



ACRE AFRICA

May 2021

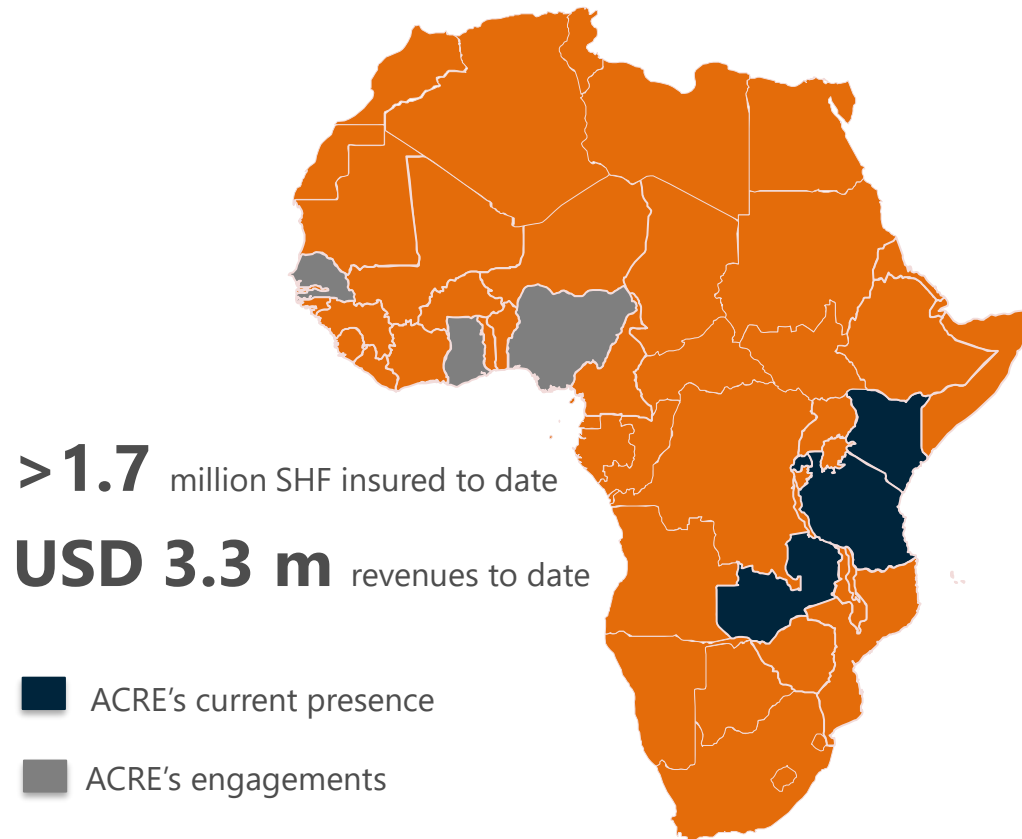
*Distribution of Weather  
index insurance among  
the smallholder farmers  
using Digital solutions*

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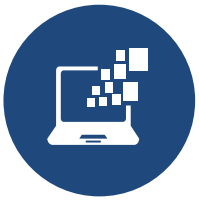
# About ACRE Africa

**The Organisational tone:** *Progressive | Energetic | On the Frontier | Engaging | Genuine | Tech Savvy | Trustworthy*



- ACRE is an innovative end-to-end **insure-tech** company, pioneering agri-insurance to smallholder farmers in Sub-Saharan Africa
- We target **smallholder farmers who are vulnerable to emergent climate change issues** and have limited access to agri-insurance products & technologies
- We combine our **deep knowledge in agricultural value chains**, investments in weather monitoring technology and assets, to design and distribute **innovative & affordable tech-enabled** agricultural insurance products
- We collaborate with local insurance and re-insurance providers who underwrite insurance risk and **leverage partnerships with existing value chain players** to distribute products through our insure-tech platforms

# Digital solutions being implemented in agriculture insurance for smallholder farmers



## Product design solutions

- Satellite based i.e. precipitation, soil moisture
- On ground based i.e. pictures based , weather stations



## Distribution solutions

- GSM based applications i.e. USSD, SMS , geo-triangulation
- Smartphone based applications i.e. Mobile apps, GPRS location
- Stakeholder systems integrations i.e. inputs suppliers, credit financiers integrations for bundling



