

## DIGITAL CONNECTORS FOR FARMING COMMUNITIES











## INSPIRING STORIES OF DIGITAL Connectors for farming Communities in Uganda





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# PREAMBLE

The Uganda Forum for Agricultural Advisory Services (UFAAS), in partnership with the Africa Forum for Agricultural Advisory Services (AFAAS) and AgConnectors, implemented the Strengthening Agricultural Knowledge and Innovation Ecosystem for Inclusive Rural Transformation and Livelihoods in Eastern Africa (AIRTEA ), Component 9 (AIRTEA\_TP 009), a transformative initiative on Digital Connectors for Farming Communities project (DC4FC) in Uganda. The project was funded by the European Union through the Organization of African Caribbean and Pacific States (OACPS) Research & Innovation Programme, coordinated by the Forum for Agricultural Research in Africa (FARA) and implemented by the Association of Strengthening Agricultural Research in East and Central Africa (ASARECA) and the East African Farmers Federation (EAFF).

The primary objective of the Digital Connectors for Farming Communities (DC4FC) project was to elevate agricultural productivity and enhance the well-being of farming communities by promoting the socio-economic inclusion of rural women and youth through their active participation in agricultural extension and advisory services (AEAS). The 2.5-year DF4FC project was focused on: creating employment opportunities for rural women and youth as digital connectors (DCs); digital delivery of AEAS services to farming communities; and evidence-based information for policy makers. This project involved the identification and support of nine (9) young agri-preneurs who were equipped to offer agricultural extension and advisory services (AEAS) as a sustainable business venture. These youths were provided with comprehensive training, coaching, mentorship programs, and digital tools by the project to enable them to establish viable agricultural advisory service enterprises aimed at benefiting selected farming communities within the project areas.

This storybook features stories of Digital Connectors that highlight the impact of the DC4FC project, linking digital connectors, farmers, policymakers, and agribusinesses, in innovation platforms to cocreate and adopt sustainable solutions.

DCs reported having enormously gained from the project citing receipt of digital tools (tablets), attainment of business and marketing knowledge which enhanced their confidence, and unlimited access to coaches. They earned income through commissions, the sale of products and services and built strong partnerships with suppliers and buyers. They appreciate the project- the business training they received on how to build viable businesses which has earned them decent employment, led to farmers' improved access to agricultural information and inputs, increased yields, and subsequently their (farmers') incomes. They acknowledge support from the innovation platform as a springboard to propel community engagement. Through this DC4FC project, Digital Connectors linked 3440 value chain actors (mainly farmers) receiving agricultural extension and advisory services. Regarding sustainability, the DCs are committed to continuing with their businesses. They are optimistic that the activities will continue because they [DCs] have built a mutual relationship with farming communities, which both parties earn and benefit from. Most DCs have trained other digital connectors, plan to scale out, link to bigger applications, and build alliances with other stakeholders for stronger impact. Innovation platform managers and the leadership in the districts also applauded the DC4FC project, citing value addition to extension service provision in the districts, and positive influence on other extension staff to embrace digital extension thus narrowing the gap between extension workers and farmers.

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#### Disclaimer:

"The opinions expressed in this publication are solely those of the project participants and editors and do not necessarily reflect the views of the funders."

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## DIGITAL CONNECTION EASES IRRIGATION BUSINESS FOR ANTHONY, CONNECTS HIM TO PROFESSIONALS

#### Digital Connector: Anthony Kisakye

Business model: E-DIMES (electronic delivery of irrigation and water management and extension services)

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Kisakye Anthony (25yrs) holds a diploma in Water Engineering, from Ndejje University. A Digital Connector under Zirobwe Agaliawamu Agri-Business Training Association (ZAABTA) Innovation Platform (IP) in Luweero District.

His business model: **E-DIMES**, is an electronic delivery of irrigation and water management and extension services, where he reaches out to farmers both digitally and physically. Anthony was linked to UFAAS by his ZAABTA Manager, Mr. Mayambala, since he was already one of the extension workers for the association.

