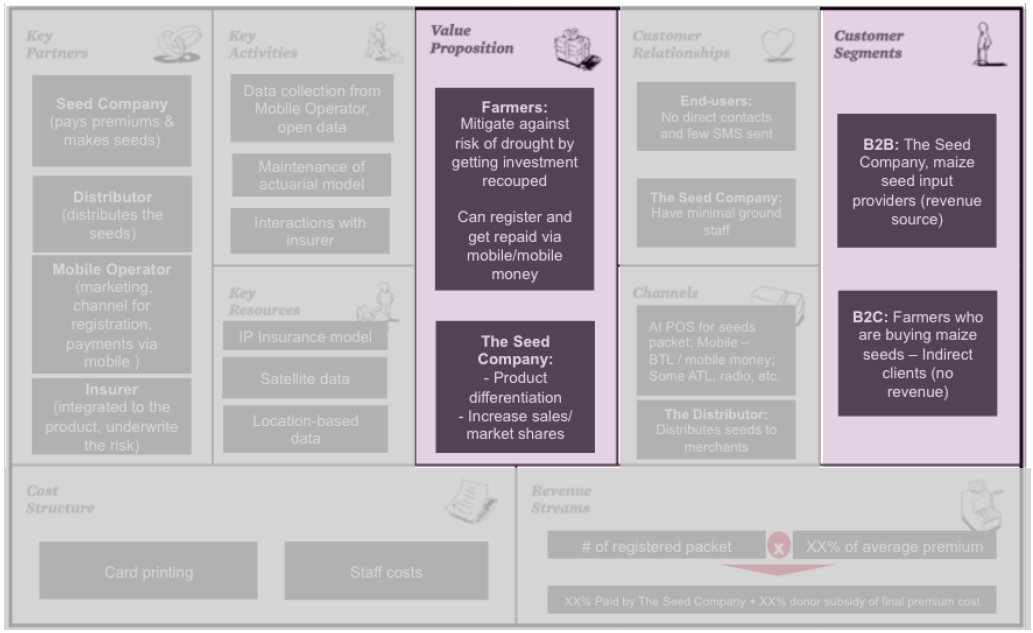
3 The value proposition to farmers is strong…

- Currently, the **cost** of the insurance to **farmers** is subsidized by the Seed Company, so is effectively **exceptionally low**

… but the returns for the seed company will take longer to emerge

- The Seed Company can be considered as **a key client** since they pay for the product - The Seed Company **pays the premium on the farmer's behalf**, which comes out of the percent margin they take on a packet of seeds
- The Seed Company does so to **differentiate** their product on the market, and hopes to see a **return** according to key business objectives – e.g. increased sales, loyalty, etc.

Partners	Key activities & resources	**Customer Value Proposition**	Cost/Rev structure	Distribution



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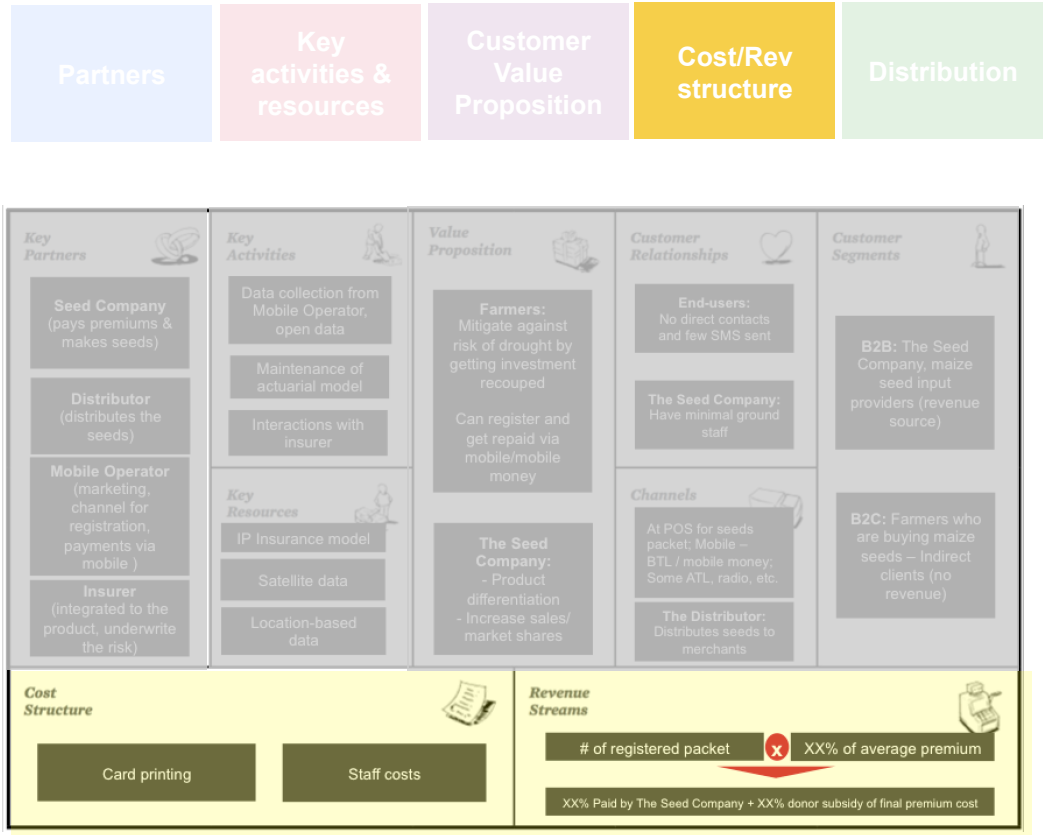
Scaling up should be very profitable for Acre Africa

4 Revenues are driven by two components…

- Acre Africa's revenue is based on the **volume** of registrations (the more, the better)
- ..and on the average **premium** (the higher, the better):
  - Acre Africa's work and analysis are the same for each area and time period, yet The Seed Company (who pay) will prefer lower premiums

…while costs are mostly fixed

- Acre Africa has two main costs: **staff costs** that are fixed since the product is easily scalable…
- …and **printing costs for the vouchers** which is conducted for all of The Seed Company's packets and is thus independent from registration



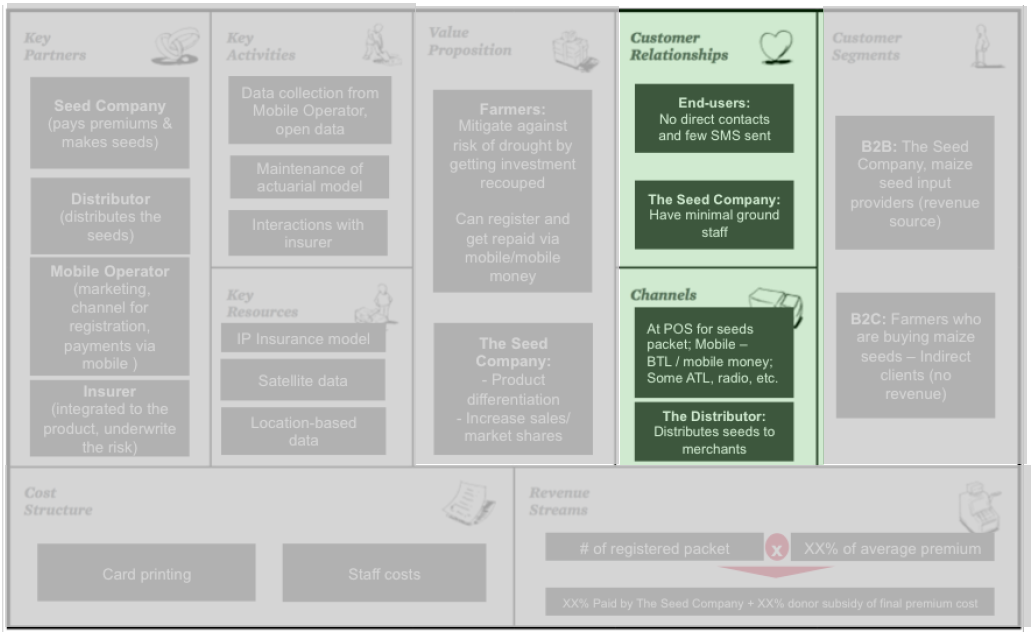
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Distribution is challenging, with minimal engagement to date

5 Acre Africa and its partners' involvement in distribution is very limited

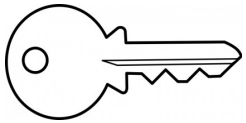
- The primary touch point with customers is the **point of sale at agricultural inputs merchant**, who is not incentivized to educate the customers about the insurance service
- Marketing has been primarily done through **radio**, and these costs have been incurred by the MNO and The Seed Company – however, efforts have not been much aligned to date

Partners | Key activities & resources | Customer Value Proposition | Cost/Rev structure | **Distribution**



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Recapping critical role & incentives of the Seed Company & MNO



Partners

Both actors are critical to support and scale the service

The MNO and the Seed Company are integral in supporting the marketing, distribution, key resources, activities and impacting direct revenues for the product

They play a critical role as key partners and upfront investors in the service – their incentives for doing so must be critically examined so that the service can be most intelligently aligned with both to achieve scale

