UNCDF

Unlocking Public and Private Finance for the Poor

Farmer Call Centre

CASE STUDY
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Digital Extension Services Improve Farmer Productivity

Using a Farmer Call Centre and Digital Extension Agents in Delivering Extension and Agronomic Services: A Case Study of Kilimo Farmers' Call Centre in West Nile, Uganda

Abstract

In the West Nile region in Uganda, one agriculture extension worker serves 2,000 farmers, demonstrating the key role of technology in enabling access to the much needed extension and agronomic services.

An inception study undertaken by UNCDF showed that the lack of access to quality extension services, is one of the main constraints in the agriculture sector and is causing the productivity in the region to slow down. The next question was, 'can digital technologies like call centre technology act as a catalyst in unlocking these market constraints with the sole aim of creating the desired impact among the last mile?' This gap gave rise to opportunities for UNCDF to work with innovators to develop tailor-made home-grown digital technologies to combat constraints in agriculture in Uganda. One of the organizations is Cabral Tech Ltd. Cabral Tech Ltd is currently running a farmer call centre in Northern Uganda, using a combination of technology and a network of community influencers dubbed 'digital extension agents' to make extension and agronomic services reach the last mile farmers. This publication explains how the solution works and sheds a light on some lessons learned in the first year of implementation.

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Background

Although Africa has the highest potential for agricultural production in the world, it is still unable to produce enough to feed its ever-increasing population. Consequently, it is still suffering from food insecurity, malnutrition, poverty, etc. Agriculture in Africa is further being challenged by the adverse effects of climate change impacts, hence deepening the existing problems.

According to the North American Energy Services (NAES) 2018, agricultural extension is, and remains the 'heart and soul' of the knowledge base of the Ministry of Agriculture, Animal Industry, and Fisheries and is one of the most important elements for the agricultural sector transformation. The reformed agricultural extension system is expected to significantly improve production efficiency, competitiveness, and foster commercialization of smallholder farmers engulfed in a vicious cycle of poverty.

In Uganda, 81 percent of smallholder farmers have no access to agriculture extension and advisory services (Food and Agriculture Organization (FAO), 2018). Unfortunately, a briefing paper by the Budget Monitoring and Accountability Unit under the Ministry of Finance (Briefing Paper 25/19,) shows that only 15 percent of technologies, better agriculture practices and research findings generated by research institutions in Uganda reach the farming communities. This has led to weak connectivity to markets and suppliers. And as a consequence, in 2018, 85 percent of farmers had to accept potential income losses, therefore, selling their crops directly to the public at the local markets. Additionally, smallholder farmers experienced low yields estimated at 28 percent of the expected yields leading to poverty and undernourishment.

Agricultural extension services need to be provided through a pluralistic, inclusive, equitable, decentralized, integrated, and harmonious system that links all different categories of extension users to the value chain with the appropriate services, innovative technologies, and the market.

Smallholder farmers need to be at the centre of agricultural extension services through a combination of the use of technology with research, educational, farmer institutions for effective new extension services.

Kilimo Farmer Call Centre

In July 2020, Cabral Tech Ltd in partnership with UNCDF under the 'leaving no one behind in the digital era' strategy initiated a project to expand farmers' call centre operations in West Nile. The project aims to provide agricultural advisory and extension services to the hardest to reach smallholder farmers, improving market linkages, ensuring access to and usage of high-quality agro-inputs, and also promoting good farming practices through voice calls, Short Message Services (SMS), Unstructured Supplementary Service Data (USSD) and Interactive Voice Response System (IVRs).

