

UNCTAD
GLOBAL COMMODITIES FORUM 2013
Recommitting to commodity sector development
as an engine of economic growth and poverty reduction

Room XVIII
Palais des Nations
Geneva, Switzerland

19 March 2013

**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

This material has been reproduced in the language and form as it was provided. The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.

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

Daniel Asare-Kyei



esoko

Esoko Service

Connect. Inform. Empower.



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?

4. Farmers use info



1. Info Agents profile farmers in the field



Prices Chart

Mais (White, grain) Prices (GHS)

Location	Price (GHS)
Eke Awka	0.45
Asafo	0.48
Bodija	0.42
Mile 12	0.40
Yan-Kaba	0.38
Dawansu	0.35

Prices

	GHS	ASAFO	BODJ	DAVA	EKEA	MILE	YAKA
Arachide (Bouche)	1.60/kg	0.55/kg	1.36/kg	2.03/kg	1.74/kg	-	-
Maïs (White, Grain)	0.52/kg	0.47/kg	0.46/kg	0.55/kg	0.46/kg	0.43/kg	-
Maïs (Jaune, Grain)	-	0.53/kg	-	0.55/kg	0.51/kg	0.47/kg	-
Mil (Sain, Grain)	0.75/kg	-	0.46/kg	-	-	0.53/kg	-
Riz (Local)	1.10/kg	1.10/kg	1.12/kg	0.80/kg	1.77/kg	1.04/kg	-
Riz (Importé)	1.40/kg	1.32/kg	-	1.29/kg	1.30/kg	1.35/kg	-
Soja	-	0.84/kg	0.79/kg	-	0.93/kg	0.87/kg	-
Sorgho (Blanc, Grain)	0.62/kg	0.58/kg	0.35/kg	0.84/kg	0.67/kg	-	-
Sorgho (Rouge, Grain)	0.62/kg	0.58/kg	0.40/kg	0.76/kg	0.70/kg	-	-
Haricots Blancs	-	1.04/kg	0.80/kg	0.94/kg	0.84/kg	1.05/kg	-

Offers

Product	Offers
Noix De Karité (Non Décorquées)	2 offers to sell
Arachide (Bouche)	7 offers to sell
Soja (Shen) Nut)	4 offers to sell
Sorghum (Red)	1 offer to sell
Riz (Local)	3 offers to sell
Mil (Sain, Grain)	6 offers to sell
Haricots Blancs	1 offer to buy 1 offer to sell
Beans (White)	1 offer to sell

2. Configure & set 'preferences' in Esoko database

Esoko Price Alert
21-10-2010 7:55am
Maize White: (GHS/KG, WHS/RTL)
NIMA=0.40/0.50
ASHA=0.50/0.58
TAKO=0.50/0.80
SKDI=0.50/0.80
CTMK=0.44/0.50
KRAC=0.43/0.49
BIMB=0.28/0.29
HOHO=0.46/0.50

Esoko Offer Alert
21-10-2010 7:55am
OFFER TO BUY:
Soya Bean, 5,000 MT
225 Franc CFA
Contact Moise 22507828246
Cte D'Ivoire. Offer expires in 33 days.

3. Send content by SMS:

Personalized & Automatic

What kind of data can be collected?



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

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



INFORM

Send **automated alerts** to individuals about market prices, agricultural tips, bids & offers, weather.

Send **manual scheduled** messages to targeted groups about reminders, advisories, promotions, events.

SEARCH

Create your own data-rich application of **technical information**, pictures and videos and host on PCs or distribute to field agents.

Consistent, up-to-data info about your organization or another industry/sector.

SURVEY

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.

ASK

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.

Profile & Group farmers in real-time



Mass upload
via Excel too

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.