	Critical role	Possible Incentives
Mobile Network Operator	• Provision of location data • Ability to make payments using mobile money • Investment into the service by covering communication and marketing costs (e.g., SMS promotion, radio and print marketing, etc.)	• Increased brand awareness for customers involved in agriculture/ rural segments • Increased value for customers involved in agriculture/ rural segments • Increased mobile money transaction volumes (payouts) • Increased SMS usage/volumes
Seed Company	• Pay the insurance premium on farmers' behalf (making the seed company an effective B2B customer) • Invest in aligning their seed product marketing, distribution and packaging with the insurance service on offer	• Increased loyalty of customers who return next season to re-purchase seeds • Product differentiation through added value proposition of insurance – farmer feels lower risk • See increased market share/ sales volume

Cost/Rev structure | Key activities & resources | Marketing & channel access

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3

The Customer Journey

The reality of using the insurance service & assessment of barriers to adoption and scale

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We map a customer journey across 6 stages of interaction with service

We formulated a customer journey similar to those already used by the GSMA

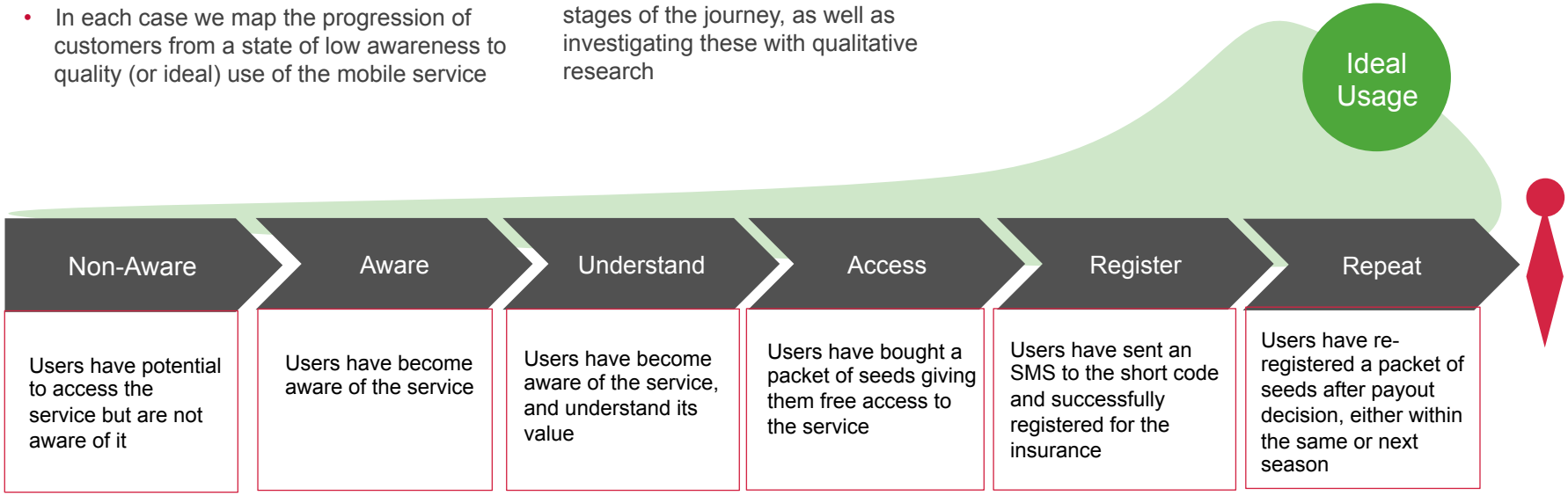
- The GSMA has used a similar model of the customer journey to analyse the quality of user bases across different service types including mobile agriculture information services & mobile money services
- In each case we map the progression of customers from a state of low awareness to quality (or ideal) use of the mobile service

We use different techniques to examine earlier and later stages

- "Understanding" and earlier stages of the journey are harder to quantify using available 'service usage data', and are investigated with qualitative research
- We conducted data analysis on existing service usage data for "Access" and later stages of the journey, as well as investigating these with qualitative research

Positive customer experience and repeat use is the target

- The service logic is such that customers who register for the insurance are mitigated against the effects of poor rainfall by replanting in the **same season**, this should logically drive repeat use of the service next season



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Assessing the size of bottlenecks

Where are the majority of customers in this journey towards ideal use?

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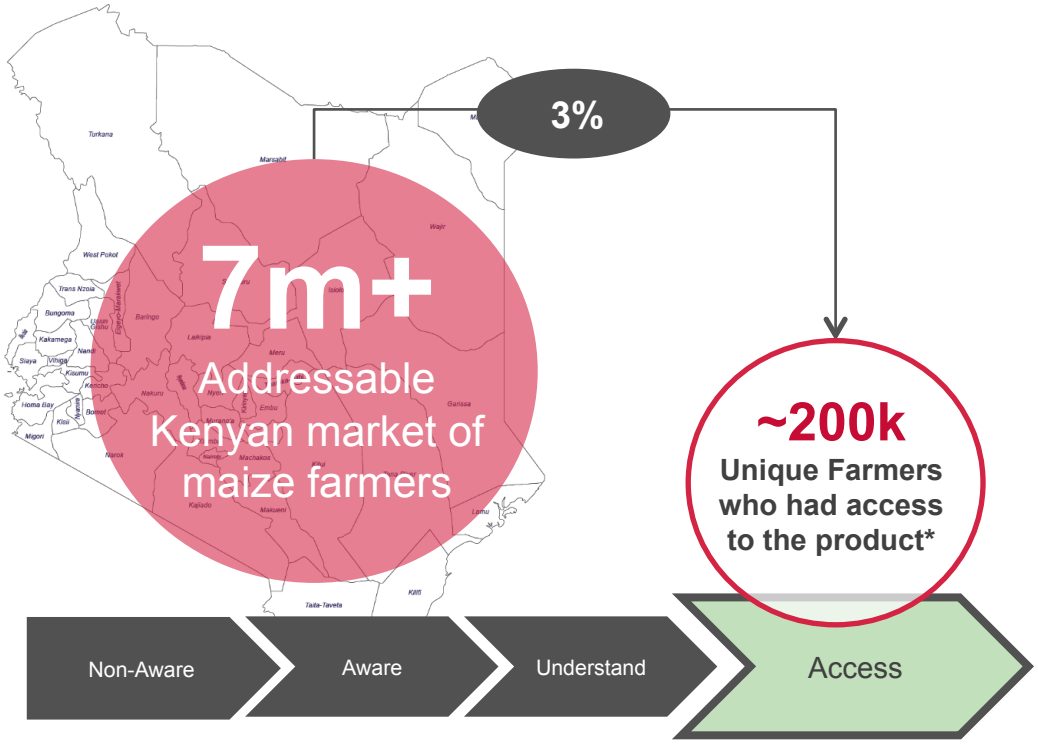
Early stages of the journey cover a large potential market, though access is limited

The total size of the addressable market in Kenya is 7+ million farmers

- These farmers will be at some state of unawareness, awareness, or understanding of the product – the exact proportions are hard to assess

For the period we assessed, only 200k had access to the product

- We estimate **200k farmers** had access to the service through purchase of a packet of seeds with the insurance service included* – we assessed the product at one key point in time over **Long Rains season in 2014**



