



## Tigo Kilimo, Tanzania

Tanzania has a population of 47 million is one of the world's poorest countries with a GDP per capita of \$1,400.



Economic growth, however, is strong with annual GDP growth rate of 6%-7%. The Tanzanian economy is heavily dependent on agriculture: 40% of GDP, 85% of exports and 80% of employment. In the agricultural sector, annual growth is only 4% indicating a lagging of agricultural productivity. Leveraging on this key insight and the furious growth of mobile telephony in recent years (currently at 43%) TIGO has decided to develop a market centered information system providing: weather forecasts, agronomy best practices and market prices for the major crops grown in the country.

Tigo Kilimo will ultimately be available through 3 key mobile channels:

1. Unstructured Supplementary Service Data (USSD)/SMS
2. Integrated Voice Response (IVR)
3. Call center

Tigo Kilimo service has gone through a round of regional pilots and surveys with moderate success, the goal being to deploy it over the entire country.

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## mKisan, Handygo Technologies, India

mKisan is designed to be a unique mobile based extension service which includes comprehensive information and advisory on a wide range of relevant topics from information and advisory on crops and livestock, agro bulletins comprising agro met advisory, information on market prices, pest & disease alerts and a dedicated farmer helpline. Apart from this, mKisan project also aims to test video based advisory, knowledge sharing tools amongst farmers and will provide specific services for women farmers.



The service is available in six Indian states in their respective regional languages targeting a million mobile subscribers within the next two year project period. The service delivery is through Interactive Voice Response (IVR) platform and is supported by Short Message Service (SMS), location based Out Bound Dialers (OBD) and a Query Recording Mechanism for farmers to record their queries.

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## Vodafone Farmers' Club, Turkey

Vodafone Farmers' Club was developed in collaboration with the Turkish Ministry of Food & Agriculture. It's a comprehensive program that includes mobile products, information services, education activities and the loyalty club. The club sends free and tailored SMS messages in order to influence good agriculture practices. We inform farmers on weather conditions, crop and livestock care tips, daily market prices, regulatory changes, governmental aids and another updates. Another important activity of the club is the Vodafone farmer's truck road show across the country. The truck visits villages to conduct professional training with farmers about the best methods of harvest cultivation and livestock care. The training content is tailored to the specific interest and need of each village.



In addition, we provide economic support to our farmer club members on their mobile expenses. Our farmer subscribers get specially priced phones, can pay their mobile expenses once a year at harvest time, and benefit from special discounts in thousands of agricultural stores and companies. Farmers receive free insurance against health and safety incidents.

To mobilize agriculture we provide M2M solutions for remote measurement of key metrics including temperature, humidity, cropping density and chemical levels (eg. ammonia), as well as remote automation solutions for irrigation, feeding etc. As Vodafone Turkey we remain committed to helping to mobilize the Turkish agriculture sector for a more sustainable future.

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## 12582, China Mobile

12582 was launched by China Mobile to provide farmers with access to information and advice about agricultural weather, market prices and trading facilities, farming techniques and working opportunities in cities via call centre (also expert helpline), SMS, MMS, WAP and WEB.



After running for 6 years, 12582 provides regional and individual information customized for users and has served cumulatively more than 50 million farmers in China. Meanwhile, China Mobile has promoted M2M applications actively in mAgri to fill the urban-rural digital divide and to advance the rural informatizing process. Take greenhouse control system and products traceability for example, more and more M2M applications will be fulfilled in future.

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## IFDC Pilot: Combatting Counterfeit Agricultural Products with Mobile Authentication Systems (MAS), Uganda

Unscrupulous entrepreneurs produce counterfeit pesticide packaging and fill it with inert product, sell inferior grain as quality seed and palm gravel off as fertilizer. Neither law enforcement agencies nor Ministries of Agriculture nor the private sector have been able to make any real headway in reducing this illegal trading.



With support from the U.S. Agency for International Development (USAID) through the Common Market for Eastern and Southern Africa (COMESA), IFDC is helping eliminate counterfeit crop protection products (CPPs). IFDC staff members designed a simple counter-measure and, in partnership with CropLife Africa Middle East (CLAME) and CropLife Uganda (CLU), IFDC launched a pilot program to scientifically test the effectiveness of the methodology.

The special label consists of a Holospot® combined with a barcode and scratch-off label, all carrying a unique pack-specific number. These unique numbers are submitted as SMS queries to the local short code 6799 which then, within a few seconds, delivers a re-assuring authentication message.

The program design stipulated two key indicators:

1. Will small farmers and the retail sector adopt the e-verification technology?
2. Can small farmers be persuaded to pay a premium for a genuine product?

The pilot resulted in an overall increase in market share of the products with the e-verification of 91%, and demand for the special packs was so great that many retailers exhausted their stock before the pilot was completed.

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## About the GSMA mAgri Programme

The GSMA's mAgri Programme aims to improve the productivity and incomes of smallholder farmers in emerging markets through commercially viable mobile services. Through the mFarmer Initiative, the GSMA mAgri Programme

supports mobile network operators and service providers in launching agricultural value added services (Agri VAS) for smallholder farmers in emerging markets.

## Nano Ganesh, India

Managing water pumps in the rural sector is a painful and costly task for many farmers in developing countries. They unwillingly spend their precious time and energy on frequent trips to remotely located pumps with compromise on family and safety.



Nano Ganesh from Ossian Agro Automation is an electronic device connected to the electrical starter along with a mobile phone. Farmers can control and monitor water pumps by accessing from any place with the help of a mobile phone. They do not physically need to visit the pump for on-off operation.

In some advanced models, farmers get SMS alerts on their phones about electricity and pump parameters. With some modifications, Nano Ganesh can also be used to control any electrical loads such as generators, coolers, compressors etc.

Nano Ganesh is a perfect blend of modern technology and rural needs for empowering the agriculture community.

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