AGRICULTURAL TECHNOLOGY GUIDE FOR ADVANCING PROFESSIONAL FARMER ORGANIZATIONS

AMEA AG-TECH GUIDE 2021 / SECOND EDITION

amea

DEAR READER

At Nuru, we firmly believe that mainstreaming technology in rural development is essential in a rapidly changing world. This effort requires disruptive and appropriate technologies to be embedded in the business models of the farmer organizations we serve. As a member of AMEA, Nuru's participation in the Ag-Tech working group and the development of the 1st and 2nd editions of the AMEA Ag-Tech Guide have vastly improved our research, prioritization, and piloting processes. Allowing Nuru to learn faster and bring meaningful technology opportunities to farmers and their businesses.

Casey Harrison
Livelihoods & Agribusiness Director, Nuru International
Ag-Tech Working Group Lead

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Photo credit: Agritask

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AMEA AMEA is a fast-growing network of public and private organizations that work in the agricultural sector. There are currently 32-member and partner organizations and hundreds of individual members, all dedicated to accelerating the development of professional farmer organizations. Our global network meets both online and in-person on a regular basis and collaborates for systematic change in the agricultural sector.

MEMBERS

STRATEGIC PARTNERS

AMEA brings stakeholders together to create change through the AMEA Framework, towards more professional farmer organizations, aimed at access to markets and finance, with the ultimate goal of improved livelihoods and resilient supply chains. The AMEA Framework contains six elements: **1** the global guidelines, **2** approved assessments, **3** approved curricula, **4** qualified trainers and coaches, **5** common indicators, and **6** feedback loops ensuring implementation, collaboration, learning, and adaptation at a national and local scale. This integrated, scalable approach provides a consistent and internationally recognized roadmap toward farmer organization professionalism.

The AMEA Framework was developed at a global level with national input, but it is implemented and refined in different local contexts. AMEA local networks in Ethiopia, Côte d'Ivoire, Uganda, Kenya, and Honduras bring together national civil society, business development service providers, government and private sector with a common objective of advancing professional farmer organizations. Local networks are actively generating new business to business partnerships, sharing learnings, and addressing context-specific challenges with agribusiness stakeholders.

AMEA WORKING GROUPS

AMEA provides a pre-competitive space for agricultural development practitioners and agribusiness stakeholders to collaborate, learn, and share knowledge on best practices relevant for professionalizing farmer organizations in developing countries. The AMEA Working Groups (WGs) focus those collaborations on specific topic areas that have a high potential for disrupting stagnant agricultural development practice.

At their core, the WGs serve the local networks by aggregating, organizing and disseminating new opportunities, tools, and other relevant information that can create space for systematic change in the agricultural sector and, most importantly, bringing new opportunities to smallholder farmers traditionally marginalized by the global economic status quo. Moreover, feedback loops between the AMEA international WGs and local networks ensure input is gathered and information disseminated to the people and local organizations creating change on-the-ground.

THE AGRICULTURE TECHNOLOGY WORKING GROUP

The Agriculture Technology (Ag-tech) WG was created in 2018 with a goal to curate, disseminate, and promote disruptive and appropriate **Ag-techs that increase farmer professionalism, incomes and promote sustainable production**. Regular on-line meetings were held throughout 2019 to unpack and refine this goal. Subsequently, a set of criteria were created and endorsed by the AMEA members active within the Ag-tech WG. The six criteria were created to ensure that the Ag-techs AMEA promotes in this Guide provide local networks and AMEA members with

1 **Member organization endorsed technologies**
2 **Disruptive new technologies**
3 **Technologies appropriate for use with smallholder farmers**

The result of the 2019 meetings, research and collaboration was the 1st edition of the AMEA Ag-tech Guide for Advancing Professional Farmer Organizations, which contains a set of Ag-tech profiles organized by the six criteria. This 2nd edition supplements the initial work.

As the Ag-tech WG and the AMEA local networks mature there is increasing opportunity for deeper collaboration and more regular feedback loops to be established. Strengthening these feedback loops can increase the value of subsequent editions of the Guide by **1** integrating "farmer-user experiences" within the Ag-tech profiles, **2** increasing the number of nationally derived Ag-tech profiled and promoted, and **3** localizing the endorsements for the Ag-techs. Moreover, at the 2021 AMEA Convening members agreed that more effective, efficient, and financial sustainable business development services for farmer organizations is a top priority. The Ag-tech WG and editions of the Ag-tech Guide can offer opportunities for collaboration to meet these business development priorities. `

AG-TECH WG PRIORITIES FOR 2021

Launch 2nd edition of Guide at the IFC Webinar Series, in May 2021, online

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Research and complete the 3rd edition of the Guide with new topic area to be published in 2022

Regularly engage with local networks to gather Ag-tech endorsements and more detailed case studies

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Continue including Ag-tech companies, software developers, and other service providers in WG online meeting schedule - see past webinars here.

Early in 2021, AMEA members agreed that these priorities will create new value for current and future AMEA members and accelerate their collective and individual efforts to bring systemic change to the agricultural sectors in AMEA local network countries.

AG-TECH GUIDE FOR ADVANCING PROFESSIONAL FARMER ORGANIZATIONS

This is the 2nd edition of the AMEA Ag-tech Guide and represents a collaborative effort in generating a curated set of Ag-techs that support the objectives of AMEA members, local networks and farmer organizations. The first step in generating this Guide is to reaffirm and establish the framing for "disruptive and appropriate" agricultural technologies. To this end, the six criteria (see next section) are generated through a review of publicly available academic and institutional literature, through debate and discussion within regular WG meetings, and via engagements with other institutions and platforms elevating Ag-tech in development. The WG has acknowledged the need to focus the agriculture and agribusiness topic area of the Ag-tech Guide, because the Ag-tech landscape is a vast, innovative and rapidly growing segment in the agricultural sector.

Four institutional resources guided the final framing of the criteria and help to generate the topic areas of relevance to AMEA members and strategic priorities:

1. The Agricultural Technology Adoption Initiative: a collaboration between MIT's Abdul Latif Jameel Poverty Action Lab (J-PAL) and UC Berkeley's Center for Effective Global Action (CEGA).

2. International Finance Corporation. 2019. Working with Smallholders: A Handbook for Firms Building Sustainable Supply Chains. Washington, DC. © International Finance Corporation.

3. The Technical Centre for Agricultural and Rural Cooperation (CTA): The Digitalisation of African Agriculture Report, 2018-2019

4. Schroeder, Kateryna, Julian Lampietti, and Ghada Elabed. 2021. What's Cooking: Digital Transformation of the Agrifood System. Agriculture and Food Series. Washington, DC: World Bank.

In 2020, the Ag-tech WG actively engaged with emerging partners and initiatives being led by other networks, institutions and international development leaders to identify opportunities to improve our processes, criteria, and awareness of the Ag-tech landscape. These engagements included:

1. The IFAD team leading the Information and Communication Technology for Development (ICT4D) Strategy

2. The AGRA team leading the AGRF Agtech & Digitalization thematic platform, which is focused on increasing capacity to generate, analyse, and use data, information, knowledge, tools & innovations

3. The Ag-tech WG was featured and presented at the IFC's second annual Digital Disruption in Agriculture forum, which brought together leaders and innovators in agriculture to virtually discuss digital tools and solutions that can help transform agriculture in Ethiopia and the broader region

In 2020, amid the ongoing COVID-19 pandemic, AMEA members acknowledged a need for rapidly adapting the delivery of services to farmer organizations toward more virtual and remote modalities to keep farmers, staff, and communities COVID-safe. In short, this led to discussions around technologies that facilitate no or low human contact by limiting the need for human enumerators and trainers for business service delivery - that is, technologies that enable farmer organizations, supply chain actors, and development organizations to expand the reach and benefits of assessment and training services to more farmers without massive human resources. As a result of these discussions there was also a recognition that these types of Ag-tech offer an opportunity to generate greater efficiencies and sustainability in delivering needed training and assessment services to emerging farmer organizations. Therefore, the Ag-tech WG selected the following as the focus area for 2021 Ag-tech endorsements and profiles:

Digital technology that delivers remote data collection, information, and/or training for farmers and farmer organizations

In order to collect input from AMEA members to support the creation of this guide the Ag-tech WG surveyed and interviewed AMEA members who are experts in the fields of agricultural development, agribusiness, information and communication technology, and smallholder farmer capacity development. Time and resource limitations did not allow for engagement directly with farmer-users of the Ag-techs. However, as previously stated the WG plans to design strategies to gather needed insights from Farmer Organizations in 2021 for a potential inclusion in the 3rd edition of the AMEA Ag-tech Guide by working through the already existing AMEA local networks that will be strengthened by increased AMEA staff as regional coordinators.

THE SIX CRITERIA FOR DISRUPTIVE AND APPROPRIATE AG-TECH

AMEA MEMBER ENDORSED

An AMEA member organization has actively used or collaborated with the creators of the Ag-tech solution and were willing to provide evidence of their experience through documentation and provide written endorsement of the Ag-tech in the profiles below.

DEMAND

There is a proven or clearly estimated demand for the tech by smallholder farmers and/or their representative farmer organizations and/or value chain players who engage with smallholder farmers. If the demand is not proven yet there is a business plan and engagement strategy to assess if demand and adoption have high probability.