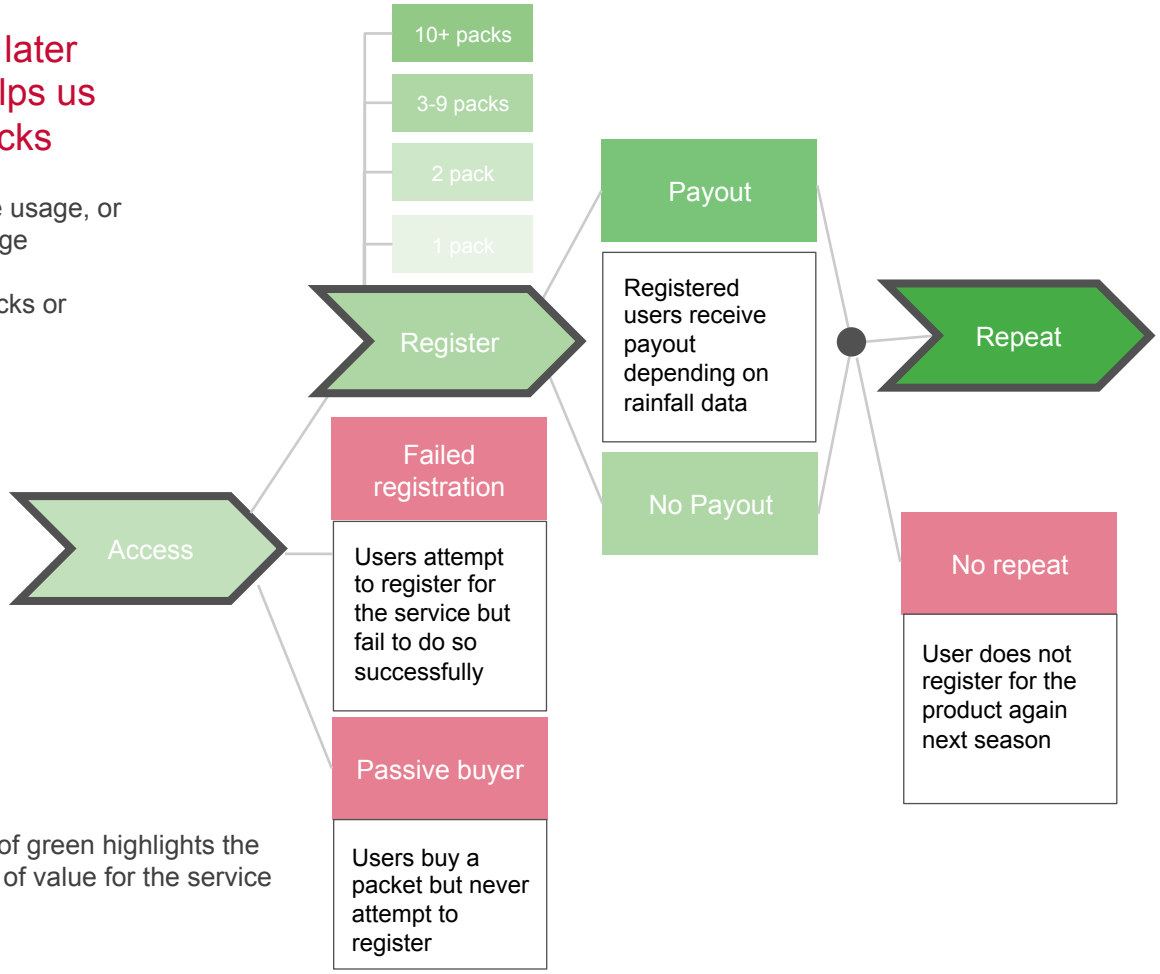
*This estimate comes from the number of packets of seeds sold, and number of cards printed so is a very accurate representation of access – we assume farmers buy 2 packets of seeds on average based on data from farmer interviews

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Later stages of the journey are broken down into more detail

A more granular view of later stages in the journey helps us assess specific bottlenecks

- Green stages highlight positive usage, or gateways towards positive usage
- Red stages represent bottlenecks or drop off points for customers



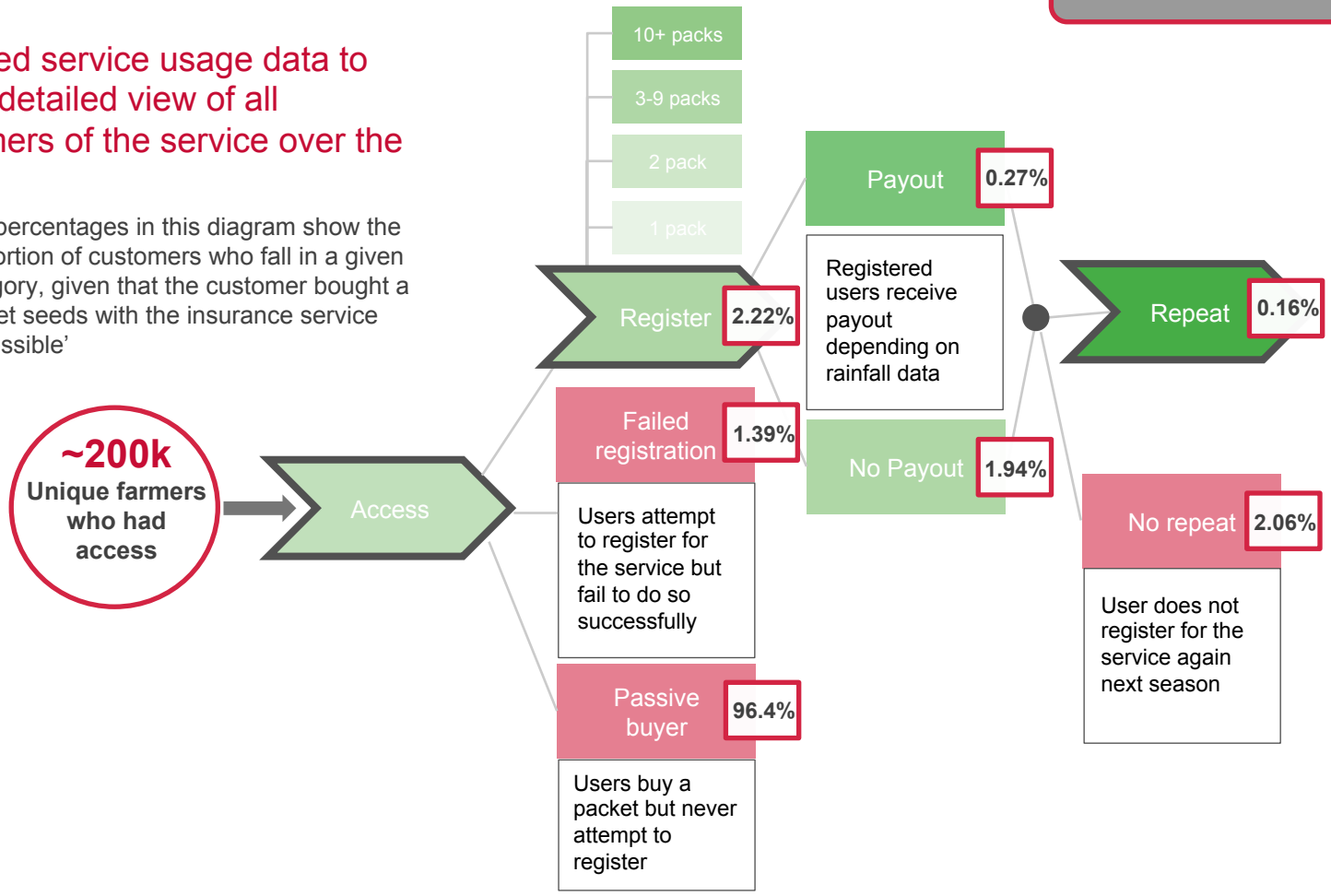
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We then assess the severity of each bottleneck

Note: Analytics based on usage data from a pilot phase of the service

We used service usage data to give a detailed view of all customers of the service over the period

- The percentages in this diagram show the proportion of customers who fall in a given category, given that the customer bought a packet seeds with the insurance service 'accessible'



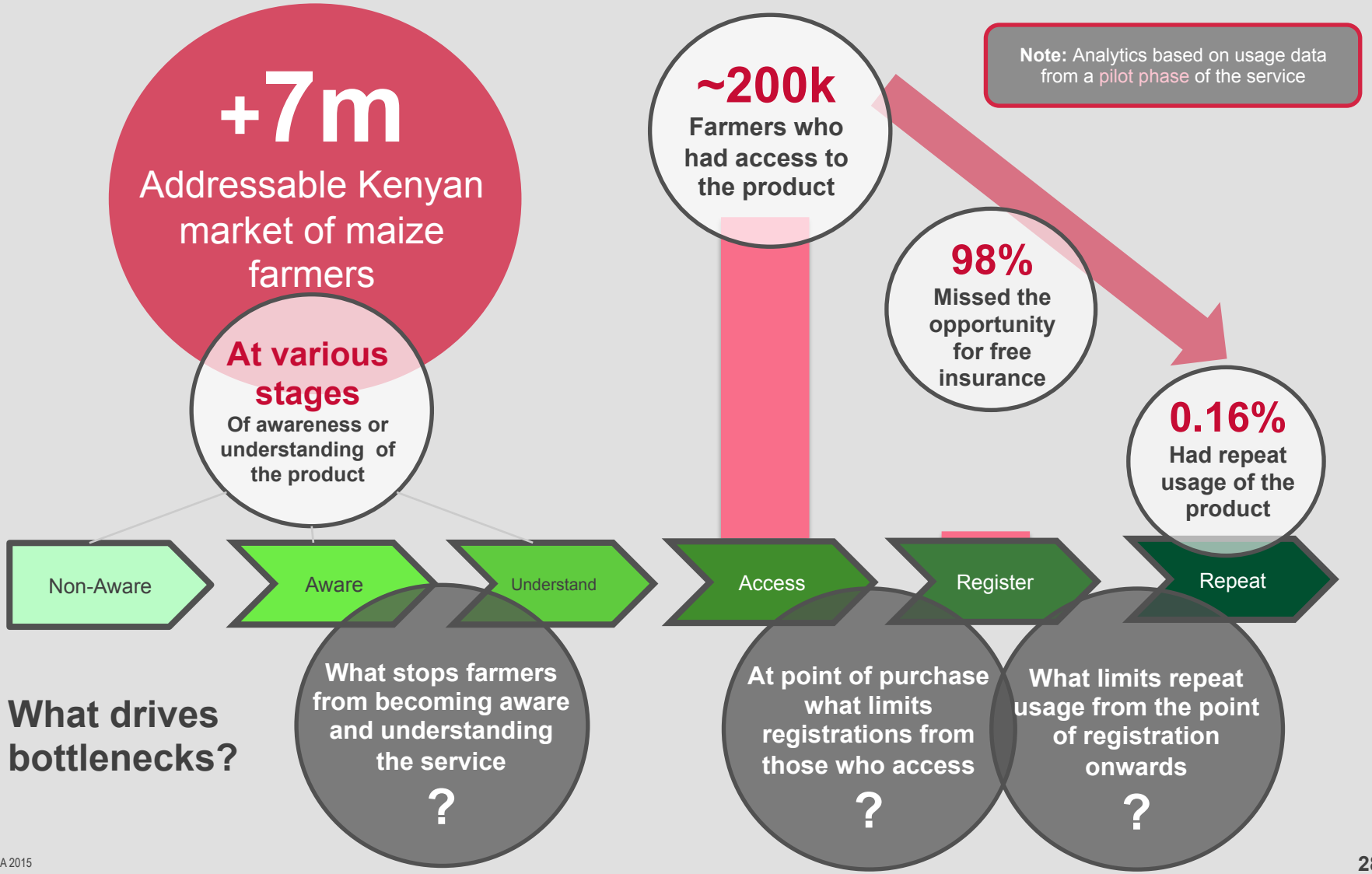
Non-Aware | Aware | Understand | Access | Register | Repeat

