Mobile Agriculture: Providing Tools and Support for Market Information Services and Commodity Price Exchange

By

Mr. Daniel Asare-Kyei, Agriculturist and geo-information specialist
ESOKO

Daniel Asare-Kyei
Esoko Service

Esoko is an agricultural market intelligence platform that improves how agricultural markets work for farmers & businesses by providing smarter communication tools.”

Mobile Phones present a new and exciting opportunity for businesses everywhere to improve on the efficiencies of how they collect market data from the field…

They also present exciting opportunities to make data more accessible for both internal policy analysis, as well as external public consumption.

Esoko has spent 6 years building a comprehensive platform that is changing the way farmers access information.
How does it work?

1. Info Agents profile farmers in the field

2. Configure & set ‘preferences’ in Esoko database

3. Send content by SMS: Personalized & Automatic

4. Farmers use info
### What kind of data can be collected?

<table>
<thead>
<tr>
<th>Market Prices</th>
<th>Bids &amp; Offers</th>
<th>Weather</th>
<th>Profiles</th>
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<tbody>
<tr>
<td>Enumerators can upload data about prices. You can collect farmgate, offlorry, retail or wholesale price types.</td>
<td>Enumerators or anyone countrywide can upload offers to buy and sell. This is a simple matchmaking service to promote national and regional trade.</td>
<td>Weather alerts are distributed via SMS on specific days and locations. GPS matching and a good data source is required.</td>
<td>Enumerators may collect profiles of traders, agents, processors, transporters, farmers etc. in any market or community to build an online directory</td>
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We provide our partners with...

1. **Technology**
   Powerful suite of tools that are hosted in the cloud and used on mobile and the web.

2. **Consulting**
   Extensive manuals that establish clear methodologies, processes, advice & training on how to collect data and deploy MIS projects.

3. **Sustainability**
   The only MIS to offer a sustainable business model with multiple revenue streams including subscriptions, consulting & training services, and SMS fees.
Esoko has four key services... that help organizations manage people & data

<table>
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<th>SEARCH</th>
<th>SURVEY</th>
<th>ASK</th>
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<td>Send <strong>automated alerts</strong> to individuals about market prices, agricultural tips, bids &amp; offers, weather. Send <strong>manual scheduled</strong> messages to targeted groups about reminders, advisories, promotions, events.</td>
<td>Create your own data-rich application of <strong>technical information</strong>, pictures and videos and host on PCs or distribute to field agents. Consistent, up-to-date info about your organization or another industry/sector.</td>
<td>Profile people, prices, farms, locations, offers in the field using a range of simple customized survey forms on phones, tablets, sms or any web-connected laptop. Capture real time market data.</td>
<td>Where available, provide a phone number for your clients and customers to use. Trained agents can manage your call centre needs and provide direct voice support to the field. Questions via SMS to our ‘inbox’ will also be available 2013.</td>
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Profile & Group farmers in real-time

Save time and errors by having your field agents profile using simple smartphones. Custom templates can be built to ask exactly what you need to know. You can confirm and save the exact GIS location of the person and the profiler, and even save a photograph.

Profiling people on paper takes time, is prone to error and loss, and can not be customized to specific questionnaires or tracked to GIS locations.

Categorize members by location, commodity and occupation. Group them so that you can easily target them with Esoko’s polling, alerts, or bulk SMS solutions.
Uploading Prices, Offers & Other Data

Managers can customize interfaces, markets, and commodities to suit specific enumeration activities in the field. Permissions can be managed so that only designated data can be uploaded by approved enumerators.

Via SMS/Java
Simple forms on ‘feature’ phones or even basic SMS formatting...any phone can upload

Via Smartphones
Handheld android devices allow direct data-entry with powerful and easy to use forms

Via any Web-connected PC (and tagging)
This interface allows you to choose between min/max/modal prices, tag price uploads with special comments or trends and customize which tags you want to track in your network.
Automated SMS Alerts for Farmers & Traders

Personalized & relevant content sent to your mobile phone as automated alerts:
Prices, Offers, News, Weather

Weather Forecast

Market Prices

Disease Alerts

Stock Availability

Bids & Offers
Send targeted bulk SMS...

Targeting messages has never been easier. Just select the area, or commodity and you can send specific messages to defined groups. Send out farming advice, news, training reminders, and announcements to thousands instantly at a fraction of the cost of calling.

- Target by commodity
- Target by location
- Schedule messages
- Customize SenderID
- Save recurring templates
- View Delivery reports
- Save $$ on cheap rates
Tracking Field activities & M&E via SMS...

