

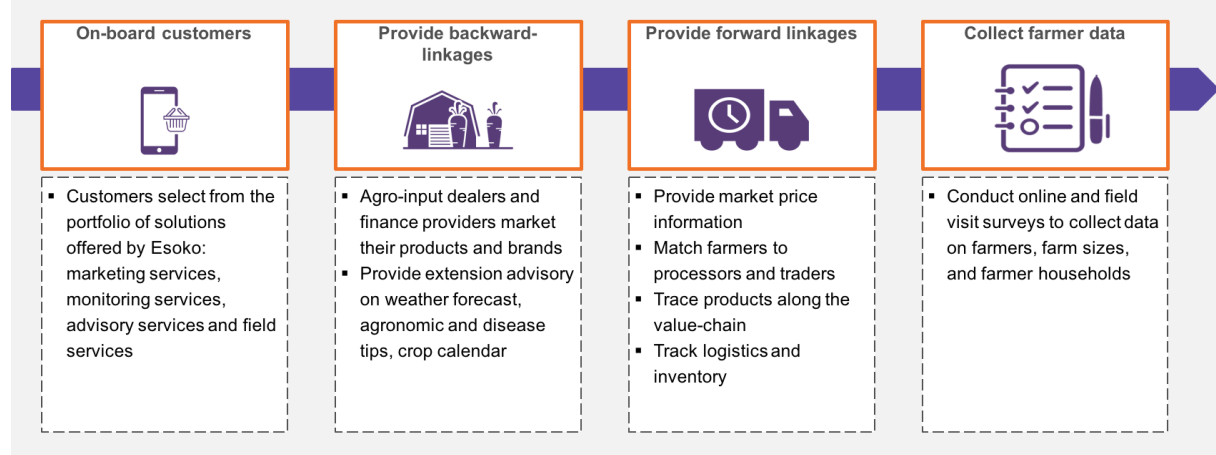
## CASE STUDY: ESOKO



**Founding year:** 2008  
**HQ:** Accra, Ghana  
**Countries of operation :**  
 Ghana, Kenya, Malawi, Zimbabwe, Mexico and Pakistan, Benin, Nigeria and South Africa  
**Orientation:** For-profit  
**Employees:** 60  
**Turnover:** USD 4 million

Smallholder farmers in Africa lack reliable information on productivity-enhancing practices, timely price and demand information and linkages to formal markets. On the other hand, input dealers, agricultural businesses, finance providers, and policy makers lack reliable data on and connectivity with small-scale farmers, thereby restricting these stakeholders from marketing appropriate inputs, delivering tailored extension services and reaching remotely located farmers to procure their produce and sell in global markets.

Esoko is a market information platform that leverages mobile and web technology to bring together different stakeholders in the agriculture value chain. The services provided on the platform include SMS alerts, extension information messages, farmer survey and SMS polls, marketplace matching, and data collection. The platform provides two-way communication and information flow between farmers and other value-chain actors. This has led to increased farmers' knowledge and access to quality pre-harvest inputs, expanded access to credit, and extended access to formal markets. Esoko operates in 10 countries across Africa and has reached 400,000 farmers till date.



### Operating Model

Initially established as a mobile and web-based repository for price information in Ghana, Esoko has transformed over the years to a platform that connects stakeholders across the agricultural value chain. The platform provides information on pre-harvest practices and real-time market prices. In addition, the platform serves as a marketplace for farmers and buyers to make offers, and for input suppliers to advertise input commodities. The platform also provides data collection, product traceability and logistics tracking services.

The platform enables real-time exchange of information between stakeholders across the value-chain. Esoko's technology platform differs from traditional ICT systems, which are designed to solely push information to farmers, in that it is a platform that enables two-way information flow between farmers and other agricultural stakeholders. This decreases information asymmetries along the chain.

Esoko's customers include farmers, farmer groups, input suppliers, financiers, mobile operators, agro-processors, exporters, farmer co-operatives, government agencies, and non-governmental organizations. Farmers receive real-time SMS feeds on price and demand information, location of seed and fertilizer outlets, weather forecasts, disease prevention tips on their mobile phones. They are also matched to buyers, including traders and processors. Agribusinesses can use the platform to monitor farm activity, market their products to farmers and receive feedback from farmers. Stakeholders can also receive information on crop cycles, and farmer yields. Co-operatives, NGOs and government bodies can use the service to broadcast critical information to farmers using

Esoko's bulk text messaging service. Esoko provides data collection services to clients as well. For example, it conducted a poverty assessment study for the Government of Ghana to analyze the impact of social benefits on farmers. For the purpose of such studies, enumerators employed by Esoko visit farms and capture farmer related data on Android apps. The enterprise also caters to mobile operators, for instance, in partnership with Vodafone Farmer Club in Ghana, Esoko provided information to farmers. As part of the club, member farmers can make free calls to other farmers in the network, and are allowed to access Esoko's content at no cost. Financial institutions can leverage farmer profile data to appropriately assess default risk and accordingly provide credit to farmers.