BENEFITS/VALUE ADDITION

The tech generates measurable value for farmer organizations and/or the value chain. This value can be through increases in productivity, agricultural income, or through premiums/cost savings downstream and upstream in the value chain. Tech can also help to improve efficiency in terms of time, cost and accuracy compared to traditional non-digital methods.

LIMITED ADDED COSTS

The tech should not create burdensome added costs for the smallholder farmers and/or their representative farmer organizations that are not offset by increases in revenue. If an added investment is needed the tech proprietor should either internally account for the cost or limit the impact on farmers through strategic partnerships.

TRANSCENDING INEFFICIENCIES

The tech clearly and empirically addresses inefficiencies in at least 2 of the following focus areas: input/output markets, land tenure, labor (including costs of goods sold), productivity and on-farm risk, credit and finance, information/knowledge, human rights, and the environment.

INTEROPERABILITY

The tech or system in which it is embedded can work together within and across technological boundaries in order to advance the effective delivery of agricultural and agribusiness information for individuals and communities.

THE AMEA AG-TECH PROFILES

This guide is not an exhaustive list of the Ag-tech or ICT agricultural sector writ large. The Ag-tech profiles displayed below (seven new tech profiles and one updated profile from the first AMEA Ag-Tech Guide) represent the evaluative experiences of AMEA members, the owners of these technologies, and the supporting documentation provided voluntarily to the Ag-tech WG.

In short, the Ag-techs contained within this Guide can help smallholder farmers and their farmer organizations meet the demands, faster and more efficiently, of a variety of value chain stakeholders and accelerate progress towards sustainability. The Ag-techs have been supported or employed by at least one AMEA member organization dedicated to accelerating the development of professional farmer organizations.

List of endorsed Ag-techs and the endorsing organization[1]:

ENDORSERS

AG-TECH

UPDATED PROFILE

ARIFU

PRODUCT OVERVIEW

Arifu is a smart chatbot making it possible for anyone to access information and opportunities for free from organizations they trust over any mobile phone. With Arifu, people seeking to learn can freely chat using interactive SMS or smartphone apps to master new skills, discover a world of free educational content, and earn rewards from our partners, without need for internet or airtime. The Arifu chatbot delivers personalized content designed in-house in close collaboration with our partners such as agribusinesses, financial service providers, mobile operators and NGOs. Arifu uses interactive SMS and smartphone messaging apps like WhatsApp and Facebook Messenger to disseminate content to over 1.5 million trainees across Africa since 2015 and has predominantly worked in the Agriculture space.

Arifu has extensive experience in training farmers on topics such as good agricultural practices that cuts across various value chains, financial education, and agribusiness training to ensure that the farmers are well equipped with knowledge and information that will help them access financial services to develop their farming into businesses and as a result become self-sustainable.

DISRUPTIVE AND APPROPRIATE CRITERIA

The AMEA network created a set of criteria to ensure that the Ag-tech endorsed were appropriate for smallholder farmers, but disruptive enough to create transformational change in the global agricultural sector. Arifu meets Amea's criteria in the following ways:

"Mercy Corps and Arifu have worked together on Agrifin Program projects with partners such as Safaricom, Equity Bank and ZANACO. These projects were aimed at addressing financial inclusion of smallholder farmers and specifically to build financial literacy and educate on products (loans and credit) available to them. Arifu's staff went above and beyond to deliver excellent services and ensured the smooth sailing of the project.

"

Lucy Kioko, Agricultural Expert, Mercy Corps

Demand

To date, over 900,000 farmers have accessed the Arifu training. Since 2015, Arifu has steadily increased their partnerships with Financial Institutions, NGO's - such as Mercy Corps - Google.org, Mastercard Foundation, World Bank, among others, to over 20 partners.

Benefits & Value Addition

For farmers, Arifu is:

- Free. There are no SMS fees or content subscription. All content is sponsored by partners, so learning is free and affordable to all

- Easy to use. Arifu's training is accessible on any phone, with or without internet, over SMS and a growing number of chat apps

- Content is personalized. Arifu's expert-crafted content is designed to meet the unique needs of each individual farmer.

Increased agriculture productivity: In one project Arifu learners have shown a 55% increase in productivity by using Arifu content generating an increase in income of $187 per acre per crop season. In another project 81% of farmers reported improved crop production, and 73% of farmers reported an increase in income. Learning leads to higher yields and higher quality of product which benefits the farmer and the consumer. Arifu has helped to increase productivity, increase income, and improve farming practices.
For Partners Arifu helps to:

- Reach scale. With mobile training and marketing at 1-10% the cost of traditional in-person models, partners can afford to engage millions of people in an efficient and timely manner

- Change behaviour. Arifu delivers awareness and knowledge that drive usage of essential skills or high impact and services.

- Capture data. Partners have access to real-time analytics and receive feedback to better understand their target audiences and design better solutions for them.

Limited Added Costs

Arifu currently operates on a B2B model. With this model, partners take up all the costs, so that Arifu ensures that access to information and training by farmers is free.

Transcending Inefficiencies

Productivity and on-farm risk

Arifu has started partnering with insurance companies to train farmers on productivity and how to mitigate risks associated with farming. Arifu also facilitates access to insurance products and services tailored for farmers. In addition, together with partners, Arifu has created content around post-harvest handling and disseminated it to farmers in a timely manner in order to minimize post-harvest loss.

Credit and finance

Arifu has partnered with financial institutions to not only provide financial training, but access to financial products and services available to farmers.

Information/knowledge

Arifu has partnered with, and continues to partner with various organizations that support farmers in order to carry out projects that ensure information and knowledge is within the reach of a farmer, for free, no

matter where they are based. Within projects, Arifu has employed advanced topping up of platform credits and SMS'. This approach ensures uninterrupted learning by the farmers.

With regard to content, Arifu solicits continuous feedback on content relevance from farmers to ensure that farmers are accruing optimal benefits from training.
The Arifu chatbot is accessible on most mobile networks and training is accessible on any kind of phone be it a feature or smartphone.

Interoperability

The tech build is replicable across boundaries and sectors. This allows for an effective and timely delivery of agricultural and financial information and training, among others, to various communities, in various countries

ARIFU

SCALE AND AVAILABILITY

Whilst Arifu is already serving farmers in 8 countries, they are looking to enhance existing partnerships and develop new partnerships with organizations in other countries within Africa as well as other continents such as Asia and Latin America, where their advanced learning platform can be used to make a positive impact to the lives of farmers globally.

Arifu's Presence

- Kenya
- Uganda
- Tanzania
- Rwanda
- Zambia
- Nigeria
- Ethiopia
- South Africa

ARIFU
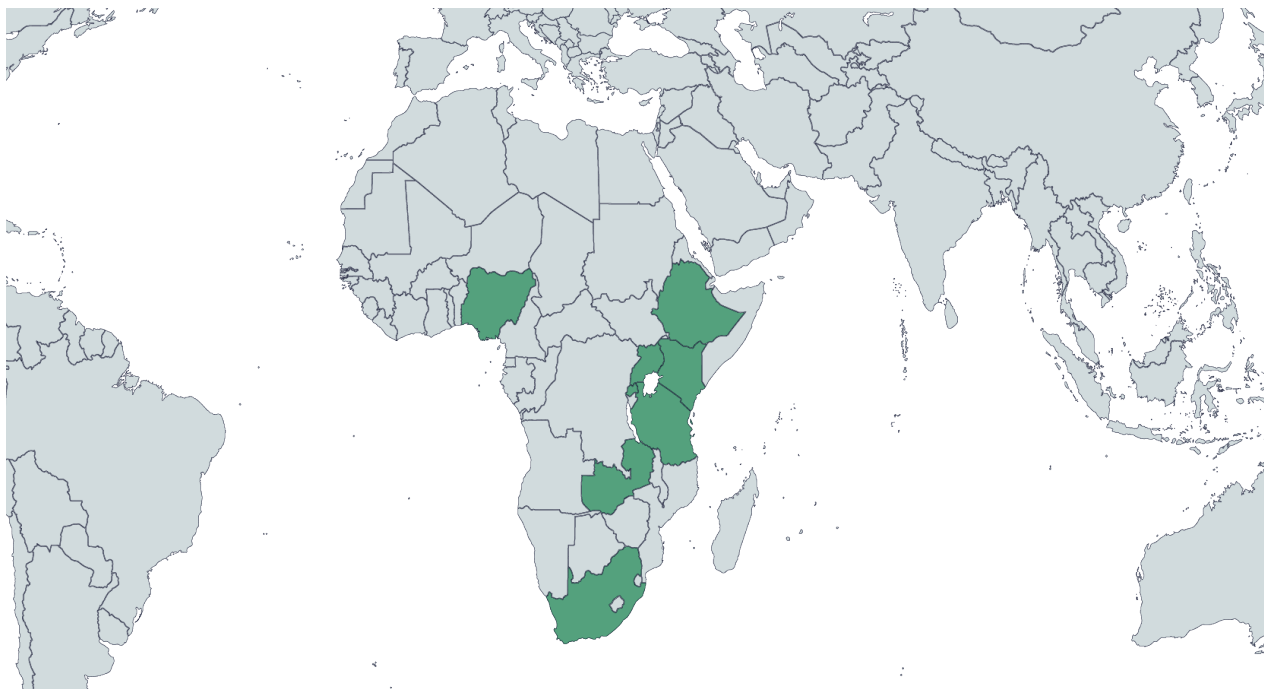
PRODUCT OVERVIEW

eProd sells an enterprise resource plan (ERP) for **Agricultural Supply Chain Management** to clients: agricultural commodity traders, food processors and farmer cooperatives. They offer an **affordable, off the shelf** and **easy to integrate** platform optimized for **low- bandwidth** environments. The eProd platform is a **data generator** creating valuable information for clients and their sector stakeholders. The product is designed to handle large numbers of suppliers. It enables clients to respond to the requirements of their demanding markets and to address the management challenges that aggregators and food processors experience while sourcing from large numbers of small scale suppliers.