Taking on this role was an opportunity for him because,

 i) he has been able to get into contact with other people within his profession (water engineering) like suppliers and manufacturers such as Davis and Shirtliff, AKVO international, and SprinklerTech among others;

ii) it has earned him trust among people like farmers, manufacturers, and suppliers. In addition, he has accessed great deals for his farmers. For instance, he recently received three water pumps from Sprinkler Tech. to give to farmers at only 15% payment. He gets a commission of about Ugx.50,000 (~US\$13.5/ 12.5 Euros) per delivery

iii) professionally, it has helped him gain confidence in speaking among people, and,

iv) he has also gained marketing skills through the social media platforms like WhatsApp, Facebook, TikTok.

To facilitate the adoption and integration of digital technologies among farmers, Anthony has trained two more digital connectors to reach out to farmers even in his absence. He has developed these programs to ensure that farmers not only understand but also actively utilize digital technologies in their agricultural practices. He has continuously sensitized and talked to farmers about the benefits of digital farming through visits to farmer groups, on his social media platforms, and through his innovation platform training and meetings with farmers. Anthony revealed that due to the services offered under E-DIMES, dry season returns usually surpass wet season gains because not many farmers produce during the dry season.

He shared an instance where his intervention significantly helped a farmer; "I had a farmer in Wakatayi, Bungo who had a water reservoir but didn't know he would survive even in dry seasons. I advised him to buy a pump, which he did. I also advised him to dig water channels in his swamp side of the farm so that water flows very well and he now has a clean green garden". Anthony narrated.

Anthony has a very big plan to have a store to stock irrigation equipment and getting a tricycle with a trolley (Tuktuk) for transporting the equipment to farmers.

The business model is still promising though capital intensive. He plans to stock irrigation equipment but he has managed to partner with manufacturers and suppliers to offer installment payment deals to farmers.

**Appreciation:** Anthony is thankful to his Innovation Platform Manager, Mr. Mayambala for connecting him to UFAAS and to the AIRTEA project and the digital connectors program that has earned him income, trust and better positioned him in the society

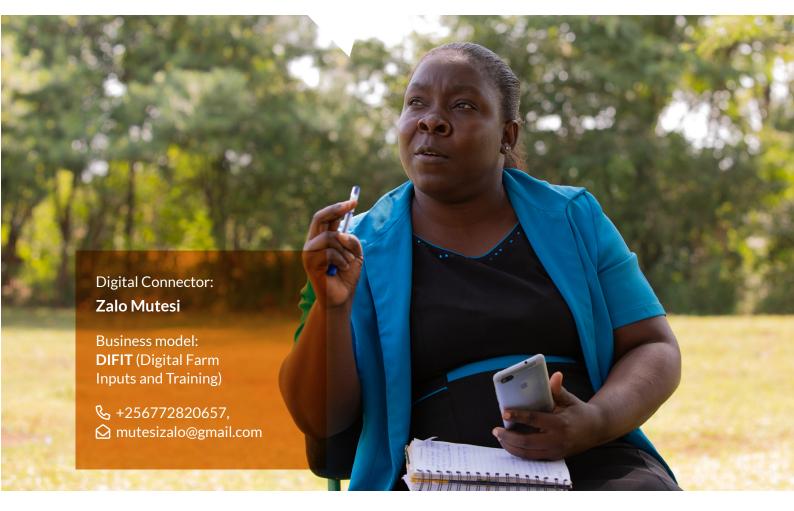
## 66

We met at ZAABTA and their manager Mr Mayambala introduced me to Kisakye, the digital connector who taught me about the benefits of agricultural digitalisation, especially the digital irrigation system. They came and gave a preliminary visit to our farm and helped us purchase the irrigation equipment at a subsidised cost".

Tumukunde Derrick, vegetable farmer, Bundo village, Kakakala Parish, Zirobwe sub-County, Luweero District

<sup>&</sup>lt;sup>1</sup>UGX 1 is approximately US\$ 3,600 or 4,000 Euros.