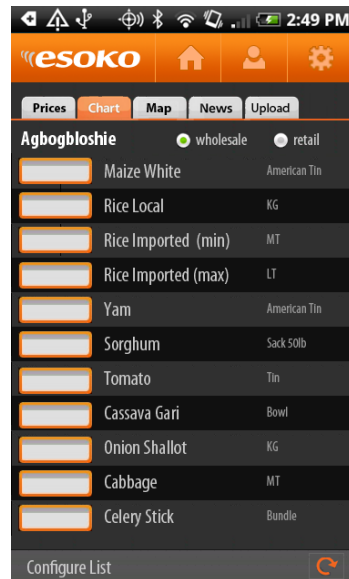


Via Excel too



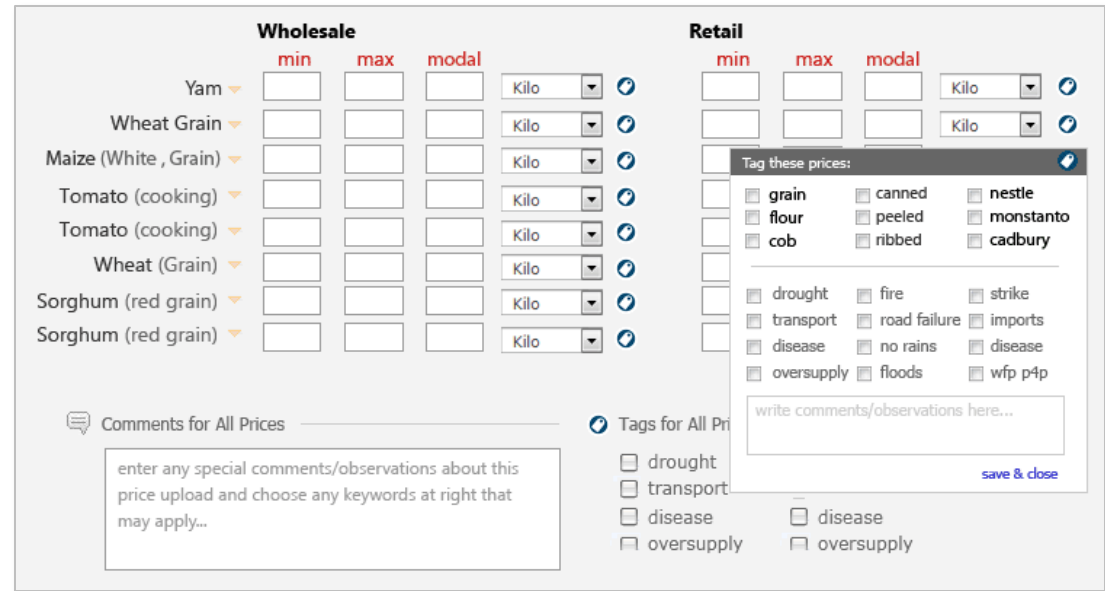
Via SMS/Java

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



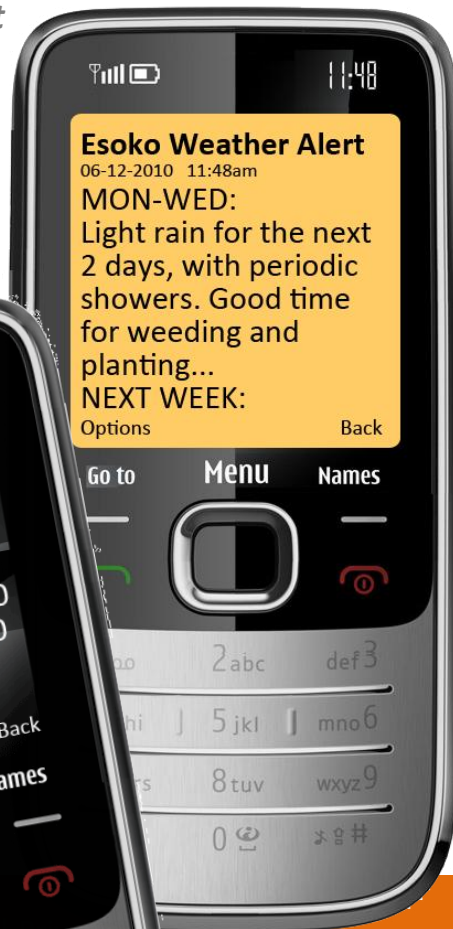
Via any Web-connected PC (and tagging)