Analytics conducted on data for **Long Rains 2014**, on:

- SMS registration logs + system registration data
- Mobile money payout data

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With bottlenecks in view we assess barriers to use at various stages



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Assessing the cause of bottlenecks

What factors are creating obstacles to use of the micro insurance service?

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What stops farmers from becoming aware and understanding the service

?

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Awareness limited by partner reach & low insurance awareness

At present Acre Africa works with one Seed Company, creating a natural cap on potential reach

- The Seed Company have ~5% market share in Kenya, meaning that the full potential market for the service is not reached
- Partnering with other seed companies could dramatically increase service outreach, but this depends on the nature of the incentive for seed companies – i.e., competitive advantage or loyalty scheme approach

Maize Seed Companies - Market share		
Seed Company A	Using m-insurance service	**~5%** market share
Seed Company B	**Not yet** using m-insurance	**~90%** market share

In general, low awareness of insurance and the specific service under investigation creates a natural barrier

- Qualitative research in specific target regions revealed very low awareness of the service in Kitui and Tharaka-Nithi*
- Low awareness of agricultural insurance exists in general, in Kitui it has been promoted with livestock (Equity Bank) but very little crop insurance
- In Embu there appears to be higher awareness of the service since this has been a region of marketing focus through local radio campaigns while agrovets and the Ministry of Agriculture (MoA) were made aware through events and training

> Insurance is something that has been well promoted on the livestock side, but is really not well known in relation to crops
>
> **MoA extension worker, Kitui**

***Note,** qualitative interviews were conducted in Kitui, Tharaka-Nithi and Embu, which had common features for farmers: limited resources and access to information; precarious/vulnerable lives; drought prone environment (increasingly). Regions also varied, notably: Kitui - active ministry of Ag; Embu – higher exposure to insurance; Tharaka-Nithi: neglected region with tough climate

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Awareness & understanding not optimised through best channels

The service is not marketed through all possible channels to increase farmer awareness

In particular, agrovets are a key actor to consider, and they currently don't push the service

Farmers

> Most farmers hear what seeds to buy on the radio in the weather forecasts
>
> **Agrovet, Kitui**

Agrovets

> Most times they come in asking for something they have heard about. They just want me to confirm for them
>
> **Agrovet, Kitui**

Radio

Many farmers are reliant on local radio for information, regularly listening to agricultural programmes and interactive talk shows

- *Interactive talk shows, advertising, weather forecasts; service has limited exposure*

Farming Groups

Farming groups and co-operatives often make their decisions as a collective, including seed purchase, often led by a few influential farmers

- *Discussions in groups, many deciding as one, service not in these conversations*

Word of Mouth

Informally, word of mouth recommendations play a significant role in influencing and informing purchase decisions

- *Community sharing advice with each other, service not often discussed*

Trusted Agrovets

Majority of farmers buy seeds from agrovets, typically a trusted individual who they visit for all of their farming inputs

- *The service is not currently something the agrovet is aware of/perceives as helpful in strengthening farmer trust*

Pre-purchase selection

Majority of customers come in with a lead or knowing what they want, asking the agrovets to confirm

- *Agrovet less likely to influence seed choice, but very well positioned to further educate on insurance service*

Securing seeds/ amounts

More proactive farmers prefer to secure seeds as early as possible to reduce risks and costs, but others aren't even able to buy whole packets

- *Agrovet prepare stocks early*
- *Sometimes resell smaller amounts to farmers (not always a whole bag)*

Non-Aware | Aware | Understand | Access | Register | Repeat

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Those who are aware are prone to misunderstand the service

Both farmers and agrovets often think the value proposition is linked to seed authentication

- In locations where there is little awareness, the service is assumed to fulfil another role and its core value is largely disregarded
- In general both farmers and agrovets are prone to think that the card is linked to the authenticity of seeds, potentially driven by a 'certificate of authenticity' available from other seed brands, but also by a prevailing concern with 'genuine seeds'

Farmers discarding, some storing card as proof of purchase or promotion

Agrovets assume it's the certificate of authenticity, some explaining this to customers but many disposing of the cards

> It's a guarantee in case the seeds don't work – you text in to verify the seeds are genuine. If they don't germinate you can text in to get your money back.
>
> Agrovet, Embu

> There is a card inside to certify the The Seed Company seeds. Another seed company also has one.
>
> Agrovet, Kitui

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Agrovet Insights

Agrovets

Assume a **certificate of authenticity**, or **authenticity system for farmers**

Agnes, Kilimo agrovets, Embu

Agnes is a former insurance trainer and agent in Embu that runs a small agrovet business named Kilimo agrovets. She has also been made aware/received training on the the insurance product we investigated (The Seed Company conducted a training with agrovets, MoA and farmers in the area).

Despite this there is confusion about the role of the mobile service – she tells us it's used both to certify the seed, and as insurance.

She's been telling some customers about the insurance but says many aren't opting in and some aren't receiving the confirmation message when they do.

When they ask for 1kg of The Seed Company, I show them the card to prove it's authentic then I put the seeds in another bag for them



NOTE

If the farmer doesn't buy a whole packet of seeds the product does not apply – some are buying smaller quantities, should smaller packs be considered for some small-holders?

They told us, if the message doesn't go through, the seeds are fake. And I know if the seeds are fake or they don't germinate, I will lose customers.



Juja, Agrovet, Embu

Juja runs a hardware store, general store and agrovet business just outside of Embu.

He broadly understands idea of the service but also believes texting in is a way to verify the authenticity of the seeds. He was at a seminar with The Seed Company recently and they confirmed this notion.

He claims to have been telling customers and handing out leaflets, his incentive being evidence that he sells genuine seeds.

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Seed authenticity is top of mind, and likely driving distraction

Farmers have suffered over recent years from imitation seeds, leading to a heightened concern at purchase

During the peak of the rainy season, the black market capitalises on the high demand for certain seeds by responding with imitation/'boiled' seeds

- Many farmers recounted experiences of this
- Perception exists that the given seed brand suffered from this in recent years; seeds don't germinate, are damaged or rotten, etc.

Farmers

This means that in store **farmers are very focused on authenticity**, looking for clues and safeguarding as much as possible

- **Checking packets** for manufactory/expiry date, looking at quality of seeds inside packet
- **Requesting physical receipts** and storing packs

Agrovets

Agrovets also aware of authenticity concerns know it can have repercussions with customers

