

**INNOVATION FUND**
**Digital tools to drive market access and manage agricultural value chains (DigiMakt)**
*Parent project: Accelerating inclusive green growth through agri-based digital innovation in West Africa (AGriDI)*

**PROJECT COORDINATOR**

Esoko Ltd., Ghana

**PARTNERS**

Ghana Meteorological Agency (GMet)  
 Ghana Agricultural Insurance Pool (GAIP)  
 Ministry of Food and Agriculture (MoFA), Ghana  
 Council for Scientific and Industrial Research – Soil Research Institute (CSIR-SRI), Ghana


**LOCATION**

Ghana


**PERIOD**

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**EU FUNDING**

EUR 221,272.70

**SECTOR**

Agriculture

**KEYWORDS**

Digital technologies, multi-stakeholder networks, capacity building, technology transfer, MSMEs, smallholder farmers, farmer cooperatives


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**CHALLENGE**

Incomes of smallholder farmers in Ghana remain significantly low, largely due to, among others, low productivity because of increasing climate variability and droughts, and economic stressors such as high purchase cost of inputs. But also due to lack of access to credit and market information on crop values, limited access to mechanisation services (tractors and harvesting equipment), and high post-harvest losses.



Aggregation and purchase of maize in Oti and Bono East Regions

**PERSPECTIVES**

The project combines a series of agricultural services deployed on Esoko's Digital Farmer Services (DFS) platform to be used for profiling farmers and other maize and soybean value chain actors, and dissemination of information on climate-smart agronomic practices and market prices to farmers via mobile phones. In addition, the project will link agricultural inputs (seeds, fertilisers, pesticides) dealers, financial service and micro-insurance providers to farmers to foster financial inclusion and the digitisation of services for improving farm and market operations of smallholder farmers. The provision of timely information on weather, good agronomic practices and market prices will support farmers making informed decisions.

**JUSTIFICATION**

The use of agri-based digital technologies within a crop value chain context is needed to improve the production and marketing capacities of smallholder farmers with efficient and timely information delivery to enhance their operations, enabling them to better manage climate-related risks and build more resilient livelihoods

**METHOD**

Through a value chain approach, smallholder farmers are linked to markets, finance, inputs and equipment. The project also builds the capacity of smallholder farmers to increase the efficiency of their farm business with improved production and post-harvest handling practices.

The DigiMakt platform which is built within Esoko's Digital Farmer Services (DFS) platform will be customised and enhanced with additional features, such as the integration of push, people, climate-smart agronomic content, bids and offer services, crop insurance services, and a payment app. The DFS platform is a web-managed system that enables real-time data gathering and dissemination via the web and mobile phones, allowing users to receive downscaled seasonal forecasts, market price (bids and offers), agronomic advisory information on their mobile phones either as voice messages, SMS or through a call centre.

The DigiMakt platform will be promoted to maize and soybean value chain actors (aggregators, input dealers, farmers, etc.) in the following way:

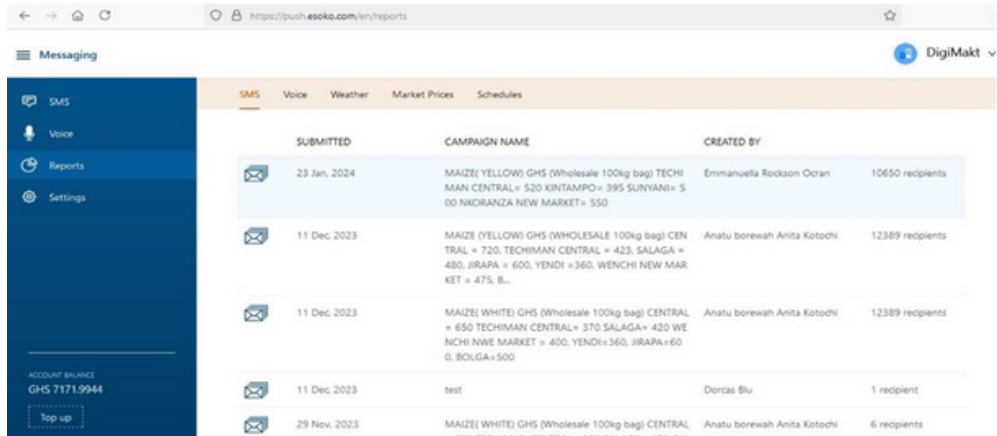




INNOVATION FUND

- Development of a super-agent network model where field agents are recruited and trained to support farmers to understand and use the services provided on the DigiMakt platform. These field agents will execute services such as: profiling farmers and other value chain actors, collect field data using the Insynt mobile data collection app. This network model serves as an anchor for the provision of critical agronomic and market services to 12,500 smallholder maize and soybean farmers in two of the four agro-climatic zones of Ghana, namely the transition and north zones.

- Deployment of 7 nucleus farmers and off-takers / aggregators as value chain leaders to support the farmers to digitise their operations and move them into the digital economy. The nucleus farmers are commercial farmers with their own farms, but they also support other smallholder farmers with the provision of land preparation services, improved seeds and other inputs, and in some cases technical assistance. The nucleus aggregators are small businesses that maintain their own networks of smallholder farmers whom they buy from and may provide some support such as seeds or credits for the purchase of inputs.



Screen shot of the messaging section on the DigiMakt platform for market prices, weather and agronomic information

- Training of value chain actors in making use of digitized market and climate-smart information / services on the DigiMakt platform.
- Facilitation of trading on the DigiMakt platform.
- Establishment of a start-up company as a spin-off of the project to expand the project reach and provide all the services of DigiMakt (provision of climate-smart agronomic content, bids and offer services, crop insurance services, payment app, input supply).
- Contracting potential warehouses to store soybean and maize.

### INNOVATIVENESS

The digitisation of agronomic and market services of maize and soybean value chain leaders (farmers and aggregators).

Strengthening of Esoko’s Business-to-Business transactions by positioning the company as an off-taker on commodities posted on the DigiMakt platform.

The virtual marketplace will allow maize and soybean value chain actors to trade on a digital platform and provide direct market access for smallholder farmers.

### EXPECTED RESULTS

#### Impact

- Increased livelihood of maize and soybean value chain actors in Bono East and Oti regions of Ghana.

#### Outcomes

- Maize and soybean value chain actors making use of digitised market and climate-smart information / services on the DigiMakt platform.

#### Outputs

- DigiMakt platform providing climate-smart market information and market linkages for value chain actors.
- Value chain actors capacitated in the use of and actively participating on the DigiMakt platform.
- Start-up for-profit company established to continue the project, expand the project reach and provide all DigiMakt services.
- Access of value chain actors to warehouses for storing soybean and maize.

This DigiMakt project is one of 9 supported by the ACP Innovation Fund project: AGriDI, a project implemented by the International Centre of Insect Physiology and Ecology (icipe) in Kenya, in partnership with the University of Abomey-Calavi in Benin, Gearbox Pan African Network in Kenya and Agropolis Fondation in France.

Contributing to a conducive environment for agri-based digital innovations, especially for women and youth farmers, and accelerating inclusive green growth in West African countries, AGriDI has selected 9 (third-party) projects that are implemented by academic and research institutions, ministries and government agencies responsible for ICT or science, technology and innovation, farmer cooperatives, MSMEs, and civil society organisations in Benin, Burkina Faso, Ghana and Nigeria.

AGriDI supports the development and scaling of the use of digital technologies for agricultural development, such as in the areas of soil mapping, agro-inputs, crop management, marketing, and policy making.