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

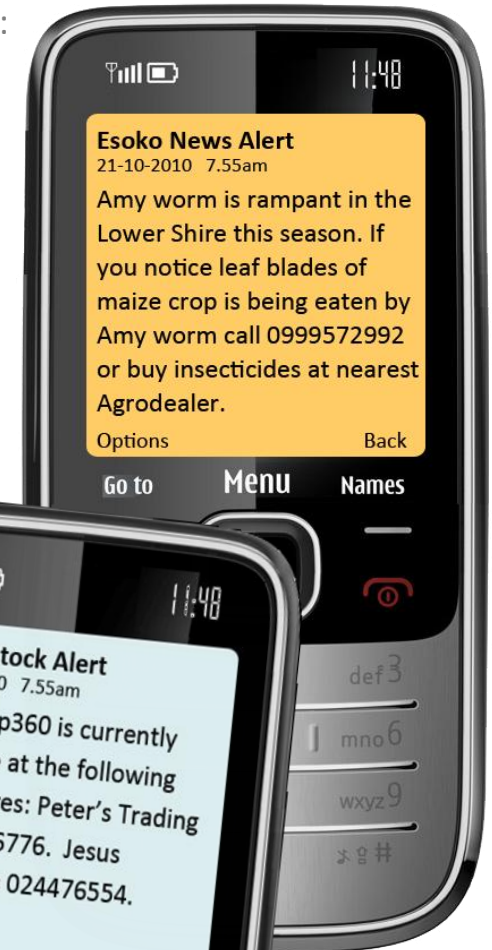
Weather Forecast



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.

SMS Push!

Message | Delivery Reports | Scheduled Messages

Compose Message

REMINDER: attend the training in Wa this tuesday. Starts at 8am. Come learn ways to improve how you improve your business through better management practices.

158 characters 1 message

Sender ID: Esoko

Who pays for this SMS?: Mark Davies (U000)

Recipients: 58

Save as Template
Send a copy in email
Send Me a Copy

Select Recipients

Search for users within your networks.

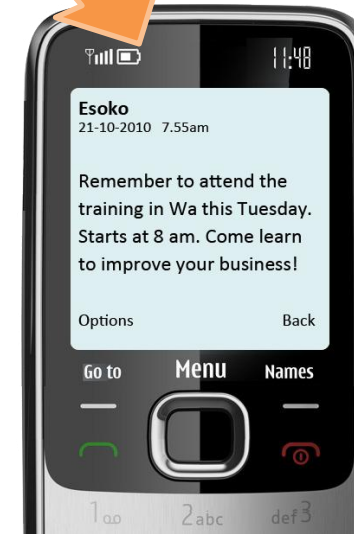
AMITSA (5752 contacts)

Esoko Staff (58 contacts)

- Afua Yeboah Ghana
- Lawrence Totimeh Ghana
- Lisy Daisy Ghana
- Kwesi Acquah Accra, Ghana

Selected Recipients (58)

- Afua Yeboah
- Lawrence Totimeh
- Lisy Daisy
- Kwesi Acquah
- Bernard Adjei
- Nana Adwoa Boafoa

