mAgri Programme Case Study
M-Kilimo, Kenya

KEY FACTS - Kenya	
Population: 39m (of which rural: 78.4%) GDP Total: $65bn (of which Agri: $16.25bn) GDP Per Capita: $1782 (<$5 per day)	50% of all exports generated by the agricultural sector 70% of labour working in agriculture Mobile Penetration: 51%

Kenya: The Arena

Kenya is a developing country where over 70% of the population live and work in rural areas. The vast majority of this population is dependent upon farm yield to survive. Often, this focus upon subsistence means that the full commercial potential of smallholder farms is never realised.

Farming methods are handed down from generation to generation and are not always the most efficient. Nor do they take advantage of the wealth of cutting-edge scientific techniques and knowledge that are applicable to them. These two facts frame a yawning information gap that exists between a typical Kenyan farmer and the best-practices that could uplift their productivity and livelihood.

At the same time, Kenya has one of the highest mobile penetration rates among Sub-Saharan African countries. More than half the population are mobile network subscribers. The mobile phone, then, is often the only piece of technology to which rural people have access and is ideally placed to bridge the knowledge gap and have impact upon productivity and income.

M-Kilimo: Overview

To test and prove the viability of agricultural mobile value added service products (Agri VAS), the Development Fund, supported by the Rockefeller Foundation, set up a farmer helpline, M-Kilimo, in Kenya.

M-Kilimo ('M-Agriculture' in Swahili) had at its heart three objectives.

- To set up a fully functioning helpline that provided high quality information services to smallholder farmers
- To understand the information needs of farmers
- To test the commercial viability of a sustainable Agri VAS deployment

KenCall, the largest business process outsourcing (BPO) company in East Africa had significant experience of providing information based support services via the mobile channel and became the selected grantee to implement the helpline. The pilot was designed in 2009 as a voice-based service where farmers spoke with helpline experts who dealt with any agricultural query raised by the user.

Service Design

When launched, the service was available to all Kenyan farmers with a mobile phone, irrespective of network affiliation.

M-Kilimo allows the farmers to call the Farmer Helpline anytime between 7am and 11pm, seven days a week. Where necessary, the service was offered in several local languages alongside Swahili and English.

The call costs were set at the normal network rate, which varied between operators and ranged from 1 - 3 KSH (0.0084 USD and 0.025 USD respectively).

Since the dialogue between the farmer and the helpline expert occurred in real time, most problems could be resolved during the lifetime of the call. However, complex queries sometimes prescinded this from happening. M-Kilimo made an undertaking to try to resolve these more complicated issues within a 24hr period. Typically, the helpline experts dealt with four main topics of enquiry.

- agricultural tips and efficient farming practices
- questions on plant and animal diseases & treatment
- agriculture-specific weather forecasts
- market price information

Customer Relationship Management (CRM)

After the in-bound call is received by the service it is automatically distributed to an available agricultural expert, who then deals with the query.

At this point the CRM system automatically logs and stores data which includes the time of the call, the duration, the waiting time, the name of the expert handling it and whether it was an out-bound or in-bound call.

Whilst on the call, the expert is constantly adding to this basic user profile by noting the location of the farmstead, the type of agronomy involved, the size of the farm and some additional information including the farmer's access to formal financial services and the referral method.

The details of the farmer's question are also noted by topic eg: *chicken, disease, blackspots*. These topics are tagged to enable them to be searchable against future queries. A full transcript of the answer is recorded and kept to facilitate searching in future.

A good CRM system with analysis of this type allows the team to understand the customer and their needs and analyse the efficacy of marketing campaigns. This information may allow a business owner to link customers to other ecosystem players and service providers.

Recruitment & Personnel

In an information service like M-Kilimo, the advice given to subscribers must be seen as both trustworthy and effective. Customer loyalty and the growth of the service depends absolutely on this being the case. Therefore the people on the front line of the service (in effect, the interface with the farmer), should be appropriately qualified and have practical knowledge. All helpline experts held a minimum of a bachelor's degree in agriculture and at least two years of relevant field experience.

Farmers typically have a range of information needs and the team were recruited to cover this spectrum. M-Kilimo could provide advice on: horticulture, aquaculture, climatology, pests, plant disease, animal husbandry, agricultural engineering, market advice, environmental and veterinary issues.

M-Kilimo refers complicated problems that cannot be immediately resolved to a second line of support which is comprised of Subject Matter Experts (SME). The SME also provided a quality assurance service for the content and delivery.