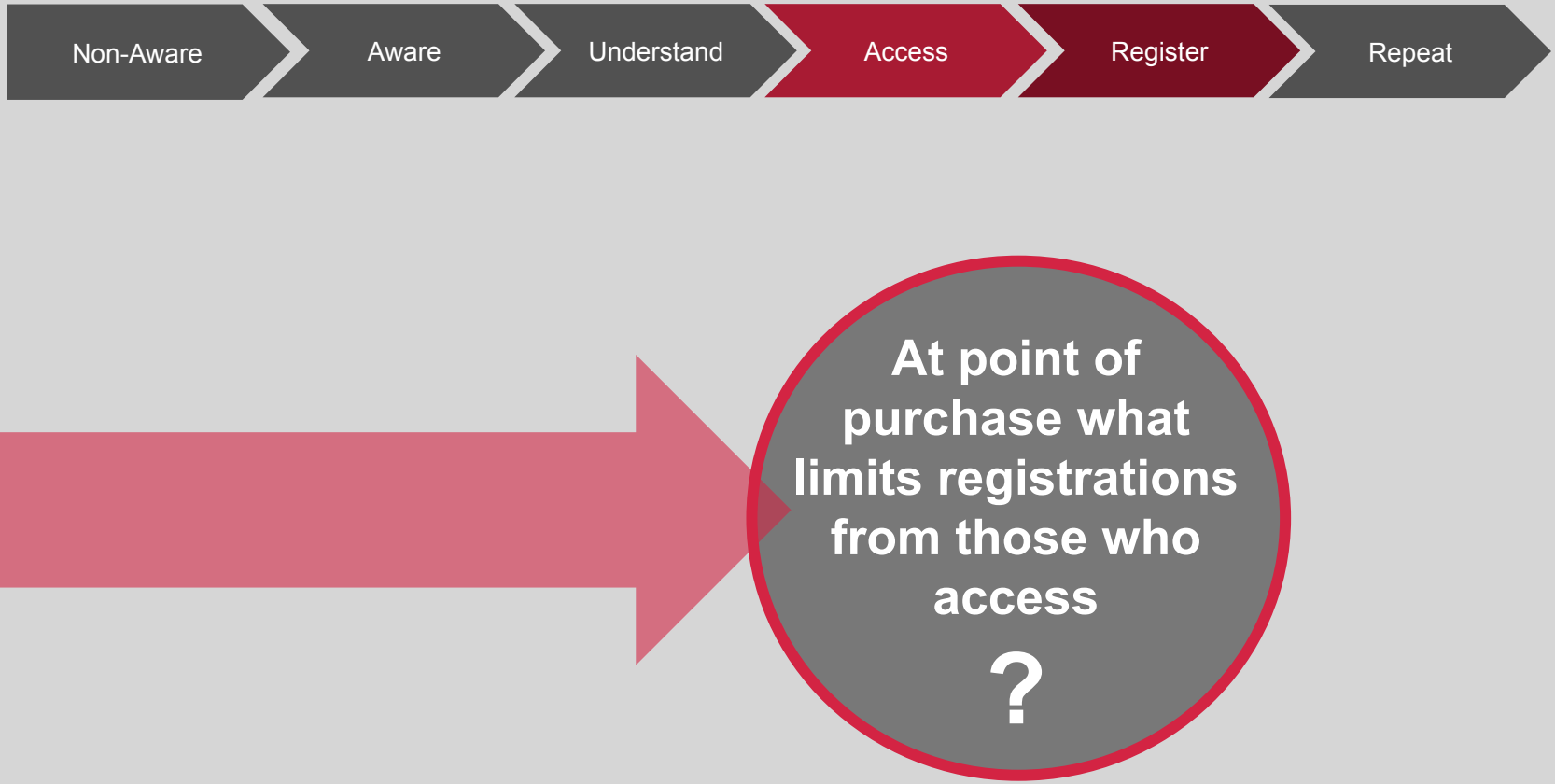
- Making efforts to **assure customers of 'genuine' seeds** with collateral and certificates
- Attempting **to take complaints back to distributors** and manufacturers with very little success

> There are those people around who cheat farmers, you have to be aware!
>
> **Farmer, Kitui**

> I have received many complaints about the given seed variety. They are in demand so in rainy season people are selling them from everywhere even on the road side
>
> **Agrovet, Embu**

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Note: There are examples of mobile products that deal with authentication issues in the M4D space, e.g. mPedigree


Non-Aware
Aware
Understand
Access
Register
Repeat
At point of purchase what limits registrations from those who access
?

© GSMA 2015

Agrovets have no incentive to push the product resulting in low access rates

Agrovets have a range of concerns when selling…

Value customer loyalty

Loyalty created through reliable/authentic products, customer service/ information and flexible payment. Loyalty has reverberating effect on business; farmers also promote agrovet through word of mouth

> They come back to me for good customer service. I give them information, and I am flexible with them, like providing credit.
>
> **Agrovet, Embu**

Supplier relationships important

Supplier and distributor relationships are key to agrovet product selection and they motivate agrovets in a number of ways

- Visits and seminars
- Informal recommendations
- Commissions
- Collateral and 'recognising' the agrovets

> My favourite suppliers are an agrochemical company. They come round each time and replaced the expired goods with new ones. They are really my best friends

Sales volumes over margin

Ultimately though, agrovets are motivated by products they know will "fly off the shelves" or enhance their business – high turnover is most sought after as it allows for reliable stocking and cash in hand

> My favourite suppliers are The Seed Company, their product goes the fastest.

… with no clear reason to push the insured seeds

Agrovets don't push the product at present because it doesn't fit with the prevailing concerns around selling, and they currently have no clear incentive to do so



Commission is an impactful way to incentivise product, but only if the agrovet perceives the product as of sufficient quality/use to farmer

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Agrovet Insights

Agnes

Kithino Agrovet, Tharaka-Nithi

If your products are fast-moving you are making money. Meeting the needs of customers will lead to greater profit



Herbicide you have big margins but you sell few. Maize, the margins are low especially during rainy season but customers will take many. The key is to be very fast-moving: buy, sell, buy, sell. High rotation.

Value customer loyalty

Sales volumes over margin

Supplier relationships important

Kithino Agrovet

Agnes started her business 8 years ago. Business is very seasonal and over the years one or two other agrovets have opened nearby.

Along with the usual agrovet products/services, she has a certificate in animal health, and her speciality is being trained in animal injections. She has many regular customers, whom she advises and teaches, they often come to her with their issues.

They trust her and take her advice positively – 'if it works, they will return next season'

What motivates her

Agnes measures the success of her business through sales – the number of products sold as opposed to margins.

Her second key measure is how customers are talking about her business.

Suppliers and Incentives

She receives a range of contact and incentives from suppliers/distributors. Her favourite companies:

- Osho Chemical – well known, products sell fast
- Syngenta – Works like magic, and they 'recognise' her by inviting her to events, and she receives a bonus if certain sales targets are met

Maize seeds and rainy season

The rainy season is her peak selling time and she restocks weekly or daily during this period. Her margin on the product is low and there is very little difference between brands:

- Brand A – sells for 450KSh, gets 40KSh profit
- Brand B – sells for 400KSh, gets 50KSh profit
- Brand C– sells for 500KSh, gets 50KSh profit

The Seed Company's brand had some promotion on radio a few years ago and everybody came to buy, I was very happy

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Packaging & card are not clear enough to encourage registration

A number of factors lead the packaging & card to have low impact on farmer's access to the insurance service

- Paper packaging leaves some customers frustrated as they are unable to assess seed authenticity and quality
- Packaging doesn't announce/support insurance service in its current form: busy design, important product details get lost
- In particular, there are no instructions on the packaging (some on card) on how to register for the insurance, and no indications about the benefits of insurance to the farmer anywhere



Issues…



The insurance is **not clearly marked** on the packet…

…and **not included on the instructions** at the back of the packet

Card in English leads many farmers to mistake it for a proof of purchase, or certificate of authenticity

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What limits repeat usage from the point of registration onwards

?

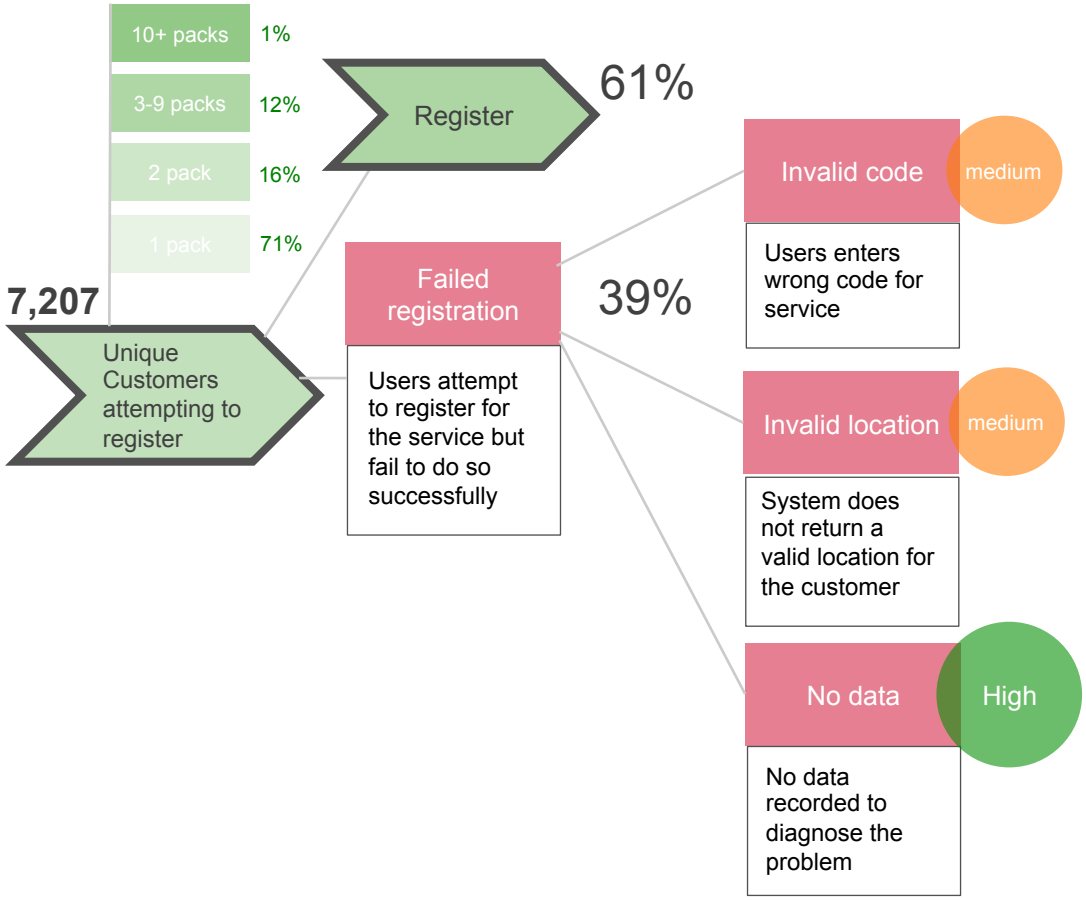
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Attempted registrations fail for various reasons