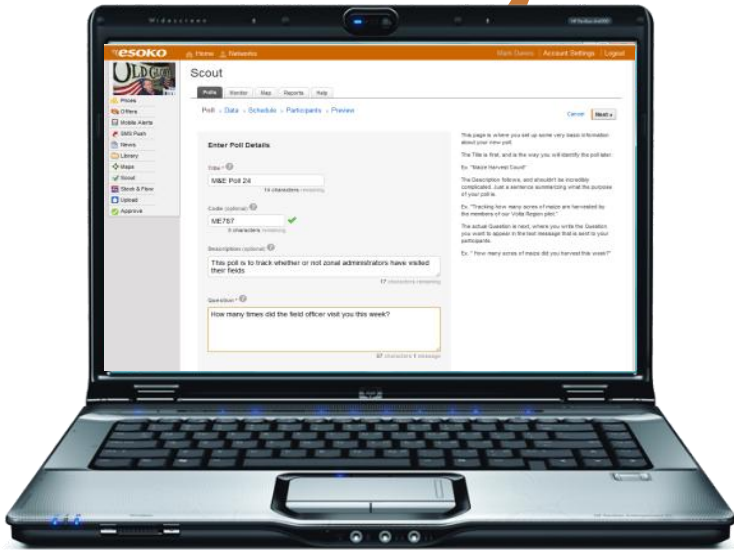


- Target by commodity
- Target by location
- Schedule messages
- Customize SenderID

- 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).

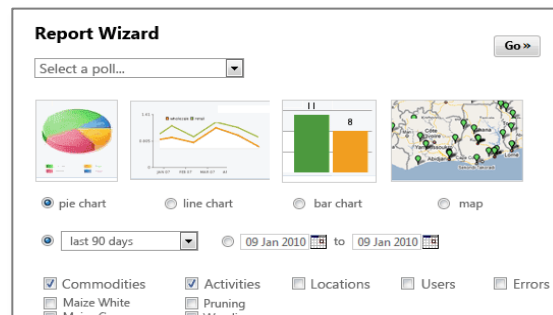
Examples:

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

3. View Responses

Date	App	User	Message	Error	Action
18/12/09	Scout	John Levermore	Yes, 13, p=4	Syntax: Wrong	Action >
18/12/09	Scout	Afua Ankomah	Maize, 14 acres	Alias: Not recognized	Action >
18/12/09	Scout	Andrea Biardi	13,24,35,45,7	Too many values	Action >
18/12/09	Scout	John Levermore	Yes, 13, p=4	Syntax: Wrong	Action >
18/12/09	Scout	Afua Ankomah	Maize, 14 acres	Alias: Not recognized	Action >
18/12/09	Scout	Andrea Biardi	13,24,35,45,7	Too many values	Action >
18/12/09	Scout	John Levermore	Yes, 13, p=4	Syntax: Wrong	Action >
18/12/09	Scout	Afua Ankomah	Maize, 14 acres	Alias: Not recognized	Action >
18/12/09	Scout	Andrea Biardi	13,24,35,45,7	Too many values	Action >

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.

Offers

OfferWatch Upload


Commodities(All) Locations (1)

See who's trading what. Customize offers by clicking on "Show Filters" or post your own through "Upload". Get offers via SMS through "Alerts".


● Approved ● Pending Show: Offers to Buy Offers to Sell

Country	Commodity	Quantity	Grade	Price
Ghana	● Cashew nuts (unshelled)	6,000 kg	-	Unspecified (negotiable)
	● cassava (gari)	4,000 kg	-	Unspecified (negotiable)
	● yam	2,000 kg	-	Unspecified (negotiable)
	● Cashew nuts (unshelled)	3,000 kg	-	Unspecified (negotiable)
	● beans white	1,000 kg	-	Unspecified (negotiable)
	● Maize (yellow, grain)	3,000 kg	-	Unspecified (negotiable)
	● Goat (live 13-30kgs)	15 hd	-	Unspecified (negotiable)
	● Soya bean	2,000 kg	-	Unspecified (negotiable)
	● cassava (gari)	5,000 kg	-	Unspecified (negotiable)
	● Sheep (live 15-30kgs)	13 hd	-	Unspecified (negotiable)
	● Rice (local)	10,000 kg	-	Unspecified (negotiable)
	● Cashew nuts (unshelled)	6,000 kg	-	Unspecified (negotiable)
	● Shea (nuts, unshelled)	5,000 kg	-	Unspecified (negotiable)
	● Soya bean	5,000 kg	-	Unspecified (negotiable)

Offer to Sell close X

 **Beans White**
10,000 kg 225 KMF/KG
Expires Today

Country: Burkina Faso
Origin: --
Quantity: 10,000.00 kg
Price: 225.00 KMF / kg
Grade: A
Valid Until: 29 Apr 2010
Offer Date: 15 Apr 2010
Payment Method: --
Delivery: --
Will Be Delivered: --
Notes: KABORE Philippe Telephone: 0022 370136516

About the Seller
 Boukary Tiendrebeogo
Tel: 2267014xxxx; tiendboukary@xxxxxx.xx

Email Now SMS Now

I am contacting you because I am interested in your offer /offer on TradeNet.