## Payment solutions

- Mobile-money collection applications
- Mobile-money disbursement applications



## Insurance policy management solutions

- Insurance, reinsurer and aggregator approval workflow applications
- Contract review applications
- Ground truthing application i.e. picture based , weather stations, crop cuts field samples



## Training solutions

- SMS applications
- Voice applications
- Social media applications

# Successes, Challenges and Lessons

## Successes

- Innovative insurance products- more affordable products, more custom solutions to meet farmer needs
- Cost effective and scalable distribution – central office administration, electronic forms
- Wider market reach and increased adoption – reduced premium amounts, mobile based distribution
- Better payment collection and disbursement mechanisms – mobile money availability
- Cost effective monitoring – satellite based monitoring



## Challenges/Gaps

- Basis risk, pest and diseases
- Limited reach of supporting infrastructure- internet, GSM network, smart phones
- Insurance policy administration inefficiencies – manual processes
- High cost of training via field visits

## Lessons Learnt

- Satellite indices require continuous ground truthing validations and recalibration
- Insurance is much more appealing when bundled with farm inputs and credit
- Continuous information sharing and transparency is key for mass adoption of insurance



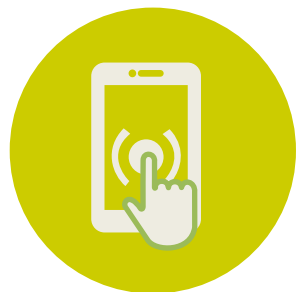
# Snapshot of the solutions



## Product design & monitoring solutions

Examples of solutions available in Acre/ Acre is involved in	Role of Acre Africa	How it works	How it overcomes challenges
<b>Satellite based precipitation index</b>	To design and monitor live insurance products whose pricing and triggers are based on precipitation index	Historical precipitation data, is matched with farmer locations and crops using actuarial and phenological models to determine pay-out thresholds of drought or excessive rain	<ul style="list-style-type: none"> <li>• More affordable premiums</li> <li>• Cheaper cost of administration for insurers</li> </ul>
<b>Weather station- based precipitation index</b>	To monitor live insurance products whose pricing and triggers are based on precipitation index	Current precipitation data, is matched with active insurance policy information to determine if pay-out thresholds have been reached or not	It offers a secondary validation mechanism to satellite data, for claims pay-out decisions
<b>Satellite based soil moisture indices</b>	To research and pilot the solution, to determine its readiness for inclusion in live products	Historical soil moisture data, is matched with farmer locations and crops using actuarial and phenological models to determine pay-out thresholds of drought or excessive rain	It offers a solution to the basis risk faced by precipitation-based index
<b>Satellite based yield index</b>	To research and pilot the solution, to determine its readiness for inclusion in live products	Remote sensed data on vegetation cover, is matched with farmer locations and crops using actuarial and phenological models to determine pay-out thresholds of yield achieved	It offers a secondary validation mechanism to satellite data, for claims pay-out decisions
<b>Picture based index</b>	To research and pilot the solution, to determine its readiness for inclusion in live products	On Ground imagery data of the farmer fields, is used to determine pay-out thresholds of yield achieved	It offers a solution to the basis risk faced under precipitation-based index

# Snapshot of the solutions



## Insurance distribution solutions

Examples of solutions available in Acre/ Acre is involved in	Role of Acre Africa	How it works	How it overcomes challenges
<b>USSD based activation</b>	To provide a USSD channel for the farmers to buy insurance or activate insurance cards sold to them at their local area	Farmers receive an insurance scratch card with a unique number, that they share via USSD for activation. The farmers also select an insurance product from a USSD menu and make payments for it. The data received from USSD which include their location, crop and planting date, is used to activate an insurance policy	It enables farmers to easily access insurance at the convenience of their various locations using any type of GSM phone
<b>Mobile application-based sales</b>	To develop mobile app to facilitate the field agents to use smartphones as POS to sell insurance ,as well as to enable farmers use mobile phones as E-commerce platforms for insurance	Village based agents access the available insurance products and other inputs ,which they can resell to farmers . The farmers who have access to smartphones can also buy the insurance products and inputs for themselves from a mobile application	It creates re-distribution business model for insurance by field agents who become catalysts for more sales and wider reach.
<b>Bundled based sales</b>	To define structures, that embed insurance as part of other products the farmers often purchase such as inputs and credit	An insurance rate is included in the selling price of farm inputs or credit, whereby all farmers that buy the farm inputs or access credit are by default placed under an insurance cover	It fosters an increased sale of insurance among the small holder farmers
<b>Pre- booking/ pre- saving-based solutions</b>	To provide a platform where farmers can pay for insurance and inputs in instalments or through their savings	Farmer will make orders of the insurance they want, save for the product overtime and receive the product when full payments are achieved	It enhances the buying power of the farmers by accepting several small payments overtime

