Orange services for agriculture in Africa

April 2015
this brochure aims at highlighting the methods developed by Orange in order to improve productivity in the rural sector, increase farmers income and strengthen the entire value chain

for more information, please write to the following email address
orange.magriculture@orange.com
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2. Orange services for agricultural stakeholders
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1 – what ICT can bring to the agricultural sector in Africa
agriculture in Africa - key figures

60% of jobs in Sub-Saharan Africa are in the agricultural sector

13% of GDP comes from agriculture on average in Sub-Saharan Africa

200 million people are suffering from hunger in Africa which represents 24% of the inhabitants of the continent (versus 33% in 1990)

63% of rural inhabitants of Sub-Saharan Africa are in a situation of food insecurity

agriculture in Africa - key challenges

62% of farmers in developing countries lack access to financial services

75% of arable lands in Sub-Saharan Africa are unused

4% of arable lands are connected to an irrigation system

1/2 productivity (kg/hectare) in Sub-Saharan Africa compared to developed countries

800 million people left rural areas for cities during the past 50 years

e-agriculture is an opportunity for African farmers

there is a massive development of ICT in Africa… … having a significant impact on local ecosystem

2x
ICT development is twice faster in Africa than in any other part of the world

60%
of the 400,000 African villages have access to network coverage

1.2%
the GDP growth brought by every increase of 10% in mobile penetration

48
$ billion
the potential increase of smallholders farmers’ income by 2020 thanks to ICT

e-agriculture opportunities can be broken down into different categories of services…

financial services via mobile phone (loans, transfers, savings, insurance)

information and training services via mobile (hotline, sms, data collection etc.)

agricultural trade enhancement services via mobile phone (information on market prices, market place, etc.)

… which aim at:

✓ improving farmers’ income

✓ increasing agricultural productivity

✓ strengthening the overall value chain


external version
2 – Orange services for agricultural stakeholders
Orange has more than 110 million of customers in Africa, Middle East and Asia (December 2014)

20 countries

22 000 employees
3 key levers of actions to enhance socio-economic innovations in agriculture

- Promote digital inclusion
- Use our technologies and know-how for development

Infrastructures & Connectivity

Social Innovation & Business

Products & Services

Ecosystems
- Finance
- Entrepreneurs & SMEs
- Support
- Open Innovation

Social innovation & business
3 development axes of Orange m-Agri services

- **Improve farmers' income**
  - Access updated market prices of crops and cattle via mobile – through SMS or IVR* – in order to better bargain prices and optimize travels
  - Save money, pay securely and access financial services (micro-credit, savings, insurance) via mobile
  - Sell or buy commodities via mobile thanks to a market place linking supply and demand

- **Increase agricultural productivity**
  - Send information and advice to farmers by SMS or vocal messages
  - Send information and weather/environmental alerts
  - Create a directory of stakeholders (buyers & sellers) with their localization

- **Strengthen the overall agricultural value chain**
  - Collect and process field data in real time via mobile or tablet in order to improve statistical analysis and anticipate needs
  - Enable logistical tracking of commodities or vehicles via machine-to-machine solutions
  - Facilitate and secure agricultural subsidies distribution
  - Improve irrigation systems

*Interactive Voice Response*
# Orange m-Agri services in Africa

- **improve farmers income**
  - information on product prices in local markets via mobile (text or vocal)
  - call center specialized in agriculture
  - Orange Money (money transfers, savings, etc.)
  - virtual market place
  - weather and environmental services

- **increase agricultural productivity**
  - bulk SMS (text or vocal)
  - sharing information via mobile phone with a whole community (through vocal or text messages)
  - Orange Money (payments, transfers, loans, insurance, etc.)
  - training on agricultural techniques

- **strengthen the overall agricultural value chain**
  - data collection via mobile
  - solution for vehicles fleet management
  - Orange Money (vouchers for subsidies, wage payments, etc.)
  - machine-to-machine solution for irrigation

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*external version*
3 – Orange m-Agri services in detail
Thanks to this information, I get local markets prices on my mobile with a simple call/SMS/short code. I spend less money in transportation and I negotiate better when I sell my crops.