OFFER TO BUY
Shea kernel 500mt - price: price: negotiable from Burkina Faso, grade Grade A, contact ROSE MARIE COMPAORE 22676433120 120

to a friend: add email here.
to the seller

send!

21-10-2010 7:55am

Sell MAIZE 2MT

Options Back

Go to Menu Names

1 00 2 abc def 3
4 ghi 5 jkl mno 6
7 pqrs 8 tuv wxyz 9

11:40

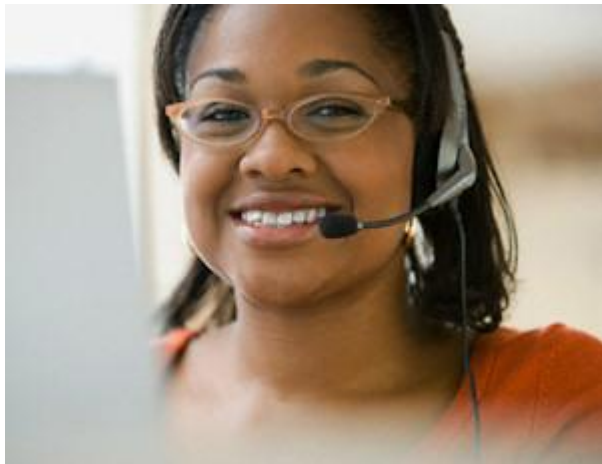
Esoko Offer Alert
21-10-2010 7:55am

OFFER TO BUY:
Soya Bean, 5,000 MT
225 Franc CFA
Contact Moise 22507828246
Cte D'Ivoire. Offer expires in 33 days.

Options Back

Go to Menu Names

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

Disease outbreaks? Training reminders? Event/Training Announcements? New varieties? Input programs?



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...

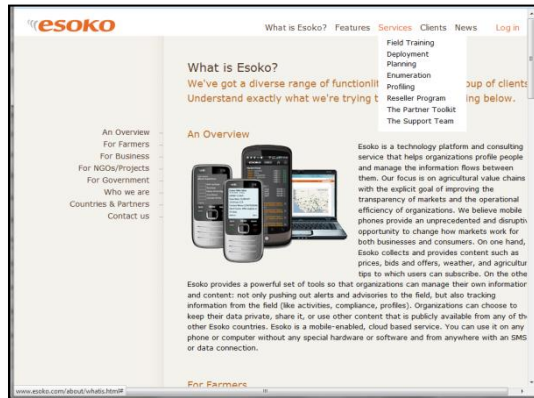


- 60 employees in Accra
- Deployed 16 Countries
- Private Business
- Founded in 2006
- 833 markets
- 4 languages
- 980,000 prices
- 25 software releases
- Financed by IFC/SEDF

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.



How do I learn more about Esoko?



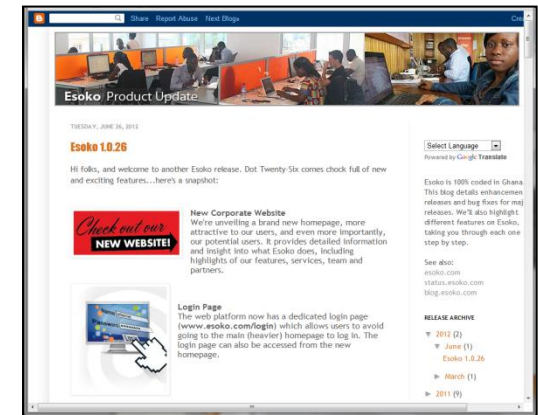
www.esoko.com

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.



www.esoko.com/about

info@esoko.com

+233 302 211611