DISRUPTIVE AND APPROPRIATE CRITERIA

The AMEA network created a set of criteria to ensure that the Ag-tech endorsed were appropriate for smallholder farmers, but disruptive enough to create transformational change in the global agricultural sector. Below, you will find how **eProd** meets AMEA's criteria.

Demand
The Agricultural Supply Chain Management ERP is used by over 30 different value chains in 14 countries in Asia, Africa, and Latin America. Services are reaching/have reached more than 250,000 smallholder farmers. The system is available in nine languages and scripts. Interest has been given by 100 clients and donors, such as Rikolto, CRS, USAID and GIZ.

Benefits & Value Addition
eProd creates comprehensive farmer profiles, including easy access to credit status of individual farmers, training attendance, field data, supply contracts, GPS location. Using the system improves the productivity of farmers,

"ICCO, part of Cordaid, through STARS program, supported the implementation of eProd with one SME and one Cooperative in Rwanda rice value chain and with one potato processor, "Senselet", in Ethiopia. All partners were satisfied with the functionality of eProd. I got to know the founders and staff of eProd as responsive, innovative and dedicated to their purpose.

Moreover, eProd, STARS program, Rabobank Foundation, and partners are in the process to develop a scorecard engine based on data elements in eProd. This will ultimately help to improve credit scoring and loan volumes for rural target groups.. "

Maurice Koppes, ICCO/Cordaid

through planning and monitoring of field activities, managing input distribution and product aggregation, and enabling traceability and quality-based payments. eProd manages finances and farmer transactions, including enabling mobile payments, automating payments for inputs and advances, and managing incentives. It assists managing client's business and employees, including stock and inventory management as well as monitoring the efficiency of your staff, and improving decision-making, planning, and transparency through reliable reporting. eProd supports monitoring and evaluation activities, including enabling measurement of impact and ensuring that reporting data is accurate and accessible. It offers flexible system configurations (cloud or on-premise solutions), including a mobile application that works both online and offline, and powerful API integrations.

Limited Added Costs
eProd offers an annual license and different packages are available depending on the number of farmers supplying the client. The smallest license costs USD 1,150 per year. For

larger operations, the annual recurring costs per farmer is around USD 0.50 per farmer. This cost is charged to the user/ agribusiness who typically embed these costs in the operations. The following eProd packages are available:

- **eProd Basic:** up to 1,000 farmers, 1 installation, multiple app users; suitable for cooperatives

- **eProd Standard:** up to 5,000 farmers, 5 installations, multiple app users, suitable for large cooperatives, food processors, aggregators

- **eProd Standard Plus:** up to 10,000 farmers, 10 installations, multiple app users, suitable for aggregators, food processors, traders

For applications for more than 10,000 farmers the price is further reduced.

Transcending Inefficiencies

eProd can manage both input and output markets simultaneously. The system is used to manage the full loan cycle, including credit scoring.

Interoperability

eProd offers flexible system configurations (cloud or on premise solutions), including an Android based mobile application that works both online and off, and powerful API integrations. It can function in 2G networks and Android versions from Android7 devices onwards. Using eProd enables effective communication with farmers and employees, including using integrated SMS and email, and creating reports to share with individual farmers.

eProd users can choose from a wide range of options to offer their farmers additional services like:

- SMS
- Weather forecast and production advise
- Credit scoring and input finance management
- Integrations with mobile money/ financial institutions
- Soil testing integrations
- Farmer mapping
- Integration with quality measurement devices

EPROD SOLUTIONS

SCALE AND AVAILABILITY

eProd Solutions has a network of agents in different countries and trained technical support team in Nigeria, Tanzania and Uganda. Training can be given either onsite or online or a combination of both.

- Kenya
- Uganda
- Tanzania
- Malawi
- Rwanda
- Ethiopia
- Afghanistan

- Nigeria
- Cameroon
- Ghana
- Burkina Faso
- Republic of Guinea
- Guatemala
- Haiti

And starting in:
- Benin
- Senegal
- Mali
- Mozambique

EPROD SOLUTIONS
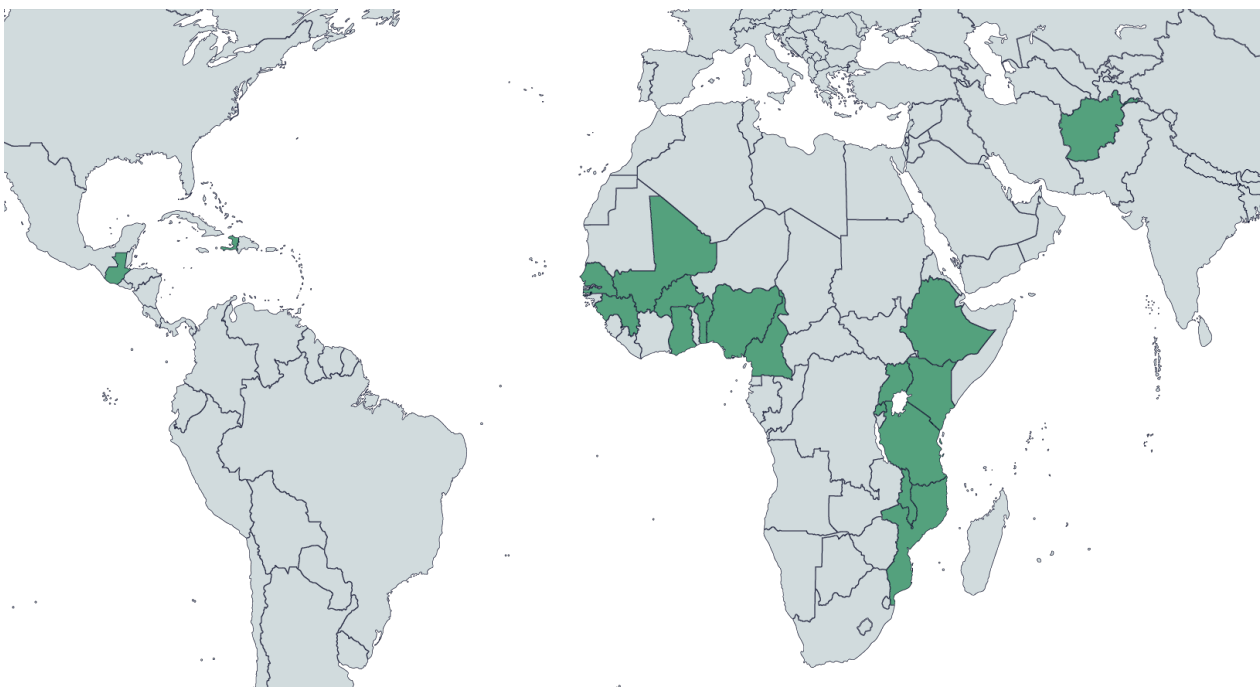
esoko

PRODUCT OVERVIEW

Esoko is a pioneer in Africa's agriculture technology landscape. Since 2008, the company has been helping enterprises manage rural communities and smallholders improve their productivity and incomes. Traditionally focused on disseminating agricultural information, such as weather services, market price data to farmers via various mobile channels (SMS, Voice, USSD, IVR and call centre), Esoko's platform now provides powerful data collection and digitization tools, content messaging and payment gateways to rural communities across Africa.

Esoko works across agricultural value chains providing technological solutions to various enterprises that want to engage and work with rural communities.

DISRUPTIVE AND APPROPRIATE CRITERIA

The AMEA network created a set of criteria to ensure that the Ag-tech endorsed were appropriate for smallholder farmers, but disruptive enough to create transformational change in the global agricultural sector. Below, you will find how **Esoko** meets AMEA's criteria.

Demand

Esoko has worked in 20 countries across Africa reaching more than 1.2 million farmers with innovative information service offerings – at the same time providing digital footprints to more than 5 million rural people through various social intervention programs. Today, Esoko connects over 1 million farmers to essential services – weather forecasts, climate-smart agronomic advice, market linkages and financial services over a range of channels including SMS, voice SMS and call centre. Various research finds such

"Esoko is a pioneer in widely disseminating agronomic, weather and market price information to large numbers of smallholder farmers in Ghana. When ACDI/VOCA started implementing the USAID funded ADVANCE Project in 2009, Esoko was new on the scene but they provided a ready platform, using SMS to effectively reach several thousand smallholder farmers targeted by the project with critical information that enabled them to improve their crop yield and to sell their produce through best market channels, while feeling empowered, knowing what the prevailing prices were across the country. The project, through a study, realized that over 60% of farmers who used the price messages reported discovering new markets, and 87% of them increased their sales. I find working with Esoko satisfying and fulfilling for especially smallholder farmers who use their services. _"_

Emmanuel Dormon, Snr Director MERL and former COP for the USAID-ADVANCE Project, ACDI/VOCA

information services can improve incomes for farmers by roughly 10%.