Note: Analytics based on usage data from a pilot phase of the service

Ability to register is a serious area of concern as so many fail without reason

- Few users are registering at present, but of those who are, 39% cannot access the service
- This could be for reasons of **service failure** (e.g. location data not collected in backend platform), or a **user-side issue** (e.g. entering false code, or trying to cheat system)
- While this issue only applies to a small number of users now (in the 1000s), it **presents a major bottleneck** that will be encountered by any farmer trying to register in future



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The picture of repeat use after payout is instructive

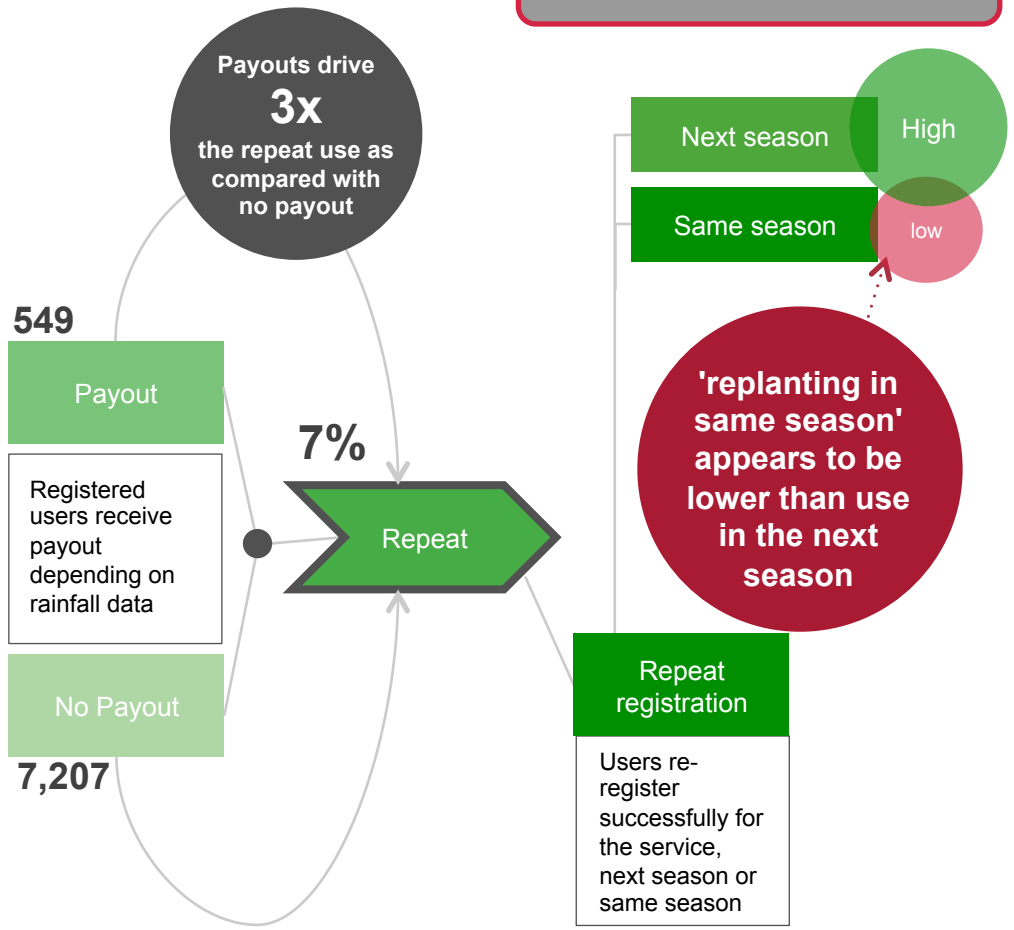
Note: Analytics based on usage data from a pilot phase of the service

Could payouts drive more repeat use than at present?

- Payouts drive **3x the number of repeat registrations** than non-payouts
- **Nevertheless we believe more repeat use could be driven from this category** – given that these users should be the candidates who received the most positive product experience, i.e. 'got paid'.

Farmers are repeating use most frequently in the next season

- A key component of the value proposition for farmers is that they "can replant and harvest the same season", **but more are taking the route of re-registering the next season**



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Payment could come at a more optimal time for farmers

The payout may come too late for farmers, and could fit more neatly into the crop cycle…

- The pay-out is welcomed and there is some evidence that it stimulates repeat use and word of mouth promotion of the product. However, the current pay-out timing presents some challenges as it is often received about a month or more after planting

> ! Some farmers avoid replanting altogether, and for those that do replant, this typically occurs **a week or two** after the first rains

- Receiving payment a month after first rains is **considered too late for replanting**, and moreover comes at a time when farmers are thinking about their loss in potential earnings

… moreover, it is unlikely to be used for seed re-purchase

- Farmers are **unlikely to spend money on seeds for next season** at the point of pay-out. Spending will generally be prioritised on more immediate needs.



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Farmer depth

Joseph

Repeat

Joseph, Farmer, Embu

Joseph and his wife are full time farmers in the Embu area. They own a ¼ acre of land and have been struggling in recent years with the lack of rainfall and resources available to them.

Joseph is a regular buyer of the given seed brand and has used other insurance offerings - he has used the insurance 5 times and received pay-out. However after he encountered a pay-out dispute, he stopped using this insurance previously.

When he first heard about the insured seeds (that we investigate here) on the radio he ignored it the first year, but he tried it last season and received a pay-out.

He feels positive about the service, has shared it with his farming group and plans to use it again. The pay-out was welcomed in a tough year. It did not go towards new seeds as it was too late (he doesn't replant), ideally he'd like the money to be sent to him the following season.

If yield is high, you can buy everything on time for next year. If not you may struggle to make ends meet.



The seeds germinated but the rains stop soon after this, I received a pay-out. I was very happy to receive the money.

I received money but it was too late to plant. They should send me the money next season otherwise it goes towards other things, not used on the farm.

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Poor insurance 'user experience' is a bottleneck to repeat use

Note: Analytics based on usage data from a pilot phase of the service

There is a need to ensure service performance is robust and transparent

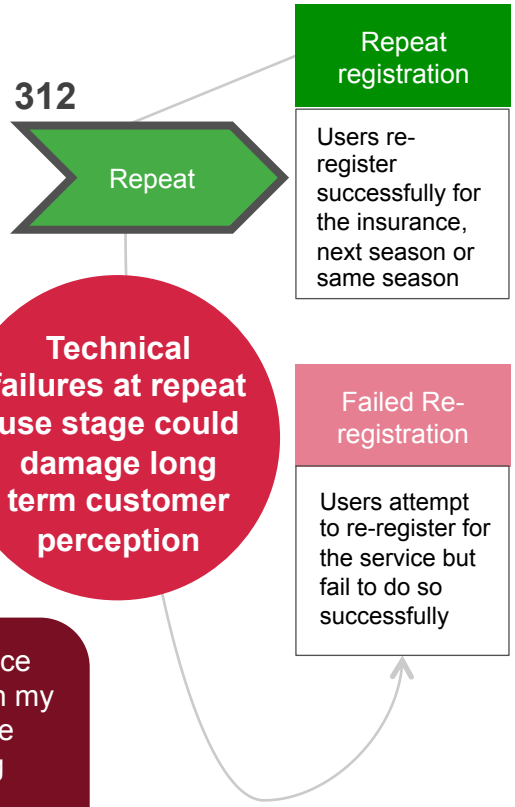
- **Lack of communication or reassurance creates doubt for farmers** - for many the journey ends abruptly after registration – after no response many assume they have been registered or carry on in doubt
- Just as for first time users, **repeat users face significant registration failure issues** - 42% likelihood of failed 2nd registration which could damage product perception

Lack of trust in the insurance and demand for transparency underscores the issue

- Insurance services are uncommon in Kenya, with 3.2% insurance service penetration overall.*
- Evidence from qualitative research also suggest that negative experiences with **payout disputes can create a strong barrier to re-use.** Lack of transparency as to why payouts received/ not received must be considered

What happens if I don't hear anything back?