Orange Niger provides prices of agricultural commodities and cattle in 87 markets through the mobile service Labaroun Kassoua.
« Labaroun Kassoua » provides information on prices of agricultural commodities and on cattle on all main markets in Niger via an Orange mobile phone.

- to receive the current prices of agricultural commodities and cattle market
- to do a better choice where to sell or purchase goods
- to optimize transportation depending on market prices of agricultural commodities
- cost: 50 FCFA / request, 20 FCFA/min

why use this service?

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- to optimize transportation depending on market prices of agricultural commodities
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how to use it?

- via SMS: sending “market” or “cattle” to the number 139
- via USSD: dialing #139#
- via vocal call to 139 in Haoussa or French

launched in Niger since 2011 with RECA and SIMB
I can put money aside for the lean season before the next harvest and better secure my family’s future. I subscribe to a micro-insurance to insure my crops. Thanks to Orange Money, I can save money securely and discreetly.

Orange offers Orange Money services in 13 African countries.

- Orange offers Orange Money services in 13 African countries.

financial services

**improve farmers’ income**

**targets:** farmers, NGO, institutions

**countries:** Niger, Mali, Ivory Coast, Madagascar, Egypt, Guinea Conakry, Jordan, Mauritius, Kenya, Tunisia, Senegal, Cameroun, Botswana
Orange Money is an innovative financial service via a mobile phone enabling Orange customers, to perform the following operations: deposit and withdrawal of money, transfer of money from one individual to another, purchase of phone credit, consultation of Orange Money account credit and of the last financial transactions.

**What is this service?**

- for financial transactions
- to have the same possibilities as those with a bank account
- to save and to withdraw money
- to have access to microcredit services

**Why use this service?**

**How to use it?**

- easy to use from an Orange mobile:
  - open a free account in Orange store or in a partner store
  - confidential password

More than 10 millions of clients in 13 countries
I have a call center dedicated to my concerns and answering in my language. Agronomists provide me with useful information, advice and explanations on cultivation techniques 7 days a week!

Orange Mali launched Sénékéla, an agricultural call-center accessible on the 37333 from 8:30 am to 7 pm
"Sénékéla" has been launched in Mali. A call-center with agronomists speaking French and Bambara, all answer questions farmers may have on agriculture: planting methods, seeds, sowing time, fertilizers, etc.

- to access a call center dedicated to farmers
- to receive information on market prices in Bambara
- to increase productivity
- to easily get practical advice

A simple phone call to 37 333 from an Orange SIM card in Mali. Cost: 50 FCFA/minute

launched in Mali since 2014 with GSMA, IER, IICD and RONGEAD.
We agree on the price and he pays me an advance via Orange Money before coming to take the goods!

Wherever I am, I can sell my onions in a few clicks on my mobile and I am directly contacted by potential buyers.

➤ Orange proposes mobile market place services in Madagascar

<table>
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<th>detail</th>
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<td>target</td>
<td>farmers</td>
</tr>
<tr>
<td>countries</td>
<td>Madagascar</td>
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</tbody>
</table>
Market Place is a mobile commercial platform providing an opportunity to buyers and sellers to publish and consult offers or request 24/7 in order to benefit from the best deals. This service is available from any mobile phone with or without internet access.

**what is this service?**

- to enlarge sales channels
- to increase income
- to have a better visibility for sales or purchases
- to easily contact buyers or sellers

**why use this service?**

**how to use it?**

a simple call to the call center from an Orange mobile in Madagascar:

- opening an account with password (200 Ar/call)
- via USSD dialing #432#
- via internet and mobile internet

launched in Madagascar since 2014 with the CCIA
I would like to post vocal advice and information on new cultivation techniques for wheat. In Egypt, the Ministry of Agriculture sends vocal advice and information modules to smallholder farmers via their mobile phone in order to increase wheat production.
In a society with a high illiteracy rate, voice message distribution enables farmers to take part in exchanges and debates on subjects of their interest, it also allows farmers’ groups, cooperatives and local radios to broadcast information.