Donor interest: AGRA, USAID, World Bank, IFC, Unicef, JICA, DANIDA, WFP, GIZ, WEF, ODI, ActionAid, GSMA, FAO, USDA, Schwab Foundation

Clients interest: Over 200 organizations have partnered with Esoko to provide targeted services to rural communities including: Vodafone, IFC, ActionAid, GIZ, Governments of Mozambique, Malawi, Liberia and Ghana, Unicef, FAO, Solidaridad, IFDC, International Potato Centre, CCAFS, SEND Foundation, MEDA, Opportunity International, Satelligence, Prestat.

ESOKO

Benefits & Value Addition

In summary, the company provides tools and solutions for:

- Surveys: conduct call centre surveys, digitize surveys and track field activities
- Deployment: deploy and track enumerators on the field
- Content: deliver e-extension information to farmers through mobile channels
- Messaging: send information through various mobile channels

Esoko's platform gives farmers, traders, agribusiness, and development projects tools to collect and share market and climate information via text messaging helping them adapt to climate change and variability. The platform is web-managed and enables real-time data gathering about market pricing, as well as three-day weather forecasts and agricultural tips and techniques. As many smallholder farmers have only limited access to important information, Esoko´s platform addresses the problem by using multiple data sources, including open government data, where Esoko's network of agents monitor price fluctuations in markets across Africa and feed the information into its database, to permit farmers to secure better prices for their produce. Primary users include individual farmers and traders, farmers' associations, agribusinesses, and public sector organizations such as national agricultural ministries.

See the following Impact and M&E studies for more information:
NYU and CIRAD:
- Case Studies

CCAFS
- Mobile Phone help northern ghanas farming families beat climate change
- An assessment of mobile phone-based dissemination
- Private Public Partnership Business Model

USAID
- Farmer First Program
- ADVANCE II Case Study

GSMA
- Case Study Esoko

ODI
- Case Study Ghana Esoko

IFC
- Esoko Empowers Farmers one text at a time

Limited Added Costs

For as little as GHS30 a year (approx. $5), smallholders can access weekly market prices, weather updates and climate-smart agronomic tips on their phone bundled with health insurance of up to GHS1,500 (approx. $250) for death, disability, hospital and maternity cover.

Transcending Inefficiencies

Esoko helps smallholders improve productivity and mitigate on-farm risk through timely and relevant information on good agronomic practices, weather updates and early-warning systems in over 15 local languages in Ghana. Given the mainly rain-fed nature of agriculture in Ghana, knowledge of information as basic as when it is going to rain can make a huge difference to a smallholders farming activities and output.

In contributing to financial inclusion, Esoko has partnered with financial institutions to provide much-needed and affordable insurance to smallholder farmers. The company is also piloting providing credit access through farmer-based groups and aggregators in Ghana.

Interoperability

Esoko provides cloud-based mobile and web technology services that can be used within and across organizational boundaries to advance the effective delivery of agricultural and agribusiness information for individuals and communities.

ESOKO

SCALE AND AVAILABILITY

- Ghana
- Liberia
- Burkina Faso
- Tanzania
- Uganda

- Kenya
- Mali
- Côte d'Ivoire
- Sudan
- Benin

- Mozambique
- Nigeria
- Senegal
- Mexico

ignitia TROPICAL WEATHER FORECASTING
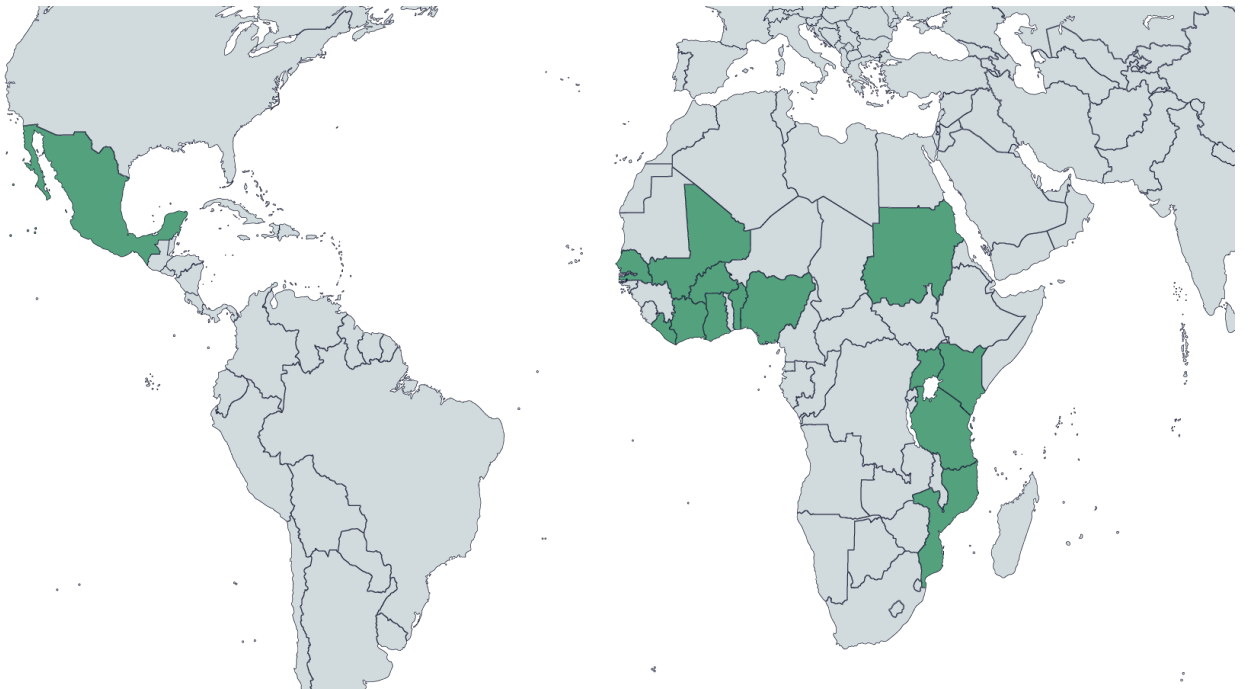
PRODUCT OVERVIEW

Ten years ago, Ignitia's team of climate scientists developed a proprietary weather forecasting model to accurately predict weather in tropical climates. Through a process of continuous refinement of these models, Ignitia offers what nobody else can: reliable short-term weather forecasts in tropical climates.

Ignita's flagship product, iskaTM, is a daily, 48-hour rainfall forecast delivered via SMS. End users receive location-specific rainfall forecasts that are scientifically proven to be at least 84% accurate, offering a level of reliability far beyond that of standard forecasting models. In addition to the daily forecasts, end users also receive, on a monthly basis, a 4-week outlook and a 2-4 month outlook. These forecasts empower farmers to make more informed decisions on their farms that enable improved productivity.

DISRUPTIVE AND APPROPRIATE CRITERIA

The AMEA network created a set of criteria to ensure that the Ag-tech endorsed were appropriate for smallholder farmers, but disruptive enough to create transformational change in the global agricultural sector. Below, you will find how **iska, by Ignitia** meets AMEA's criteria.

Demand
Ignitia has more than 1.3 million paid end users across Ghana, Mali, Nigeria, and Burkina Faso, in addition to a number of partnerships across West Africa and Brazil through which Ignitia delivers forecasts.

"AgriFin partnered Ignitia in 2020 to roll out a bundled weather and urea fertilizer service to 10,000 Indorama farmers – Indorama is a leading urea manufacturer - over a 3 month period to impact yields and incomes positively and change behavior towards continued purchase of urea fertilizer which is affected by the level of rainfall. Post the pilot, impact studies conducted showed over 80% of the farmers reported improvements in their way of farming, farm production and revenue, and overall quality of life because of Ignitia's weather forecast service. Also, 74% of the farmers said they would promote Ignitia's Iska weather services. It is evident that Ignitia's is servicing an underserved market and impacting farmers' way of farming, farm outcomes and overall quality of life, while helping farmers be more resilient against climate shocks. Mercy Corps AgriFin, due to these results, recommends the use of Ignitia's Iska weather services by SHFs to build their resilience and increase their productivity and incomes. "

Sieka Gatabaki, Mercy Corps

Donor interest: USAID, SIDA, UNDP, DFID, NDF
Implementing partners: Mercy Corps, GIZ, 2Scale, IFDC, CARE, TechnoServe
Telecommunication Partnerships: MTN (Ghana), AirtelTigo (Ghana), 9Mobile (Nigeria), Orange Mali, Orange Burkina Faso

Benefits & Value Addition
The benefits of Ignitia's solution start with the forecast accuracy. With climate change causing changes to the once-predictable seasonal rainfall patterns in the tropics, there is a greater need than ever for reliable and accurate weather forecasts that can enable farmers, especially small-scale farmers engaging in rainfed agriculture, to make improved decisions that lead to enhanced productivity. Ignitia's scientifically verified 84% accuracy in the tropics are at the top of its class.