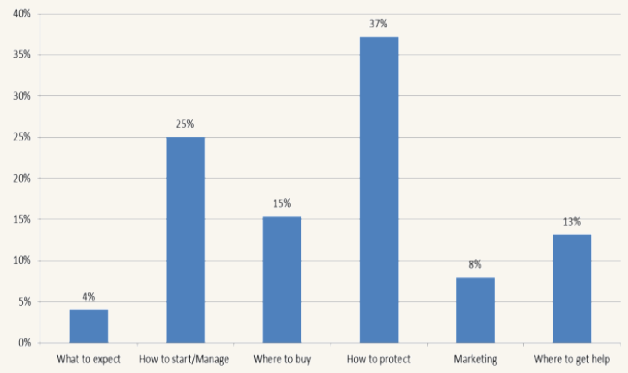
Primary Sources & Content

There was no readily available agricultural content source for Kenya in existence. M-Kilimo identified both primary and secondary sources to augment the experts' own knowledge. Content falls into two broad categories; static and dynamic. Static content encompasses expert agricultural information and advice which evolves more slowly than the dynamic data concerning market prices or weather.

For dynamic data, M-Kilimo sourced its market price information from the Ministry of Agriculture on a daily basis. Market prices covered 8 main markets and 41 commodities.

Weather was handled by a partner organisation, aWhere. The weather forecasts are available for 10 days with a tight focus on agriculture-specific information and are highly localised.

BELOW: Analytics breaking down farmers' queries into categories.



Content & Delivery Format

The content of the information should fit the form of the delivery channel. The Content Management System should store all the information required in appropriate formats that can be quickly accessed by the expert. In a call centre the expert needs an information source to refer to during the call giving them, for example, a factsheet containing context about the disease, the conditions in which it lives and possible remedies.

The helpline is well-suited to diagnosing and resolving relatively complex queries. Agricultural tips can be provided over voice or SMS and should be available in the required local language. An SMS lends itself to more concise messages eg: agricultural tips, crop calendar reminders, market prices, government alerts and weather. An advantage of SMS is that the information is in a digital format that allows the farmer to save it and refer to it later.

For M-Kilimo, voice was selected to be the main delivery mechanism and although it is the most user-friendly channel after traditional face-to-face, it is the least scalable and ideally would be complimented with other methods.

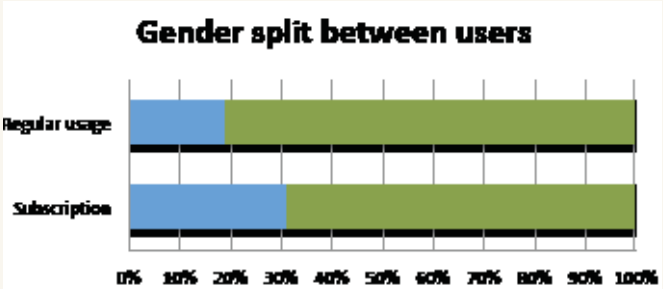
M-Kilimo has tested SMS for carrying weekly weather forecasts. The results of the pilot show that it is possible to deliver a weather forecast in Swahili that is both understandable and valuable for the customer.

Gender Insight in Kenya

In Kenya, commercial control of the farm is a male preserve, whilst women carry out the bulk of the farming labour.

A similar dichotomy occurs in mobile phone ownership with a man much more likely to own a phone than a woman. However, it is important to note that male and female users benefit equally from the service.

According to a regular user Susan, the service also confers social capital. 28 years old, she was able to 'obtain pride and get the respect of her neighbours', since she is young and a female, but manages to run a farm efficiently and has good and healthy vegetables in her shamba.



	Subscription	Regular usage
Female	31%	19%
Male	69%	81%

nb: data shows M-Kilimo users, not mobile users in general

Marketing M-Kilimo

Reaching the market effectively is a major challenge for any new product and this holds true for Agri VAS deployments. This situation is further complicated by the fact that the majority of Agri VAS deployments happen in developing nations which bring their own unique set of problems to the table.

The marketing strategy of M-Kilimo had to evolve and adapt to the challenges it encountered which are categorised below.

To date, 30,000 unique users have subscribed to M-Kilimo.

- The trust issue. Initial distrust of a new service is a normal phenomenon and has to be addressed. Partnering with established market players, NGOs or the government helps to reduce the trust barriers. The M-Kilimo service was able to gather some credibility by having a presence on well-known radio stations and sharing credentials with bodies. (ACDI/VOCA & Infonet Biovision)

▪ Loyalty. An aggressive customer acquisition strategy doesn't always bring regular users. There is a fundamental distinction between buying an Agri VAS service and having one sold to you. Repeat usage remains an issue, often because they become customers without a complete understanding of the value proposition. This is a barrier to usage frequency. M-Kilimo's regular user figures are 5,000 (16.5% of total user base). However, feedback indicates that farmers becomes regular users once the service showed it could solve an issue for them.

▪ The tribal aspect. Kenya remains a tribal country, with more than 40 tribes and different languages spoken. Although official Governmental languages are English and Swahili, when targeting the rural population, messages in local languages help to reach the customer. While all marketing materials are developed in Swahili for better outreach, 'M-Kilimo' was also marketed on vernacular radio-stations and local events.