## Financial Sustainability

The enterprise invests significant costs in development and maintenance of the platform. The initial upfront investment to set up the platform included USD 600,000 of personal capital and USD 200,000 in donor funds<sup>1</sup>. The primary cost components constituted new hardware, staff to operate the hardware and work in the commodity markets to collect price information. Esoko continuously strengthens its multi-stakeholder platform; it spent USD 700,000 in 2015 on upgrading and maintenance. In pursuit of expanding services delivered on its platform, Esoko is set to launch an input wallet solution in that will allow purchase of input commodities directly on its platform by linking farmers to input suppliers, along with financial institutions playing a role in input finance.

To support its operations, Esoko employs a differentiated revenue model: subscriptions and revenue share. Subscriptions are paid primarily by enterprise customers to use the platform. Revenue share is with the mobile operators; typically mobile operators retain 70 percent-80 percent of the value of the communication (SMS costs or call center charges) and Esoko is paid 20 percent-30 percent of the value of the communication. With the introduction of the input wallet solution, input sales will be based on a commission model. Farmers and farmer groups are charged based on a tiered subscription model.

The table below provides an indicative farmer pricing model<sup>2</sup>:

Tier	Services	Target Customers	Annual Cost (USD)
Bronze	Mobile alerts of market prices and offers. Average of 10 SMSs per week	Individual farmer	36
Silver	SMS Push and market sites	Farmer groups with up to 200 members	250
Gold	SMS Push, market sites, scout polling	Farmer groups with 200 - 2000 members	1500
Platinum	SMS Push, market sites, scout polling	Unlimited farmers	8000

In addition to these revenue streams, Esoko also pursues public-private partnerships to improve sustainability. Government stakeholders are important in designing interventions appropriate to smallholder farmers.<sup>3</sup>

## Impact

The consolidated impact on all stakeholders on Esoko's platform is yet to be assessed. However, the service is believed to have increased efficiencies across the value-chain. For instance, an export

<sup>1</sup> ICT in Agriculture: Connecting Smallholders to Knowledge, Networks and Institutions, The World Bank, Nov 2011

<sup>2</sup> Esoko Networks: facilitating agriculture through technology, UNDP, Jan 2010

<sup>3</sup> ICT in Agriculture: Connecting Smallholders to Knowledge, Networks and Institutions, The World Bank, Nov 2011

company registered on Esoko's platform undertook the procurement process in 31 days with 3 employees as opposed to 60 days and 5 employees prior to using Esoko.<sup>4</sup> Farmers' self-reported evidence showed an increase of 20 percent-40 percent in revenue.<sup>5</sup> A banking study conducted by IDInsight and financed by Acumen indicated that Esoko farmers who were provided loans from an agricultural bank in Kenya had a 12 percent higher repayment rate than farmers who were provided loans from the same bank but not registered on Esoko.<sup>6</sup> According to Esoko, the reason for the higher repayment rate could likely be attributed to the customer loyalty engendered by the services provided on the Esoko platform; customers valued the content and were inclined to stay in good standing with the bank, as opposed to only receiving repayment reminders which were more distressing in nature to the farmers.<sup>7</sup>

## Challenges and Lessons

Esoko's primary challenges are linked to access to finance and working capital. Given the high costs involved with technology development, architecture and maintenance, cash flow is a significant challenge. Another challenge is finding talent at affordable prices – a large part of its business model relies on accessing data and verifying the authenticity prior to disseminating it to stakeholders across the value-chain. Keeping abreast on government regulations is also a key consideration for Esoko; for example, any changes in telecom regulations may affect Esoko's service delivery. The enterprise was recently under pressure by the meteorological department in one of the countries of Esoko's operation to mandatorily get the enterprise's weather feed approved by the meteorological society prior to disseminating it to farmers.

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<sup>4</sup> ICT in Agriculture: Connecting Smallholders to Knowledge, Networks and Institutions, The World Bank, Nov 2011

<sup>5</sup> ICT in Agriculture: Connecting Smallholders to Knowledge, Networks and Institutions, The World Bank, Nov 2011

<sup>6</sup> Reported by Esoko during the interview, Sep 2016

<sup>7</sup> Self-reported