ISKA BY IGNITIA

Ignitia's weather forecasts enable improved decision making throughout the agricultural process. From the timing of sowing and selection of seeds and the application of fertiliser at the correct time, to knowing when to hire labour and machinery and when to harvest their crops, end users across multiple geographies in West Africa report that Ignitia's forecasts help them to make improved decisions on the farm. 88-95% of farmers have reported on the improved decision making enabled by the forecasts.

These improvements in decision-making have led to reports by these farmers of reduced wastage of inputs, improved efficiency, reduction of post-harvest loss, and improved crop quality. Additionally, up to 78% of farmers have reported yield improvements and 87% have reported increases to their farming revenues.

Sources:
- Uppsala University Evaluation of ISKA forecast performance
- Securing Water For Food (SWFF) Evaluation
- 2SCALE Nigeria Evaluation
- 60 Decibels: Ignitia Farmer Insights

Limited Added costs
Ignitia's technology has a high, positive Return on Investment for farmer subscribers. Farmers typically spend around US$0.04 per daily forecast message, with costs varying slightly depending on geography and subscription method. In various studies across multiple geographies in West Africa utilising before iska-after iska comparisons, crop yields improved, on average, by 20-40% depending on crop, and income by an average of $100 or more.

Transcending inefficiencies
The fundamental problems the technology addresses are the increasingly uncertain nature of rainfall in the tropics due to climate change and the inherent difficulty in predicting tropical weather that makes high quality, reliable, and affordable weather forecast information inaccessible to people living in the tropics, especially small-scale farmers who predominantly rely on rainfed agriculture. The high quality forecasts sent via SMS address the key problems of rainfall predictability, which is a major bottleneck of rainfed agriculture, and accessibility of weather forecasts. Anyone with a cell phone and network access (no smartphone nor data access required) with select mobile network operators in Burkina Faso, Ghana, Mali, and Nigeria (as of March 2021) can receive forecasts via a shortcode through which they subscribe for about US$1 per month.
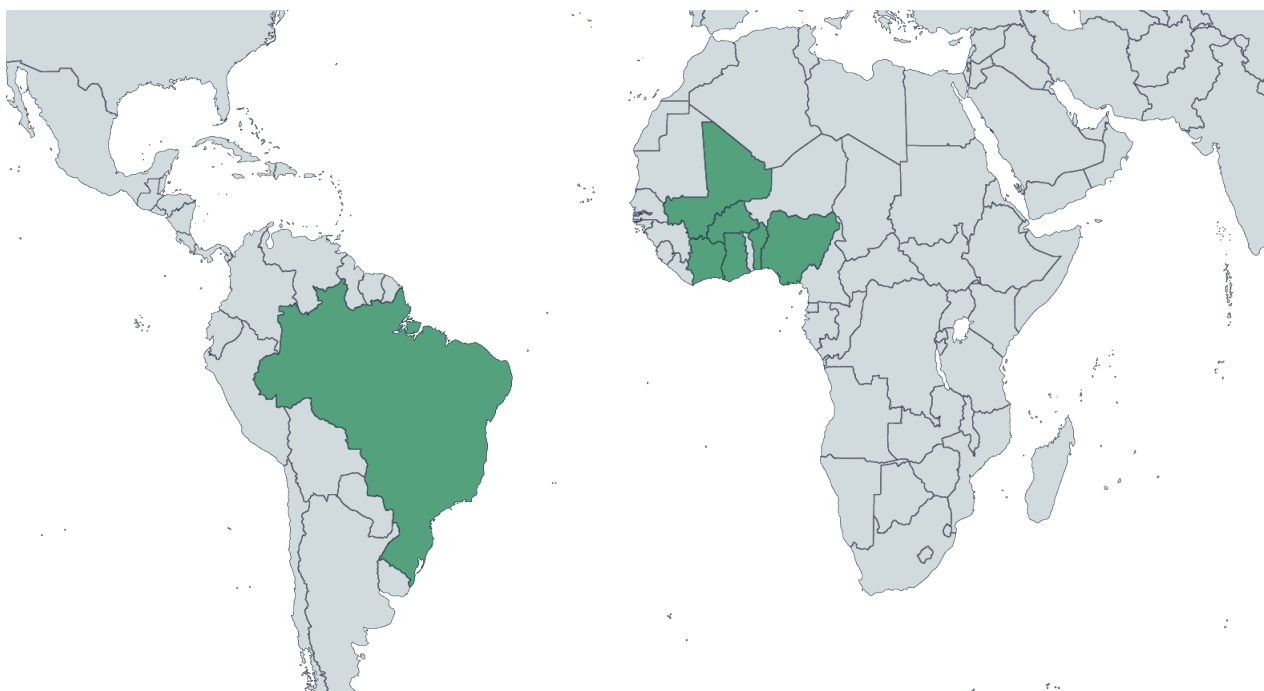
Interoperability
One of the key aspects of Ignitia's forecasts is that they do not require a smartphone nor a data/internet connection to access. If an individual has a phone and SIM card through which they can place a phone call or receive an SMS, they have the technology required to receive iska weather forecasts.

Additionally, iska is readily available for to be sent to individuals across West Africa. One method through which this can be done is by sending forecasts directly through mobile network operators. Ignitia currently has a live service with five different mobile network operators in the country and has the full capability to integrate their service with other mobile network operators across the country. Alternatively, Ignitia works directly with partners to send forecasts to groups of farmers, requiring only the phone number and GPS location of each farmer to deliver their forecasts.

Ignitia also can provide any weather parameter (e.g. moisture budget, accumulated rain, humidity, etc.) to an existing farm management platform or app via an API data feed.

ignitia TROPICAL
WEATHER
FORECASTING

SCALE AND AVAILABILITY

- Ghana
- Nigeria
- Brazil
- Burkina Faso
- Mali

- Côte d'Ivoire
- Benin

ISKA
BY IGNITIA

KUCHEZA

**FARMING FORWARD
BY KUCHEZA**

PRODUCT OVERVIEW

Kucheza improves the income and resilience of smallholder farmers by creating an entrepreneurial mindset, increasing financial literacy, and improving collaboration among farmers through a game-based learning approach. Central to this approach is Kucheza's digital training game 'Farming Forward'. Farming Forward is a playful digital simulation of a smallholder farm and its environment. In this customizable game, players take the role of an entrepreneur with the goal to grow their farm and increase their income. They grow a variety of crops and livestock, make decisions, experience the outcomes, and explore alternative approaches.

Farming Forward is embedded in a modular, participative training programme to add further explanation, discussion, and reflection to the game. The modules can be delivered both as an on-site classroom training and as a remote group training. The combination of the game and training modules provides trainers with a powerful tool to add to their training toolbox. For trainees, it is an attractive way to learn about complex topics and turn into real entrepreneurs

DISRUPTIVE AND APPROPRIATE CRITERIA

The AMEA network created a set of criteria to ensure that the Ag-tech endorsed were appropriate for smallholder farmers, but disruptive enough to create transformational change in the global agricultural sector. Below, you will find how **Farming Forward, by Kucheza** meets AMEA's criteria.

Demand
Kucheza trains trainers from farmer organisations, knowledge institutes and other

"Koppert Foundation supported Tear Netherlands to implement a game based Training Module Farming Forward at Ebenezer Farm in Zimbabwe. Apprentices in this vocational training centre in Zimbabwe got their 'own plots' to learn in a playful way how to cultivate their land and how to build a farming business. Players are stimulated to explore ideas, recognize opportunities, create plans and to focus on goals. They experience the result of their decisions on their own farm. Within the game, also collective business opportunities can be explored. Both trainers at the farm and young farmers in training are very positive about this way of learning.
"

Ed Moerman, Koppert Foundation

implementing partners to use the Kucheza approach and to integrate it with their existing (training) activities. To date, Kucheza has trained 270 trainers and 3,000 farmers in 11 projects/implementations. In 2021, another 230 trainers are participating in the training programme with a potential impact of 5,000-10,000 farmers and students in the next few years.

Benefits & Value Addition
To have farmers structurally improve their household income and successfully access finance and markets, increased financial and entrepreneurial awareness, knowledge and

KUCHEZA

Europalaan 20, 3526 KS
Utrecht, The Netherlands
https://www.kucheza.nl/

skills are crucial. Only then can farmers make the best decisions for their own situation. These aspects are exactly the results of Kucheza's training game and programme. As an example, in an implementation with female dairy farmers in Kenya, Kucheza has calculated an estimated annual increase in income of 200 euros (76%) at farm level.

Digital training games generate relevant data that provide insights in progress and behaviour of players. And they scale up more easily than traditional learning methods, both in terms of quantity and quality.

Limited Added Costs

A phased, 8-day training of trainers programme can be delivered from 750 € up to 1,250 € per trainer, depending on the level of customization of the game and the number of participants. After the end of the training period, organizations will pay a license fee of 400 € per trainer per year, which gives them access to updates of the game and training programme, technical and didactical support, and player data. Per license, up to 250 trainees per year can access the game.

Transcending Inefficiencies

Trainees who have been trained through the Kucheza approach have experienced the added value of aspects like record keeping, cash flow management, and calculating results, they know how to decide on investments, and understand how to capitalize on opportunities or mitigate risks. This leads to better short- and long-term decision-making, access to markets and finance, and cooperation in the value chain.