**what is this service?**

- to access voice information messages broadcasted by cooperatives, NGOs, local radios...
- to post messages on a certain topic
- to follow selected voice blogs

**why use this service?**

**how to use it?**

- web interface
- voice SMS (push)
- calling a vocal server

**pilot ongoing**
Thanks to the advice received by SMS I managed to increase the yield of my wheat field.

- **Mobinil Egypt** and the Ministry of Agriculture have launched a pilot: 600 farmers regularly receive SMS information on wheat culture.
The bulk SMS sending service allows to send information to multiple recipients through SMS. It enables NGOs, agricultural communities to keep in touch with their members by sending them information regularly.

- to broadcast information and trainings to communities or groups of people in real time
- to maintain links with farmers and communities

- SMS sent via a web interface

**bulk SMS service**
I optimize the use of my truck to collect goods from small producers thanks to the information they send me.

In Mali prices of agricultural commodities and weather information are collected through a mobile application in order to improve statistical analysis.
The data collection service can be used for field studies (surveys, census), warning systems (epidemic, commodity prices) or any other type of real-time information collection through mobile devices. Remote data monitoring, storage, processing and distribution services are also available.

- to count the rural population and production in order to improve governmental statistics / field agents’ efficiency
- to collect prices and quantities on the markets in order to anticipate shortages and the important price variations
- can integrate: pictures, GPS coordinates; it enables to receive reliable information in real time
- survey configuration, storage, data processing and analysis through a web interface
- data collection and distribution through a smartphone or a tablet (3G or GPRS network)

Pilot launched in Mali and soon in Cameroon.
Thanks to the voucher system on my mobile I can receive fertilizers and crops distributed by the government easily and in complete confidence.

- In Egypt Mobinil participates in a pilot project to secure payment and distribution of subsidised crops towards farmers.
Management of transactions (traceability, payments) of subsidized products using virtual mobile accounts.

- to manage the distribution of subsidized products
- to manage inventory levels
- to track transactions up to the end-user
- to manage payments

- register beneficiaries in the data base
- users download mobile application

pilot planned in Egypt in 2015
summary table of Orange m-Agri services
## Orange m-Agri services in Africa 1/3

<table>
<thead>
<tr>
<th>country</th>
<th>service name</th>
<th>channels used</th>
<th>value proposition</th>
<th>service contents</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niger</td>
<td>Labaroun Kassoua</td>
<td>- SMS - USSD - IVR*</td>
<td>• provide access to information on commodities prices&lt;br&gt;• facilitate markets choice for purchases and sales&lt;br&gt;• optimize transportation costs</td>
<td>• products prices (onion, sesame, peanut, potatoes, niebe, cattle, etc.) on more than 87 markets in Niger</td>
<td>launched since:&lt;br&gt;- SMS : Nov 2011&lt;br&gt;- USSD : April 2012&lt;br&gt;- IVR* : planned for May 2015</td>
</tr>
<tr>
<td>Mali</td>
<td>Sénékéla</td>
<td>- Call center - USSD (for price information only) - data - data collection</td>
<td>• provide access to information on market prices in local Bambara language&lt;br&gt;• improve productivity&lt;br&gt;• provide practical advices</td>
<td>• price information (mil, corn, onion, etc.)&lt;br&gt;• practical advices (seeding, agricultural inputs, harvest, etc.)&lt;br&gt;• price information (onion, rice, maize, vegetables, fruits) for retailers or wholesalers</td>
<td>launched in April 2014</td>
</tr>
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*Interactive Voice Response*
## Orange m-Agri services in Africa 2/3