# Snapshot of the solutions

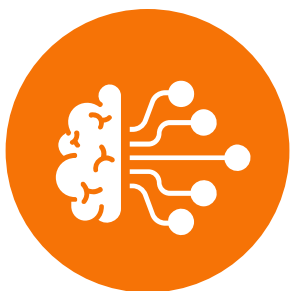


## Payment solutions

Examples of solutions available in Acre/ Acre is involved in	Role of Acre Africa	How it works	How it overcomes challenges
<b>Mobile-money based premium collection</b>	To integrate with mobile money gateways to be able to collect premiums on insurance purchases	Farmers purchasing insurance, will automatically receive payment prompts on their phones and the payments will be tied to their orders	It enhances convenience and reach of premium collections
<b>Mobile-money based claims pay-outs</b>	To integrate with mobile money gateways to be able to send claims pay-outs directly to the farmers' mobile money wallets	Farmers whose policies are due for claims payments, will receive their claims on their mobile money wallets	It enhances the convenience and credibility of claims pay-outs



# Snapshot of the solutions



## Insurance administration solutions

Examples of solutions available in Acre/ Acre is involved in	Role of Acre Africa	How it works	How it overcomes challenges
<b>Automated approvals</b>	To ensure new innovative insurance products can be shared with insurers and reinsurers for approval and distribution	Collaboration between insurer and reinsurer in design and approval of insurance products is done on a workflow system	<ul style="list-style-type: none"><li>• It fosters faster roll out of better insurance products for the small holder farmer</li><li>• It offers the insurers the ability to sell innovative Agri- insurance solutions, that would have been expensive to administer on their own</li></ul>
<b>Automated contract monitoring</b>	To ensure the process of contract monitoring is transparent and tamper proof	Current weather data and farmer data are matched and recorded on a blockchain ledger to depict pay-out qualification transparently	Farmers have more transparency on the claim process that leads to more trust, which leads to more repeat purchases by the farmers in future
<b>Automated claims payments</b>	To ensure the process of generating the payment schedule is accurate and tamper proof	The pay-out schedule is generated by a blockchain smart contract that is automatically triggered by the results of contract monitoring	Claim pay-outs are more transparent and more faster which leads to trust and more repeat purchases by the farmers in future

# Snapshot of the solutions



## Information sharing and Training solutions

Examples of solutions available in Acre/ Acre is involved in	Role of Acre Africa	How it works	How it overcomes challenges
<b>SMS based solutions</b>	To share insurance policy terms statuses and training material to the farmers	<ul style="list-style-type: none"><li>• Training materials and policy terms are pre-set and shared to the farmers via SMS, based on their insurance products and stage of production.</li><li>• Policy statuses are shared with the farmers via SMS , based on the results of contract monitoring</li></ul>	More farmer awareness is a catalyst for more farmer acceptance and adoption of insurance
<b>Mobile app based solutions</b>	To share insurance policy terms statuses and training material to the farmers	<ul style="list-style-type: none"><li>• Training materials are pre-set and shared to the farmers via mobile applications such as WhatsApp based on their stage on production.</li><li>• The farmers can also check their policy on the mobile applications on demand.</li></ul>	More farmer awareness is a catalyst for more farmer acceptance and adoption of insurance

# Recommendations

## Continuous improvements of insurance products

- Continuous improvements of products to address the custom risks that affect the small holder farmer productivity. For instance, soil moisture, picture based, yield based satellite, pest and diseases indices

## More distribution channels

- Build more distribution channels to reach the farmer. For instance, focus on bundling solutions – from experience it has been easier for the farmers to get the insurance as they purchase their seeds. It also easier to include insurance as part of the credit for the small holder farmers that seek credit financing to start production

## Better claims administration

- Have more automated back office claims administration to ensure speedy and valid claim payments.

## Transparent and continuous information sharing

- Be more consistent and transparent with information sharing to existing and new customers. This leads to trust ,which means more new and return business



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