1. Set up poll

2. Send Messages

On Esoko, you can set up automatic SMS polls or quizzes where you ask simple questions and users respond. All automatic. Even add airtime credit as incentives (where applicable).

Examples:
- Have you planted yet?
- How many in stock?
- Are you happy with program?
- What do you need?
- Which is correct...?

3. View Responses

4. Analyse Data
Linking buyers & sellers...

Anyone can upload offers using the mobile or web. Bids and offers are posted online. Esoko automatically sends the bids or offers over mobile when there is a match between buyer and seller.
Farmer Helpline & Club

- Low cost handset
- Farmer Helpline with experts
- Referral service
- 80% discount call rates
- Free SMS messages
- Free Esoko trials & discounts
**E-extension Messages via SMS**

Smartphone Tool for Extension Agents

In the Project Management unit
Esoko’s ‘Knowledge +’ software allows your extension department to organize and standardize their data into one system that can be used by technicians to support extension agents in the field.

In The Field
Equip your extension officers with Android smartphones, and they can have standardized information on a range of crops, varieties, inputs, diseases and administration information.
Does it work?

• Better negotiating
• Timing to market better
• Selling into new markets

In 2010 the French research organization CIRAD did the first African SMS-based price delivery research on Esoko in Ghana and observed an average 10% increase in revenues among participants. With broader content and better targeting, that impact is expected to rise.

New York University in March 2013 has announced that Yam farmers in the Upper Volta region of Ghana are gaining an extra 7-11% on the price they are selling their yams as a direct result of Esoko market prices.

In Malawi, Chitsosa trading was studied closely and it was determined that there was a $350/month savings on operational costs such as phone costs, or travel costs.

Victoria Odin (Ghana) now owns a fridge from additional income
Victoria used to sell her Soya beans at Yeji market in the Brong Ahafo Region of Ghana. She could get about $20 for 8 bags. When she started using Esoko she transported the same bags of soya beans to Ejura market in the Ashanti Region and sold it for $180. She was able to purchase a fridge from the additional income.

Sara Maunda (Malawi) finds 500% better prices through Esoko
Sara Maunda saw prices on Esoko were four times what her local trader was offering for her groundnuts...“They’re lying” he said... But she joined four neighbours to rent a pickup, travel 80km and sold her produce in Lilongwe for $130 instead of the $27 she would have taken from her local trader. A five-times increase.

Mustapha Korantsir (Ghana) increases revenues by 60%
Mustapha is from Esuehyia in the Central Region of Ghana and was selling 2,000 pineapples to local traders at 25p (0.13USD) each. Using Esoko SMS alerts, he realized he could get a much higher price. Indeed he discovered the average market price was around GHC1.20 (0.62USD). Using this information, he was able to negotiate a better price, selling his pineapples for around 40p each -- a 60% increase.
Farmers experience with market info

“I now direct buyers to my community to buy from me when prices are good”

“I now know Kumasi market, I go there every month”

“I now wait for good prices before I sell my produce”

“I used to sell my groundnuts in bowls in the local market, now I send it to Accra per bag”

They’ve changed marketing strategy
Challenges & Lessons Learnt

Data Collection of Market Data:
• Difficult to collect timely, accurate content from field
• Quality control measures must be set up
• Established data collection methodologies must be adapted to each context
• Pulling data from the field requires incentives

Deployment & Dissemination of Market Information:
• Technology is 10%, Deployment is 90%
• Training, Awareness Building, & Support are crucial
• Target Associations & Businesses to Access Farmers
• Lack of trust in information & info sources
• Community experts are key to success
• Pilots allow early tech adopters to demonstrate value, prove concept
• Know your audience & make sure content is personalized & relevant
About Esoko...

Esoko is Africa’s leading market information platform. We provide technical services, deployment support and sustainability planning. Our award winning platform is used throughout the continent with a wide range of private and public partners.

- 60 employees in Accra
- Deployed 16 Countries
- Private Business
- Founded in 2006
- 833 markets
- 4 languages
- 980,000 prices
- 25 software releases
- Financed by IFC/SEDF
How do I learn more about Esoko?

www.esoko.com
Our main webpage covers a description of what the service is, who are our client types, a range of features that we provide, and then case studies about who uses as. You can also find news and press releases.

blog.esoko.com
An engaging blog that tries to bring Market Information to life through the lives and events of those that are using MIS and trying to work out how to deliver value to smallholders and agric businesses.

product.esoko.com
A short summary of our product releases and new features. You can stay up to date with the latest improvements as the Esoko platform matures and releases new services.