Farmer, Tharaka-Nithi



I won't be using insurance again, I will warn others in my town not to trust people coming around selling insurance to them

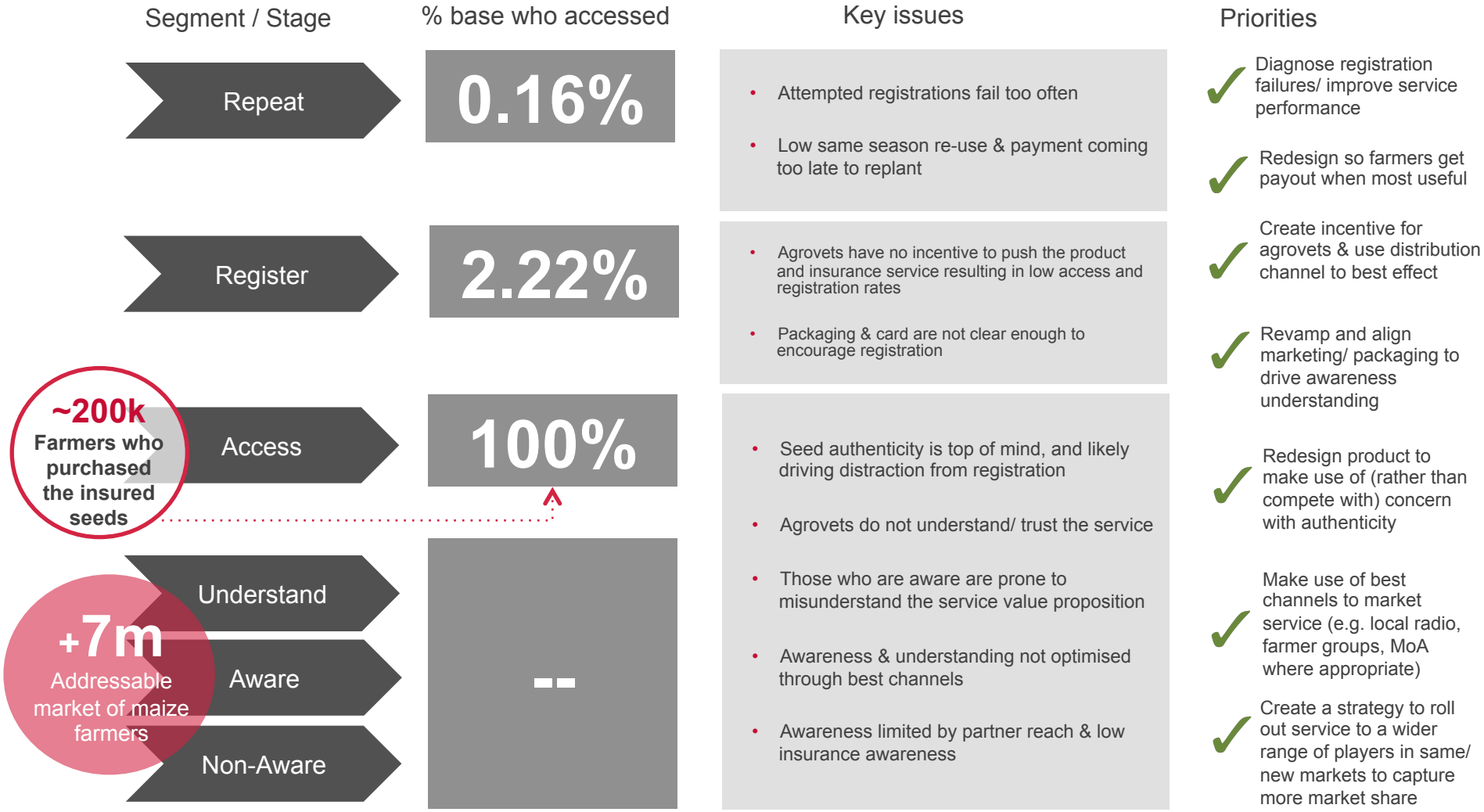
Farmer, Kathwana area

***Sources**:
KPMG insurance in Africa report 2014, National Survey Insurance Regulatory Authority of Kenya, 2012

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Non-Aware | Aware | Understand | Access | Register | Repeat

Customer journey summary



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4

Industry Recommendations

Learnings for the wider M4D industry for launching agricultural micro insurance services

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Employ subsidy model to cover farmer premium

Selling insurance directly to small-holder farmers presents a challenge as this is:

- A new concept
- Hard to explain
- Typically requires 'buy before try'

To overcome these barriers, **business models that involve subsidizing the cost to farmers** 'try before you buy' will have greater chances of success. E.g. agribusiness, input provider or bank/ MFI pays the premium, etc.

Relevant for:

Implementers

Investors

Partners

Assess mobile money maturity

Consider insurance in markets **where mobile money already has certain level of rural adoption**. In particular check that:

- ✓ Mobile subscribers have wallets & are comfortable with concept of 'cashing out'
- ✓ Rural mobile money penetration is sufficient and quality agent network is in place
- ✓ There is enough trust in mobile money systems

Relevant for:

Implementers

Investors

Partners

Choose the right reimbursement model

Providers must select the best reimbursement model, two possible models are:

- **Mobile Money cash out** – farmer receives payout direct to wallet as B2P payment
- **Vouchers** – farmer redeems the voucher for a new product/input (e.g. from merchants in distribution network)

The second option has the advantage of a closed loop system, but is likely harder to scale (e.g., system & training for merchants to accept vouchers requires significant investment). Might come into play later, when rural merchant payments reach high levels of adoption

Relevant for:

Implementers

Investors

Partners

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Dedicated & incentivized distribution channel

Mobile can reduce key costs in the traditional insurance model (e.g. registration, claims assessment, payout).

However, barriers around customer awareness and understanding of the product will likely be dependent on the quality of customer education. Distribution channel agents are likely to have conflicting priorities and multiple products and services to sell and need a strong incentive mechanism in place as well as high quality training.

A dedicated distribution channel is a must, with agents trained on the service and properly incentivised to educate customers around insurance

Relevant for:

- Implementers
- Investors
- Partners

Technology & user experience must be robust before scaling

Before attempting to scale, the **service must meet a certain level of operational KPIs** – e.g. pitfalls like registration failure must be addressed.

Similarly, **data analytics and user testing should be used to evaluate the pilot service**, ensuring there are no bottlenecks in the user experience that will act as barriers to scale (e.g. payouts coming at inappropriate times for farmers, or farmers unable to register properly for the insurance service)

Relevant for:

- Implementers
- Investors
- Partners

MNOs should invest in Location Based Services

Mobile insurance services for agriculture heavily depend on Location Based Services (LBS) availability. LBS represent a significant opportunity for mobile agriculture service providers to deliver location-customised services to the agricultural population beyond insurance.

Mobile operators could significantly increase the value of mobile services in rural areas by investing in LBS systems and sharing data with service providers within mutually beneficial partnerships.*

Relevant for:

- Implementers
- Investors
- Partners

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* Once enabled LBS systems could be leveraged for other services (same sector or other industry sectors/ segments e.g. healthcare), gradually increasing value of mobile products and services.

Use best-fit investment vehicle for m-insurance

The **best vehicles for investors to use for m-insurance services should follow the same lines as any other commercial venture**. Vehicles like 0% debt, convertible debt or equity, as opposed to subsidising premium costs over a fixed period are preferred.

Note: that by subsidising the premium donors/ investors are hindering the reality test for the business model, and potentially disrupting later commercial investment in m-insurance services.

Relevant for:

- Implementers
- Investors
- Partners

Bundle with other agri information services

Consider bundling insurance with other supporting information services, e.g.

- Weather forecasts (near time of planting and harvesting)
- Agronomy tips (at relevant times of the crop cycle)
- Market prices (at points when the farmer is preparing to sell)

This can serve to increase the value proposition to farmers, reduce investments in user education on the service, build trust in the product and reduce the risk of the mobile financial service.

Relevant for:

- Implementers
- Investors
- Partners

Co-brand with MNOs to drive further buy-in

Building awareness and trust in the product at an early stage is key, and operators have significant brands upon which insurance services can build a relationship with the customer.

Operators and insurance providers can seek mutually beneficial partnerships in terms of branding the product, for example 'powered by *[the Mobile Operator Brand]*' messaging can serve to increase customer awareness, while ensuring co-branding at the most 'delightful' parts of the customer experience (e.g. payout) will benefit all parties.

Relevant for:

- Implementers
- Investors
- Partners

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Be mindful of counterfeit concern around agricultural inputs

Many agricultural inputs in developing countries, e.g. seeds, fertilizer, & pesticide, etc., suffer from counterfeiting, especially when a product has been particularly successful in a given season.

This counterfeit concern can distract farmers from the insurance value proposition. M-insurance providers should **consider how to create servcies that address both insurance and authenticity value propositions** for farmers*

Relevant for:

- Implementers
- Investors
- Partners

Design for scale from B2B perspective

A B2B model provides a useful foundation for the subsidy of farmer premiums, but m-insurance providers should aim to **quickly diversify the portfolio of business customers** to mitigate against risks of revenue being overly dependent on one external entity and creating a barrier to scale.

Relevant for:

- Implementers
- Investors
- Partners

Mitigate against reputation risk around insurance product

Word of mouth is a powerful marketing tool especially in rural areas with community-based culture. If farmers don't trust the service, e.g. after a bad experience, this will have long term repercussions that create barriers to service uptake.

Providers must **ensure that the service is well tested and negative user experiences are mitigated against before investing in marketing** to avoid long term damage to reputation, which can act as a barrier for all m-insurance providers in the space.