Interoperability

Farming Forward can be played on all digital devices. In most cases it is played on laptops and tablets because of the large screen (compared to smartphones). Tablets are often preferred for their portability. To play the game, an internet connection is not necessary.

FARMING FORWARD
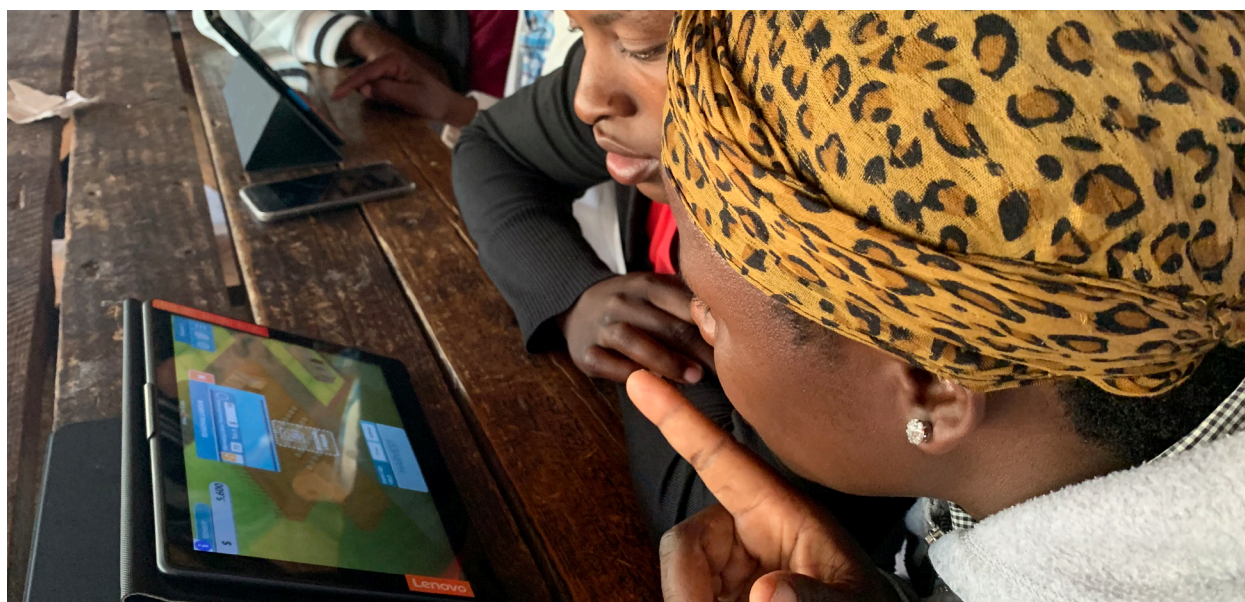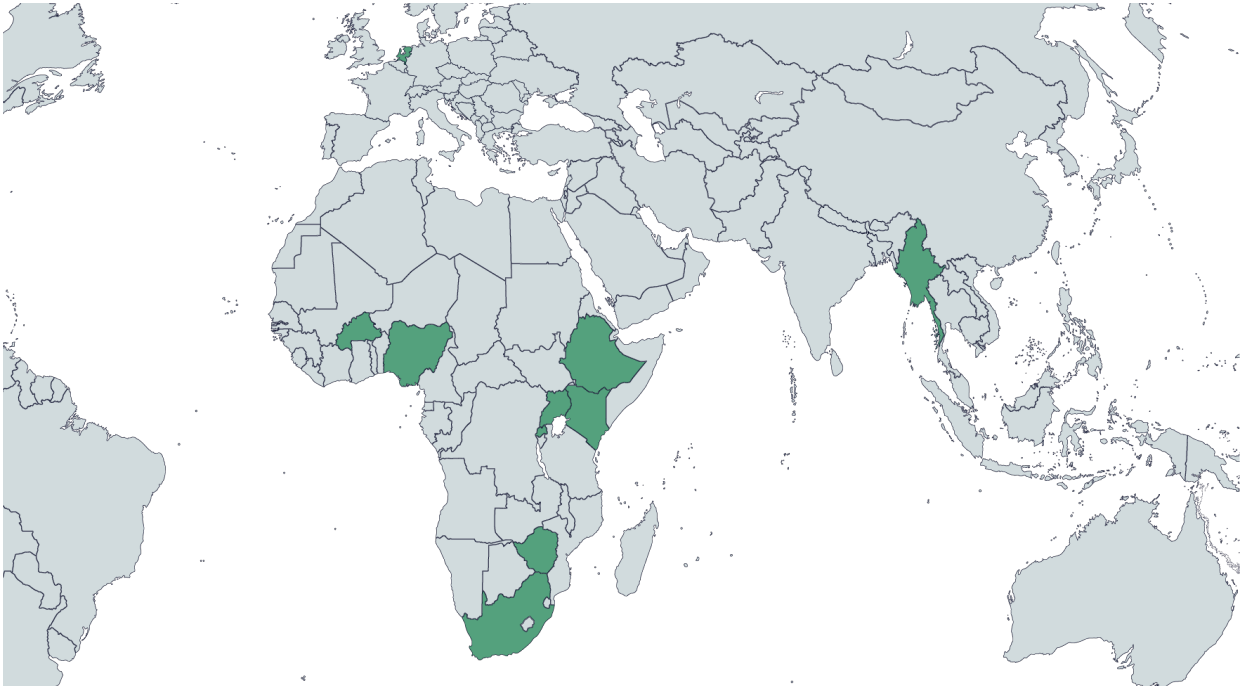## BY KUCHEZA

Photo credit: Kucheza

KUCHEZA

SCALE AND AVAILABILITY

- Zimbabwe
- Kenya
- Burkina Faso
- South Africa
- Ethiopia

- Netherlands
- Nigeria

Expanding into:

- Myanmar
- Rwanda
- Uganda

**FARMING FORWARD
BY KUCHEZA**

CONNECTED FARMER BY MEZZANINE

PRODUCT OVERVIEW

Mezzanine is a technology company that co-creates fit for purpose digital mobile solutions that enable productive societies in Africa. Mezzanine offers comprehensive solutions for agribusinesses to interact and transact with smallholder and commercial farmers. Connected Farmer is an agnostic digital platform that improves productivity, revenue and resilience for small scale farmers by connecting them to information, inputs, credit and buyers at scale.

DISRUPTIVE AND APPROPRIATE CRITERIA

The AMEA network created a set of criteria to ensure that the Ag-tech endorsed were appropriate for smallholder farmers, but disruptive enough to create transformational change in the global agricultural sector. Below, you will find how Connected Farmer, by **Mezzanine** meets AMEA's criteria.

Demand

About 10 million smallholder farmers use Connected Farmer in sub-Saharan Africa. Surplus value to farmers creates a network effect to attract participating enterprises that monetise transaction flows between actors, based on validated value propositions to all tenants, co-created with strategic partners. Mezzanine delivers digital solutions to companies doing business in Africa. With an estimated 800 million mobile subscribers in Africa, Mezzanine views mobile technology as a major enabler for creating productive societies. Mezzanine delivers mobile, IoT and digital solutions that cut costs, increase efficiency, improve risk management, and provide unrivalled access to users across the continent.

> "Mezzanine - a Vodacom Group company in the Vodafone family, provides smallholder farmers (SHFs) access to inputs, finance, markets and knowledge through a digital agri-ecosystem called Connected Farmer (CF). CF is a secure, cloud-based and mobile enabled solution that provides a frictionless platform for ecosystem partners (producer organisations, input providers/off takers and enterprise clients) to register, profile, communicate, transact and engage with all their beneficiaries (SHFs and extension workers) and each other. ICCO believes the open design (the farmer does not pay for access) built around market linkages with an agnostic approach to complementary technology, and an Uber-like vision to achieve scale with a sustainable business model will provide accessibility for the most marginalized in the rural communities and drive increased incomes for SHF. "

Phil Walton, ICCO Cooperation / Cordaid

Mezzanine works with mobile network operators, government departments, development agencies, research experts, and other technology service providers to co-create solutions in the industries of agriculture, health, social services, education, and utilities and financial management.

Benefits & Value Addition

By providing access to the digital knowledge economy, financial inclusion, quality inputs and secured off-take through formal and other contracts, farms can increase their gross income by 70-80%. This equates to an average $600 increase per farmer per annum, providing jobs and lifting millions out of poverty, especially women and the youth.

Limited Added Costs

As a platform provider, Connected Farmer charges a percentage fee to the enterprises on the platform while helping to drive value and impact down to the smallholder farmer. The farmer does not pay to use or interact on the platform.

Transcending Inefficiencies

Connected Farmer replaced the earlier cumbersome paper-intensive way of recording transactions and dispensed with the need to transact in hard cash. It also enables the agri-industry to educate and give guidance to farmers on farming issues via SMS. This makes

high-touch agribusiness – a business model characterised by a close relationship with customers or clients – in terms of interaction with the farmers, transactions and data management, a reality.