### FROM TRAINEE TO TRAINER IN DIGITAL AGRICULTURE: "MY COMMUNICATION SKILLS HAVE IMPROVED" - ZALO MUTESI



Zalo Mutesi, 39, is a Digital Connector and the Managing Director for DIFIT (Digital Farm Inputs and Training). A degree holder in agriculture based in Bugiri District, she got information to apply for the opportunity from her then District Production Officer, Dr Isiko. As a Digital Connector, she works in two sub-counties-Nankoma and Iwemba and has so far reached 781 farmers-women, men, and youth.

Zalo provides farmers with knowledge digitally on how to access genuine agro- inputs and timely advisory services to solve the problem of fake inputs on the market and delayed advisory services. Eager to learn, Zalo participated in all the scheduled trainings offered by the project partner AgConnectors about building businesses. Her work has helped farmers increase their production because they can now get genuine inputs and timely advisory services.

#### Becoming a Digital Connector has helped Zalo to:

- Acquire a digital gadget and tools that helps her to profile and link with farmers
- Learn and master how to start and maintain a viable business
- Opening her own agro-input shop. Through this, she has so far realized UGX. 3,500,000 (~US\$972/ 873 Euros) out of commissions on inputs delivered digitally
- Improve her communication skills. Now a trainer and mentor as a result of the skills she gained from the Digital Connectors project, Zalo is now able to network and reach many farmers in Bugiri District and beyond.



Zalo and Nicholas , digital connectors working in the same district, offer complementary services to farmers

To facilitate the adoption and integration of digital technologies among farmers, Zalo continues to sensitize the farming communities to use digital platforms to access the services. She has: trained three (3) more digital connectors, and targets 15; set up a WhatsApp group for the digital connectors, where everyone can reach her and instantly act on the issue; and engaged other digital connectors within the district to develop a dashboard where farmers will be able to find all they need in relation to agricultural extension, which she hopes will be ready by the end of 2025.

#### **HER SUCCESS STORY**

Zalo helped a farmer who previously got low yields from her farm, largely due to poor soils and fake inputs. In collaboration with another Digital Connector in the area (Nic soils), they first tested her farm soil, got her the fertilizer that was required, got her improved maize seeds of Bazuka, and her yields greatly increased from 3 bags of maize to 28 bags from each of the 3 acres she had. She advised her to hoard it until prices go high, which she did. When the farmer sold off her produce when prices were higher, she got a lot of money which helped her roof her house that had stayed for five years.

66

My yields have greatly increased because I now get genuine inputs and timely advice from Zalo," Elizabeth Kulabako, Farmer, Nabyono

village, Bugeso Parish, Iwemba Sub county, Bugiri district Amidst many successes, Zalo has faced some challenges in the implementation of her business model;

- Some farmers don't have phones, and some of those who have do not know how to use them- especially the smart phones.
- Poor network in some areas which makes it difficult for farmers to access digital services.
- Some farmers take long to pay for the delivered orders. "The payments are usually delayed or do not come", says Zalo.

With agricultural digitalization, Zalo sees the livelihood of farmers changing for the better, their yields will greatly increase, their incomes increase, and hence they will be able to cater for all their basic needs, thus improving livelihoods.

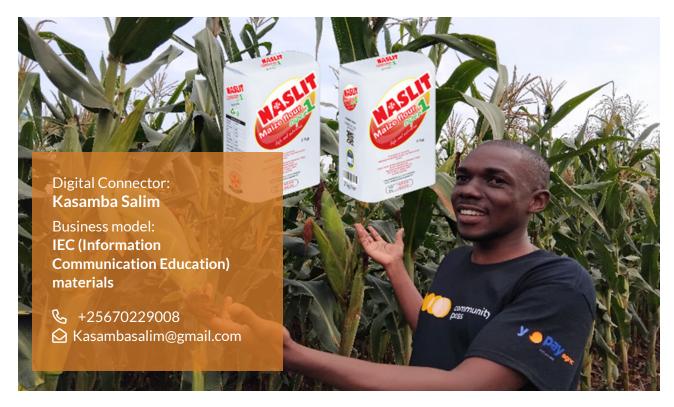
#### **FUTURE PLANS:**

Zalo has plans to open her own agro-input shop, train more digital connectors and finalise the dashboard for farmers to easily access her services. In the dashboard she is developing, she plans to integrate a pre-payment so that farmers can order and pay before the inputs and services are delivered.