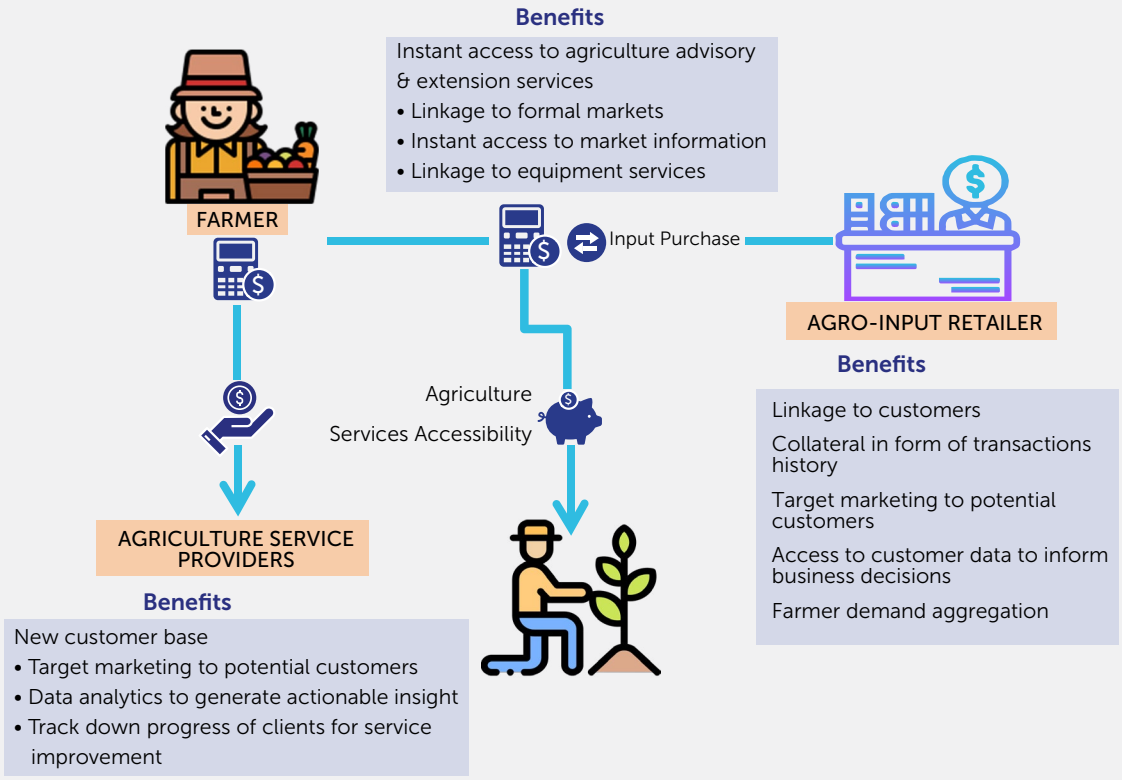
Cabral Tech Ltd, through their call centre called Kilimo Farmer Call Centre provides the following services;

a. Access to advisory and extension services
b. Market linkage and access to market information
c. Linkage to agricultural services
d. Ensuring use and access to agriculture inputs
e. Promotion of good farming practices.

Why a farmer call centre solution was sought in addressing access to extension services and agronomy in rural areas

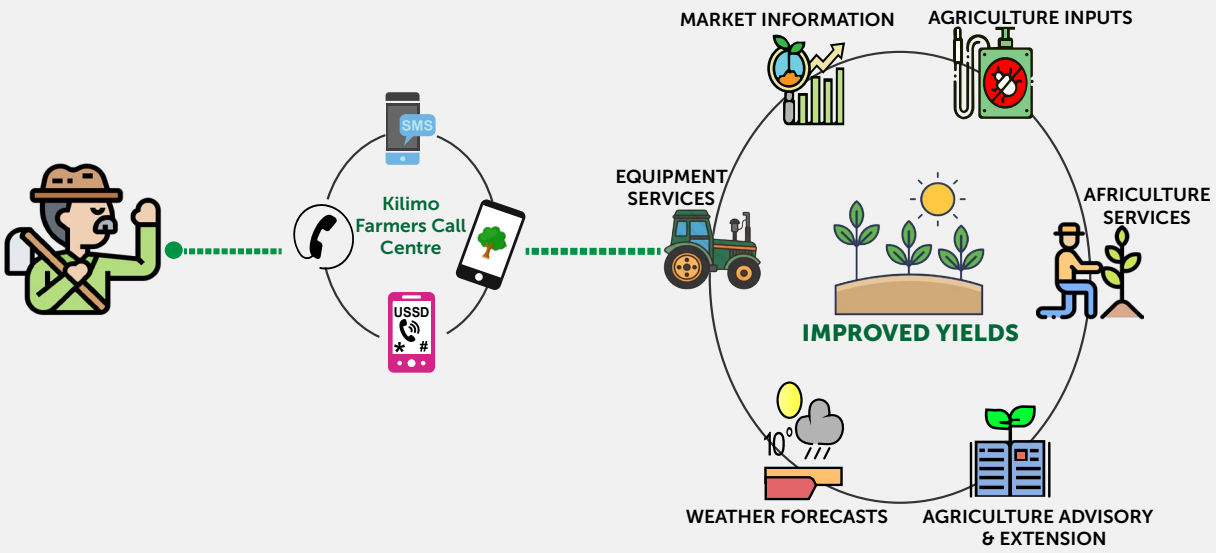
Kilimo Farmer Call Centre is a mobile platform leveraging mobile technology to ensure:

1. Instant access to agriculture advisory services and new technologies by smallholder farmers
2. Instant alerts in case of pest and disease outbreak, and early weather warnings
3. Increased and proper usage of high-quality agro-inputs to improve production
4. Increased access to equipment services to mechanize agriculture and improve productivity
5. Improved market linkages, and instant access to market information by smallholder farmers.
6. Illustration of benefits of Kilimo Farmer Call Centre



Call centres require the integration of several different technologies to maximize the use of information and to streamline the activities of call centre operators. Advances in technology and the adaptation and integration of synergistic technologies have resulted in the development of numerous features that have enhanced the growth of call centres throughout the world. The computer and the telephone are two of the major and most familiar tools of technology that have converged to make call centres more efficient and productive. When used properly along with software technology that assists operators to assimilate and analyze customer data to respond knowledgeably to customer inquiries, the benefits to both the customer and the organization are substantial.

How Kilimo Farmer Call Centre works



Smallholder farmers are asked to complete their farming profile and information needs on the Kilimo Farmer Call Center app, afterwhich they are geo-mapped.

In addition to the agriculture extension services through voice calls, SMS, USSD and IVR in local languages, smallholder farmers receive weather updates on a weekly basis as well as market price updates and agronomical tips based on the crops they grow and the location they are based.

How to Reach Last Mile Farmers

To make extension and agronomic services reach the last mile farmers, an innovative channel or network of community influencers called digital extension agents was proposed. The digital extension agents support the service delivery offered through the farmer call centre, private extension workers, and government extension workers that currently have gaps in providing the required information on best farming practices.

Digital extension agents will play a crucial role in promoting agricultural productivity, increasing food security, improving rural livelihoods, and promoting agriculture as an engine of pro-poor economic growth.

Through the connection and rapport built by digital extension agents, the project aims to improve the smallholder farmers' production systems and help them attain high levels of efficiency in the farm enterprise.

A digital extension agent with farmers

Using an innovative hybrid model of leveraging the farmer call centre alongside a network of digital extension agents seems to be appropriate because it's easier to reach large numbers of farmers. However, for this model to be successful, a lot has to be factored in, and below are some of the initial insights from the field:

a. Digital extension agents require a lot of training to meet the farmers' needs although reliable information through the experienced extension and agronomist exist to provide support.
b. Using unqualified digital extension agents poses a threat as it can impact the churn rate, since most of them may not meet the level of expertise required to disseminate the digital extension messages to the last mile.
c. The gap and ratio of extension worker to farmers (1:2000) is large thus requires many support levels.
d. The structure is expensive to develop due to the heavy budget involved in recruitment, training and retention of digital extension agents in the initial stages, making it necessary to develop a sustainable model that makes these digital extension agents profitable so they can run on their own.
e. Using digital extension agents who have not been actively engaging with farmers poses a threat to the delivery of information since farmers tend to trust information from the people they already know.

Conclusion

Cabral Tech Ltd has effectively mapped all the key value chain actors in West Nile including, but not limited to input dealers, public and private extension service worker. The objective is to create a working relationships and synergies to improve access to best farming practices / information for farmers. More efforts are being sought to develop a network of digital extension agents to help simplify the delivery of extension and agronomic services to the last mile through what is known as 'Agent Assisted Extension Service Delivery'. We believe the above approaches will play a vital role in changing the way extension services are currently delivered and eventually create an impact on the lives of poor households.

LEAVING NO ONE BEHIND IN THE DIGITAL ERA

The UNCDF strategy 'Leaving no one behind in the digital era' is based on over a decade of experience in digital finance in Africa, Asia and the Pacific. UNCDF recognizes that reaching the full potential of digital financial inclusion in support of the Sustainable Development Goals aligns with the vision of promoting digital economies that leave no one behind. The vision of UNCDF is to empower millions of people by 2024 to use services daily that leverage innovation and technology and contribute to the Sustainable Development Goals. UNCDF will apply a market development approach and continuously seek to address underlying market dysfunctions.

ABOUT THE UN CAPITAL DEVELOPMENT FUND

The UN Capital Development Fund makes public and private finance work for the poor in the world's 46 least developed countries (LDCs). UNCDF offers "last mile" finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. UNCDF's financing models work through three channels: (1) inclusive digital economies, which connects individuals, households, and small businesses with financial eco-systems that catalyze participation in the local economy, and provide tools to climb out of poverty and manage financial lives; (2) local development finance, which capacitates localities through fiscal decentralization, innovative municipal finance, and structured project finance to drive local economic expansion and sustainable development; and (3) investment finance, which provides catalytic financial structuring, de-risking, and capital deployment to drive SDG impact and domestic resource mobilization.

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