▪ Above-the-line marketing. Rural populations often have a very low exposure to traditional media channels. Radio remains the most accessible source of information and is an efficient, if expensive marketing channel. Marketing collateral used on the radio should focus on peer-level testimony to explain the service's value proposition. It is worth noting another benefit conferred by radio; it bypasses the literacy barrier.

▪ Below-the-line marketing. Often new services require a demonstration for customers to understand the concept and benefits. Experiential marketing should feature strongly in the strategy of an Agri VAS business owner. For M-Kilimo, the promotional materials used testimony from existing customers to show how it resolved real issues faced by the target market. See right.

▪ Limitations of the BPO model. Despite obvious expertise in B2B business, the BPO company can lack the requisite skill sets for operating in the B2C segment. Developing products and marketing products and services is a big business challenge for a call-centre, with a steep learning curve to navigate. There is no distribution network available, no consumer brand to leverage, and the investments required to build an effective marketing campaign are often daunting.

▪ Branding. Customer feedback showed that the target market responded most positively to a brand design, name and logo that showed sympathy to the local culture, aesthetic and language.

▪ Distribution & partnership. Reaching the remote target audience in developing countries can be difficult. M-Kilimo made strategic partnerships with local stakeholders who had their own distribution networks such as NGOs, Micro Finance Institutions and other partners who disseminated collateral.

The Next Steps for M-Kilimo

M-Kilimo has made valuable strides in identifying rural farmer's information needs and explored some ways of structuring a business to deliver them. Having successfully launched the service, going forward focus will tighten on its sustainability and scalability, improving value for all.

TOP: The M-Kilimo logo.
ABOVE: Poster showing farmers voicing individual agricultural problems in speech bubbles and a call-to-action explaining that the helpline can solve them all without them having to leave their farms.
BELOW: A poster featuring a usage case testimonial from Lucy showcasing how M-Kilimo cured her vegetables of blight. On the right, the value proposition of the service is explained, along with the helpline short codes.

Testimonials ▪ Paul, 23 years old.

'I learned about farming from my parents, but I hadn't taken it up seriously. Recently, I recognized a business opportunity for selling beans, so I called M-Kilimo to get information on the market and farming advice. They suggested that I plant an improved bean variety called Ki-Farm with fertilizer to boost the yield. The M-Kilimo expert also gave me farm management tips including the importance of planting early, and the type and amount of fertilizer to use for my land. They also advised me on how to control weeds, since they would compete with my young maize crop for nutrients.

I followed the advice of M-Kilimo and my beans are doing well. I'm planning to grow onions next because they have good, reliable market and are fetching good prices. With the help of M-Kilimo I know I will succeed.'

▪ Nahomi, 50 years old.

'My chickens were laying eggs with thin weak shells. I could not sell or even store them in that quality status. I called M-Kilimo and the livestock expert on the other end of the line suggested that I give the chicken a feed rich in calcium.

He explained that one way to do this was to buy calcium rich poultry feeds or by adding fish meal to the existing feeds to increase the calcium in its content.

Now, my chickens are laying good quality eggs and I can sell the surplus. The experts at M-Kilimo are very helpful and are available anytime that I need advice on my farm.'

The Role of the GSMA Development Fund

The Development Fund exists to accelerate social, economic and environmental evolution through the use of mobile technology. The provision of relevant, scalable mobile services to those in the developing world tangibly improves lives.

The mAgri Programme

The Development Fund's mAgri Programme works to catalyse the deployment of mobile solutions that benefit the agricultural sector. These solutions are designed to address the problems of low yield, income and the value chain inefficiencies that beset the world's poorest farmers.

mAgri Programme's Objectives

- to test and prove mAgri business models
- to encourage scaling with Mobile Network Operators
- to create high quality agri VAS products that change farmers' lives for the better
- to propagate the wider adoption of agri VAS products across the mobile ecosystem
- to share learnings and best practices with the mobile development ecosystem

The mAgri Programme's Involvement

The mAgri Programme, in partnership with the Rockefeller Foundation, who supplied the funding, undertook the grant management role, and provided on-the-ground technical assistance throughout. The mAgri Programme supported the operational planning, marketing & product development, strategic management, monitoring & evaluation procedures and consulted on ICT system design. For more information, please visit: http://www.gsmworld.com/our-work/mobile_planet/development_fund/magri_programme.htm

About the GSMA

The GSMA represents the interests of mobile operators worldwide. Spanning 219 countries, the GSMA unites nearly 800 of the world's mobile operators, as well as more than 200 companies in the broader mobile ecosystem, including handset makers, software companies, equipment providers, Internet companies, and media and entertainment organisations. The GSMA also produces industry-leading events such as the Mobile World Congress and Mobile Asia Congress.

For more information, please visit Mobile World Live, the online portal for the mobile communications industry: www.mobileworldlive.com or the GSMA corporate website at http://www.gsmworld.com.

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