<table>
<thead>
<tr>
<th>Country</th>
<th>Service Name</th>
<th>Channels Used</th>
<th>Value Proposition</th>
<th>Service Contents</th>
<th>Status</th>
</tr>
</thead>
</table>
| Ivory Coast | Market Info System/Cashew nuts | - USSD | • increase productivity  
• provide access to information on commodities prices  
• increase farmers’ bargaining power (choice of the market for sales/purchases)  
• increase agricultural yields | • price information on: cashew nut, corn, onion  
• cultivation techniques (harvest, seeding, fertilizer, etc.)  
• national and international markets price trends for sales decisions | launched in January 2014 |
| Madagascar | Bazar mada | - USSD | • increase farmers’ income  
• tool to provide sales support | • prices information on rice, vegetables, fruits, handcrafted products, cattle, agricultural inputs, fishes, etc. | launched in April 2014 |
| | Market place | - USSD  
- IVR* (opening of market place account) | • enlarge sales channels for farmers  
• increase farmers’ income  
• propose a market place to give visibility and connect sellers and buyers | • publication of agricultural products offers (offer)  
• publication of product request (demand) | launched in April 2014 |

*Interactive Voice Response
## Orange m-Agri services in Africa 3/3

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<thead>
<tr>
<th>country</th>
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<th>value proposition</th>
<th>service contents</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>Farmer awareness (professional training and information)</td>
<td>- SMS</td>
<td>- increase productivity</td>
<td>• information on inputs to use, on quality of seeds</td>
<td>- pilot launched via SMS channel: march 2015</td>
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<tr>
<td></td>
<td></td>
<td>- Call center</td>
<td>- increase yields</td>
<td>• professional training on best practices and cultivation techniques for rice and wheat (fertilizers, seeds, ground care)</td>
<td>- Sharqia area, close to Nile delta (100 km north east of Cairo)</td>
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<td></td>
<td></td>
<td></td>
<td>- improve cultivation techniques</td>
<td>• SMS quizz to evaluate skills of farmers and the efficiency of the information broadcasted</td>
<td>- target: 600 farmers</td>
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<td></td>
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<td>- evaluate skills acquired through service usage</td>
<td>• advices on daily concerns on agriculture</td>
<td>- cultures: rice and wheat</td>
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<td>- provide real-time answers on agricultural concerns</td>
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<td>- inform in local language at a low cost</td>
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<td>fertilizer distribution and payment with mobile wallet</td>
<td>- SMS</td>
<td>- help farmers to benefit from State fertilizer subsidies</td>
<td>• fertilizers subsidized by government</td>
<td>pilot planned launch in 2015!</td>
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<tr>
<td></td>
<td></td>
<td>- USSD</td>
<td>- improve traceability of products</td>
<td>• gathering information on sales of subsidized fertilizers</td>
<td>- April – June: for rice</td>
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<td></td>
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<td></td>
<td>- introduce easy payment via NFC*</td>
<td>• payment with NFC* application</td>
<td>- Oct-Dec for wheat</td>
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<td></td>
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<td>- target: 6 villages</td>
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<td></td>
<td></td>
<td></td>
<td>- Sharqia region</td>
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* Near Field Contact technology
### Orange supports m-Agri start-ups

**Tech Innov**
*winner of the Orange African Social Venture Prize 2011*

This Nigerien solution enables farmers and agricultural cooperatives to irrigate remotely their fields with their mobiles. Farmers can thus increase their yields and reduce their water consumption.

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**Vivus Limited**
*winner of the Orange African Social Venture Prize 2012*

Vivus Limited sends “deal of the day” SMS to crop vendor and allows them to optimize their stocks and thereby to avoid waste.

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**Modisar**
*winner of the Orange African Social Venture Prize 2014*

An application designed to help Botswana’s farmers to manage their farms. The goal is to develop the agricultural sector by associating the passion for breeding and the benefits of new technologies.

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**Mewanko Farm**
*winner of the Orange API Partner Prize 2014*

A Cameroonian project based on the creation of an online market place for agricultural commodities. The goal is to facilitate the life of small farmers giving them direct access to markets in order to increase their income.
thank you