Connected Farmers' digital platform allows ecosystem stakeholders and smallholder farmers to interact with each other and to transact at a lower cost by optimising supply and demand. It provides farmers with:
- Access to digital finance
- Access to information
- Access to buyers and inputs

SCALE AND AVAILABILITY

- Ghana
- Nigeria
- Uganda
- Tanzania
- Kenya
- Zambia
- South Africa

**CONNECTED FARMER
BY MEZZANINE**
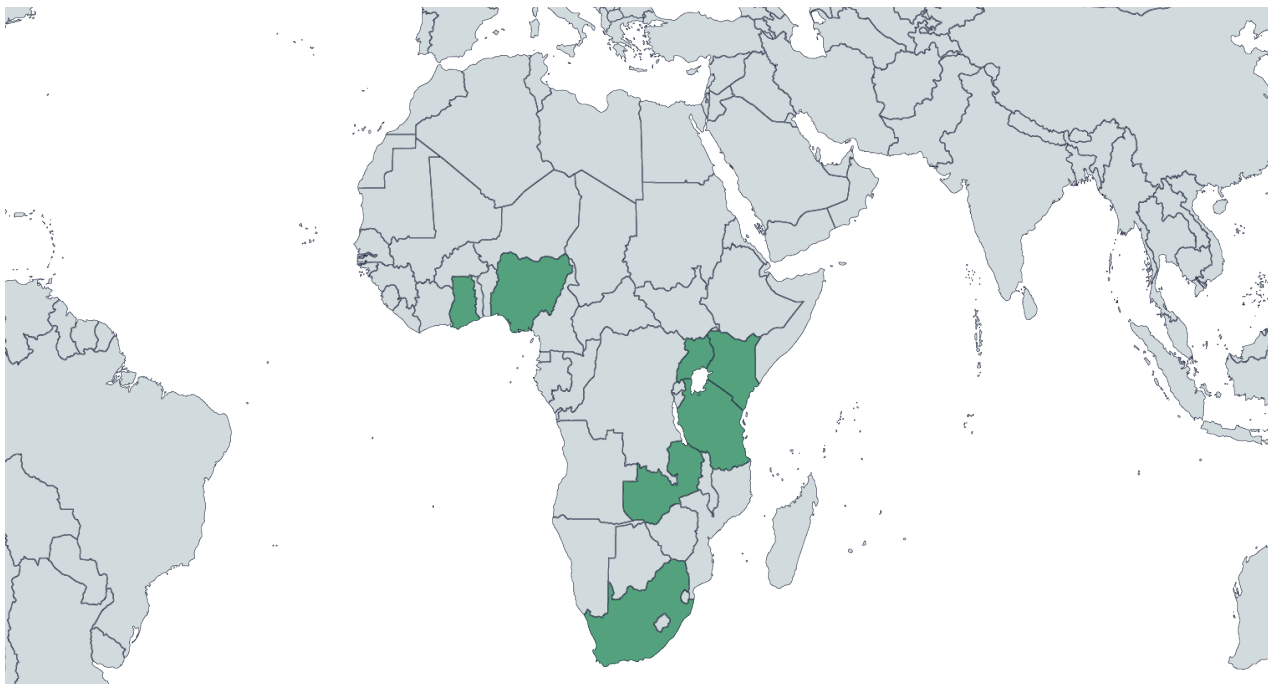
PRODUCT OVERVIEW

Simbuka loan management system is a SAAS solution special developed for financial institutions such as Banks, MFIs and SACCOs to process agriculture loans. The system is flexible to integrate with third party software providers via APIs, which will improve the agriculture loan process.

Customer Management (KYC): Have full insight in your customer details at any time.

Mobile field app: Loan officers can visit the smallholder farmers with a mobile field app and capture all the required farmer data in the field.

Scorecard Engine: By using the scorecard engine, clients can perform an objective risk assessment on the smallholder farmer (or farm). This helps to reduce the credit risk and will improve the loan portfolio quality.

Document Warehousing: The system makes it possible to generate documents (e.g. loan agreement) to provide the farmer a loan. Furthermore, uploaded documents will be stored in the digital document warehouse and can be retrieved at any time.

Workflow Management: Clients can create their own workflows in the Simbuka system, to have a perfect interaction between organizations and the Simbuka software. The workflow can all be easily configured without any developers involved.

Monitor reports: Clients are in full control of their credit process with clear overviews, dashboards, and nice monitor reports.

Open APIs: The Simbuka loan management system is flexible to integrate with 3rd party software/data providers. For example, the system can be integrated with a corebanking

"Simbuka is a designed-for-mobile SaaS loan origination and management solution, and credit score carding platform. The state-of-the-art architecture provides an affordable solution for financial institutions who can then fully control their full loan portfolio, which will lead to better quality loans and a lower turnaround time (operational efficiency). In 2020 ICCO embedded our proven Agricultural Assessment Tool (ACAT) into the platform to enable loans to be determined by crop and farm specific cash flow models which propose the disbursement schedule of a loan (rather than being paid upfront). We called this enhanced solution Simbuka+ which bridges the communication chasm between loan officers and small holder farmer (SHF). The result is more SHF farmer loans and reduced administrative burden and risks for the financial institution."

Phil Walton, ICCO Cooperation / Cordaid

system, credit reference bureau, agriculture data providers, etc.

Farmer cashflow projections: The system has embedded the proven ICCO Agricultural Assessment Tool (ACAT) which predicts the cash flows of a farm. This prediction can be used in the scorecard model. Furthermore, it indicates which amount the farmer needs in which period of the crop season.

DISRUPTIVE AND APPROPRIATE CRITERIA

The AMEA network created a set of criteria to ensure that the Ag-tech endorsed were appropriate for smallholder farmers, but disruptive enough to create transformational change in the global agricultural sector. Below, you will find how **Simbuka** meets AMEA's criteria.
Demand

SIMBUKA

Simbuka performs more than 150,000 scorings per month and has around 5 million customers in the system. Simbuka has a partnership with ICCO Cooperation/Cordaid which is supported by Rabobank Foundation and De Lage Landen.

Benefits & Value Addition

- Fully automated and paperless agriculture loan process at financial institutions
- Better risk assessment of the smallholder farmers by using scorecards
- Embedded agriculture knowledge in the system via ACAT model
- Improved monitor capabilities

These benefits result in an improvement of the agriculture loan portfolio quality and reduces the operational costs for agriculture loans significantly.

Limited Added Costs

The Simbuka loan management system is available for MFIs and Banks starting from 350 euro per month (depending on the number of customers in the system).

Transcending Inefficiencies

Smallholder farmers need access to capital, but the financial sector often does not have the right products for rural communities in Africa. The transaction cost per loan, the perceived complexity and risk of farmer loans has limited the flow of capital to the agricultural sector. The combination of the Simbuka loan management system with the ACAT analysis will optimize services to farmers and reduce the costs of lending further

Interoperability

The Simbuka loan management system has open APIs which makes it easy to integrate with other software providers.`

SIMBUKA

SCALE AND AVAILABILITY

- Rwanda
- Tanzania
- Malawi
- India

- Myanmar
- Indonesia
- The Netherlands

SIMBUKA

PLANTWISE KNOWLEDGE BANK AND APP
BY CABI
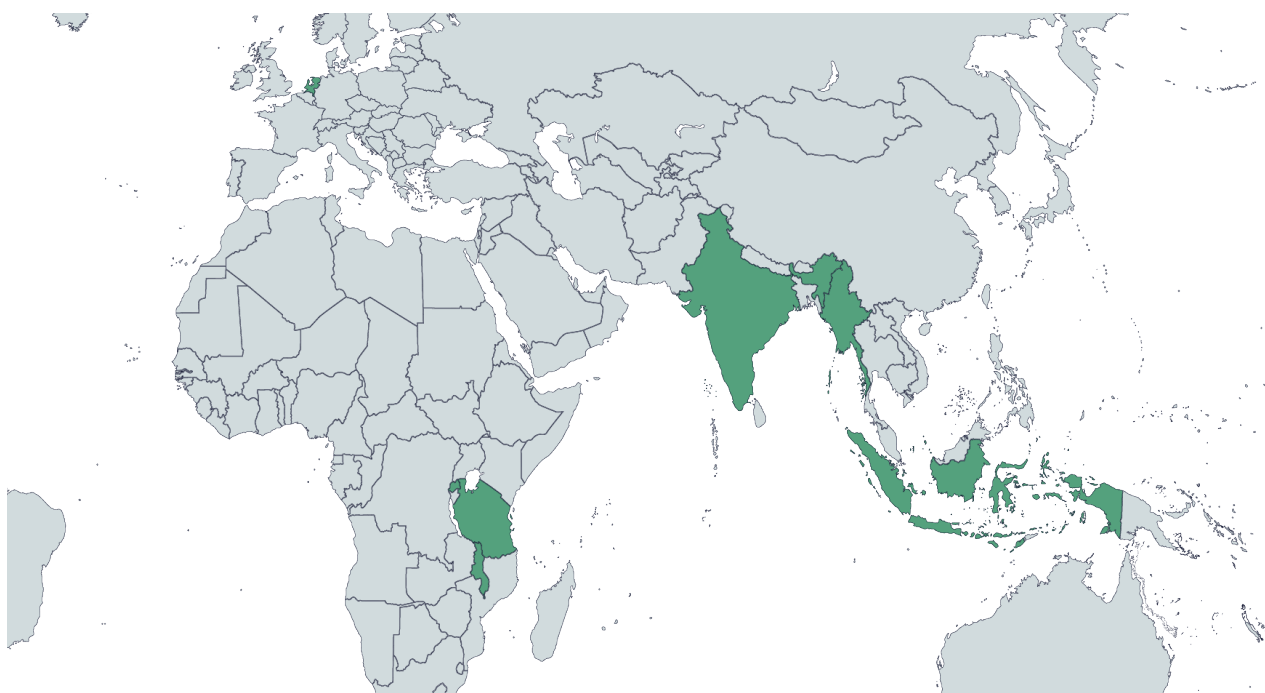
PRODUCT OVERVIEW

In the previous version of the AMEA AgTech Guide (2020), we profiled Plantwise, by CABI, as an endorsement from Koppert Foundation. This year, Koppert shared with us an important update for those who were interested in Plantwise. Below, you will find the update, the new endorsement, and the links to access the curriculum/course.