Relevant for:

- Implementers
- Investors
- Partners

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* It is worth exploring & analysing existing m-solutions that address the authenticity concern, e.g., mPedigree

Raise awareness of existing open data

There are a range of institutions who make/can make open data available (satellite data in particular). This data can be invaluable to m-insurance providers in spear-heading innovations (e.g. cloud cover satellite data).

We suggest **a call to action for organisations with location based/ historical data to make it a public good** – where feasible – so that m-insurance and other mAgri service providers can build services using these datasets.*

Relevant for:

- Implementers
- Investors
- Partners

Use best market channels to raise awareness

Assess the most cost effective channels to reach farmers for the given target market. The optimum marketing channels for micro insurance services targeting farmers may vary based upon market & geography.

In general, radio appears to be a consistently strong channel with which to reach farmers (e.g. farming shows). However, in other situations various entities are useful means for 'tapping into the farming conversation', e.g.

- Farming groups
- Ministry of Agriculture – extension workers
- PoS – merchants selling to farmers

Relevant for:

- Implementers
- Investors
- Partners

Tie physical packaging to the insurance product

In cases where the insurance service is linked to a distinct agricultural input (e.g. seeds, fertilizer, etc.) **ensure that product packaging is tied to mobile service**.

This is critical to ensure that:

- The input product (seeds, fertilizer, etc.) is differentiated from competitors (if this is the intention)
- The farmer can be made aware of the service through the physical packaging itself

In particular, consider opportunities to align physical packaging and other ATL/BTL marketing efforts (e.g. ATL campaign refers to features on the packet)

Relevant for:

- Implementers
- Investors
- Partners

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* See Columbia's Earth Institute website as an example of an organisation making such data available

5

Appendix

Introducing the M4D Impact Evaluation Service Model

A means of helping and advising organisations to better use their data

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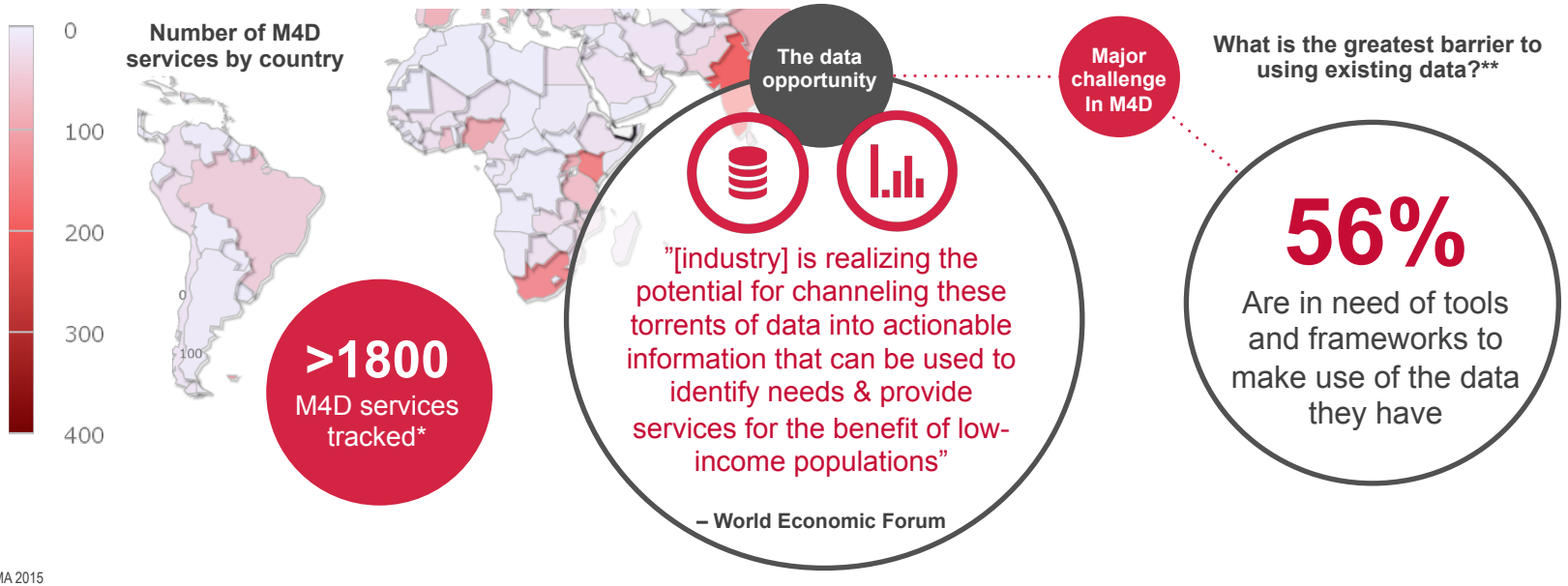
An opportunity & challenge around data in mobile for development

Big Picture – "Big data" touted as game changing in international development, mobile leads the way

- Many refer to the opportunity in "big data" in international development as a means to better serve the interests of underserved populations
- Solutions in the international development space that use mobile technology are of particular interest because of the volume of data they quickly generate - with over **1800** Mobile for Development (M4D) services now tracked by M4D Impact, this opportunity grows every day

A Key Barrier for the Industry – Not data access but data use

- Organisations offering mobile products and services that target underserved populations – from Mobile Network Operators to NGOs – all desire to better use data they already have, with business questions in mind to ensure sustainability, social impact, and scale
- The need for tools and frameworks that allow implementing organisations to make better use of the data they have is striking, with **56%** of respondents from a recent M4D survey citing this need as primary



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Source: (*) M4D Impact product and service trackers (**) M4D Impact survey results – see 'Making the most of data in M4D' report

Our approach creates direct impact and shares replicable methods

We work with M4D service providers across sectors

Results from our survey show a need across sectors and organisation types to make better use of existing data*

Provide support to tackle barrier of lack of frameworks and tools

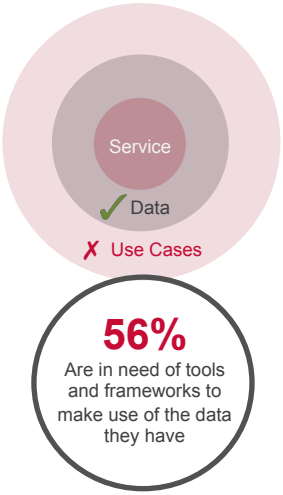
A cost effective service supporting M4D service providers to make use of existing data, focusing on tools and approaches that can be reused would prove valuable for a wide range of organisations

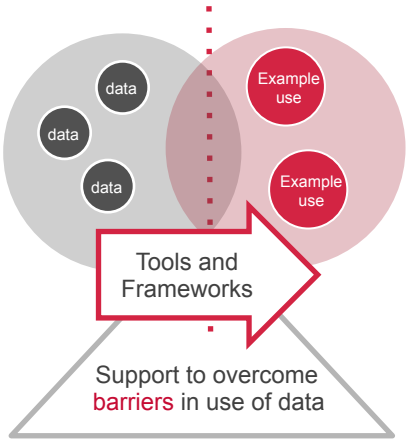
Seek replicable approaches across sectors & organisation types

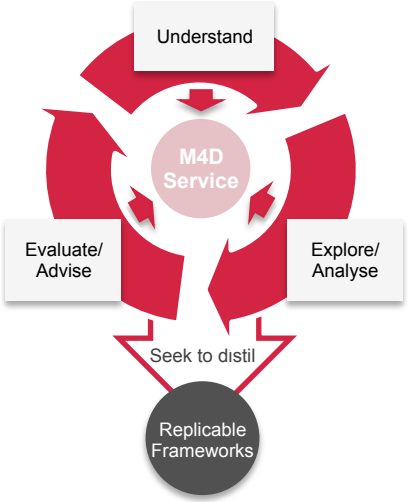
Beginning on a case-by-case basis with given M4D service providers in tackling barriers to data use, we seek to refine replicable frameworks and tools across sectors

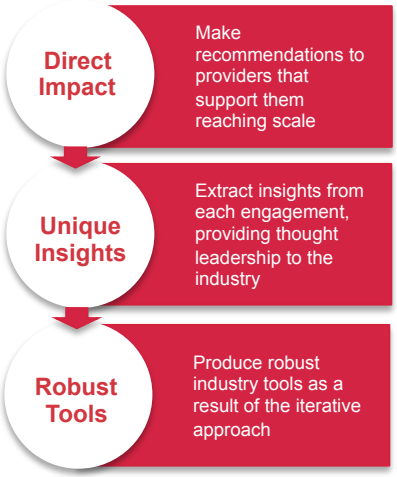
Add value to the wider M4D industry across sectors

Share findings with the wider industry – insights and tools that are relevant and applicable across sectors; both directly and indirectly impacting M4D service providers in supporting them overcome barriers to data use









Source: (*) M4D Impact survey results – see 'Making the most of data in M4D' report

© GSMA 2015 **Note on privacy**: It is important that the request for data be in line with regulatory market requirements (e.g. customer location data generally cannot be shared without the customer's consent). further resources on data privacy go to http://www.gsma.com/publicpolicy/mobile-and-privacy/design-guidelines & http://www.gsma.com/publicpolicy/mobile-and-privacy/mobile-privacy-principles

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