FROM AMEA AGTECH GUIDE APRIL 2020 PAGE 13

Plantwise is a global program led by CABI, which helps farmers prevent losses due to plant health problems. Working closely with national agricultural advisory services, a global plant clinic network has been established, with each plant clinic run by trained plant doctors. Plant clinics work just like clinics for human health: farmers visit with samples of their crops, and plant doctors diagnose the problem and make science-based recommendations (including via SMS) on ways to manage it.

The plant clinic network is reinforced by the Plantwise Knowledge Bank, a gateway to practical online and offline plant health information, including diagnostic resources, best-practice pest management advice, and plant clinic data analysis for targeted crop protection. Together, these two unique resources are part of the Plantwise approach to strengthen national plant health systems. CABI and Koppert Foundation have developed an additional training curriculum for plant doctors to raise their knowledge and skills to advise biological and other non-chemical solutions for pests and diseases.

Course curriculum and materials can now be downloaded from the CABI Academy platform. The course named 'Using biocontrol as part of IPM' is located under Agriculture/ Crop management/Crop protection.'

On the first visit, you will have to register for the CABI Academy platform. This is a general prerequisite for the platform. Once registered, access to the course materials needs a permission from CABI.

"The training on biological control went well. There were 21 people attended the training from 5 different institutes. These institutes/NGOs are working with the growers in their regions. All are promoting biological control products and this fits in their working portfolio. With this training, we may expect increased awareness and application of non-chemical ways to keep our crops healthy.
"

Mahesh Kumar, technical manager Koppert India

SPOTLIGHTS

In addition to this year's featured profiles, this edition of the Guide also includes four "Spotlight" Ag-Techs. These are agriculture technology solutions that have been in contact with AMEA in the past few months, but have not yet been in a partnership with an AMEA member. Therefore, we could not get the necessary endorsement to profile them in this edition. However, AMEA believes these "spotlight" ag-techs have presented interesting solutions for our common challenges and because of the potential they offer, the AMEA Ag-tech WG thinksthey deserve a spot in this Guide.

ACCESS AGRICULTURE

www.accessagriculture.org

AMEA WEBINAR

Access Agriculture is committed to assisting Farmer Organisations in improving services to their members. In particular the emphasis is on helping with "farmer to farmer" training videos in more than 85 languages to assist smallholder farmers. Access Agriculture focuses on improving incomes in a sustainable and environmentally friendly way. On the Access Agriculture website, visitors can register and download videos, soundtracks for radio programmes and factsheets for sharing.

Access Agriculture has had backing for a new network of Entrepreneurs for Rural Access throughout Africa using a solar powered Digisoft Smart Projector, so that videos can be shown in places with no electricity, no internet and no mobile phone signal. These entrepreneurs receive a coaching and mentorship programme during an 18 month period, so they become skilled in service delivery and serving neglected rural communities in remote areas.

Access Agriculture works with a number of AMEA members and have held a webinar to show how organisations need to think of how farmers learn best from each other and to break down the language barrier. It is particularly important for working with women farmers and encouraging young people. Despite COVID, training and capacity building can still take place. Organizations can also share their work on the project section on Access Agriculture's sister website. www.EcoAgtube.org. For more information, please contact **Phil Malone** (email: phil@accessagriculture.org phone: +44 7899 897693)

AGRITASK

Agritask logo

https://start.agritask.com/

Agritask provides a holistic ag-operations platform designed to enable fact-based, on-time decision making. It focuses on delivering precision agriculture solutions, with high configurability, comprehensive offerings, and interoperability with 3rd party systems. Agritask allows for digitization of individual work methods such as crop or client-specific data protocols, workflow, models, visualization and others. It can be used to manage the entire crop life cycle and operational activities, as well as all aspects of grower services. In addition, it can integrate with a range of external technologies, from aerial imagery and sensors to machinery and ERP software. Agritask's clients consist of growers, ag-buyers, farm inputs companies, governments and NGOs, research institutes, and ag-insurers and creditors. Today it operates in 35 countries and across 50 crop types.

Under the Covid restrictions, Agritask has enabled several ag-stakeholders to work remotely through a combination of mobile capabilities and remote sensing solutions. Some clients collaborate with Agritask to deliver a user-friendly mobile app with specific functionalities and user interface tailoring for their growers, so that they can communicate effectively without going to the fields. Farmers can consult the mobile app for agronomic advice or report data on sustainability matters to buyers. In other cases, clients ask Agritask to verify certain information, such as crop type and planting date, or estimation production risk based on satellite information. This helps them significantly reduce their field operations and focus resources where necessary.

Agritask has started to work more with AMEA members in the last year, including a project with the IFC in Vietnam as well as winning the Better Cotton Initiative Challenge which was initiated by BCI and IDH (an AMEA member).

Photo credit: Agritask

HIVEONLINE

hiveonline

hiveonline's distributed digital community finance marketplace builds a bridge between the formal and informal financial sector. Through its platforms, myCoop.online and vsla.online, hiveonline facilitates digital identity, savings and lending, seamless financial administration, harvest forecasting and tracking, and blockchain based secure record keeping with a digital behavioural reputation score for small scale farmers, women's savings groups and agricultural cooperatives.

The hiveonline team is an industry leader in research into financial access, market systems development, and blockchain for good with founder and CEO, Sofie Blakstad a lead researcher for UN, knowledge partner the Sustainable Digital Finance Alliance and co-author of "Fintech Revolution".

hiveonline is currently working on several new developments and partnerships. In partnership with AMPCM and Norges Vel, hiveonline is rolling out myCoop.online to cooperatives in Mozambique. As the next phase of this project begins,, a number of new features will be added to the platform with the aim of helping farmers and cooperatives professionalize, reach new markets, and obtain access to finance and farming inputs. Additionally, vsla.online is now in pilot with savings groups with Self Help Africa in Zambia and RARE in Honduras.

hiveonline first collaborated with AMEA in December 2020 being featured on AgTech Exchange. This was an opportunity to spread the word about myCoop.online and the work hiveonline isare doing using digitalization.

AMEA WEBINAR

GEOPOLL

GeoPoll

GeoPoll is the pioneer in conducting research through mobile-based methodologies in Africa, Asia, and Latin America. GeoPoll's offerings provide humanitarian organizations, governments, and leading brands with high-quality data through multiple mobile modes. Their technology platform seamlessly facilitates research through live voice calls, text messages (SMS), mobile web links, focus groups, and in-person methods, and their experienced team of researchers guides clients throughout the data collection process.

In 2020, GeoPoll's solutions allowed organizations around the globe to conduct research on the impact of COVID-19 on food security, crop production, income loss, local governance, and more. GeoPoll expanded its call center operations to over 50 countries and worked with partners to demonstrate how to collect quality data remotely from hard-to-reach areas. GeoPoll conducted several studies on how COVID-19, climate events, and other factors have affected smallholder farmers, reaching both beneficiaries of specific agricultural programs and leveraging our existing databases to gather feedback from farmers in specific areas. GeoPoll partnered with AMEA and other groups to conduct webinars responding to important and oft-posed questions about the benefits of mobile-based research.

This year, GeoPoll will continue to expand its capabilities and footprint in key regions such as Latin America, North Africa, and the Middle East. As the pandemic continues and focus turns to vaccination campaigns and economic recovery, GeoPoll will support clients with their data collection needs through both remote and in-person methods. To learn more about GeoPoll's capabilities reaching smallholder farmers and other groups, contact the GeoPoll team at GeoPoll.com or info@GeoPoll.com.

AMEA WEBINAR

FINAL THOUGHTS

AMEA and its members acknowledge that the Ag-tech landscape is vast and that this guide is not a comprehensive list of the agricultural and financial inclusion technologies available to development practitioners and the agribusiness sector. The seven Ag-tech profiles (and updated profile) shared represent the evaluative experiences of AMEA members, the owners, and supporters of these technologies, and the supporting documentation provided voluntarily to the AMEA Ag-tech WG. Most importantly, each profiled Ag-tech meet the first of six appropriate and disruptive criteria member endorsement. An endorsement is a display of public approval that represents a willingness to promote the tech company or partner who owns the technology.

Additional Ag-techs were considered for this guide, but further evidence and experience was needed by AMEA members. If you would like to discuss your company's or partner's Ag-tech solution please contact casey.harrison@nuruinternational.org (Ag-tech WG Lead) and/or matteo@ameaglobal.org and we can set up an online meeting.

Photo credit: Access Agriculture

Photo credit: Agritask