She thanked the funders of the AIRTEA project and UFAAS in general for the Digital Connectors project which has elevated her in the society because she is now a better person.



#### USING DIGITAL TOOLS IN AGRICULTURE CREATED DIGNIFIED EMPLOYMENT FOR KASAMBA SALIM: A STORY OF HOPE



Salim Kasamba, 35, is a digital connector and Chief Executive Officer of IEC (Information Education Communication) Materials Consultants Ltd, based in Bugiri District under the Bugiri Agribusiness and Institutions Development Association (BAIDA) Innovation Platform. IEC is a one stop digital shop providing packaging materials for agricultural products and information across Africa.

When Salim lost his job as an Illustrator with the Vision group in Kampala City during Covid 19, he retreated to his village in Bugiri District. Uncertain how he would earn a living, he stayed with his mother and would wake up to join other family members at the farm. However, he was mocked by his village mates. "My villagemates laughed at me because seeing a degree holder back in his parents' home is not good. They label you as a failure." he painfully narrated.

While there, he linked up with the farming communities and took a keen interest in the crop value chain. He realized a challenge- after producing the crops, farmers did not have the materials to package their produce from the gardens and stores to the marketplace. He mobilised farmers, and engaged with BAIDA and Nabigingo SACCO, and realized that they were in need of extension services.



"They needed better packaging for their products to get better prices." He started a business to supply farmers with the much needed packaging materials.

However, Salim was so uncomfortable dealing face-to-face with the farmers because some would disguise themselves as clients, yet they came to mock him. *"I lost hope and kept in-house for fear of being laughed at since I was a graduate who failed to make it in the city"*  A new lease of life: becoming a Digital Connector

On one lucky day, Salim scrolled through the WhatsApp platform of Bugiri District Cooperative Forum and saw the call for proposals to become a Digital Connector. He immediately applied through BAIDA and, fortunately, he was selected. From several trainings and engagements with the experts, he realized that he could connect digitally with the farmers -from making orders of the packaging materials through the phone to advising on the farm enterprises.

The project has been a life-changing opportunity for Salim. Among other things, it has

- Increased his income through the sales he made to the farmers, in the comfort of his home.
- Boosted his confidence as a businessman. He has gained skills in pitching, collaboration, and engaging with the farming communities
- He also got a chance to train other young people in digital skills.

To facilitate the adoption and integration of digital technologies among farmers, Salim has employed several strategies, including intensifying digital training about packaging and the entire extension services using the available technologies like a solar projector and training more digital connectors to reach out to the farmers in every farmer group. He makes sure at least one farmer is trained, either physically or virtually, by sharing screens, using visuals to simplify scientific content for even the illiterate farmers.

"I train them [farmers] on many things [...] including how to use smartphones, basic button phones to call and place orders for the packaging materials" says the agri-preneur.

He also believes that his intervention significantly helped farmers;

"After profiling and providing a group of farmers producing soybeans with packaging materials, they have been allowed to produce both seeds and grain because having good packaging is one of the requirements for setting up a local seed business and grain processing. They are now in the final process of acquiring certification". Salim narrated.



Hasna (L), the farmer that uses Salim's services

One of his clients used not to sell her value-added produce after milling because she lacked packaging materials. From Salim's advice, she acquired the plain and general packaging materials. Salim plans to seek credit and produce for her at least 1,000 pieces of more customized packages with her company details at once and keep selling to her in small quantities.

"Bulk production of minimum pieces like 1,000 is cost-effective and profitable, but not affordable to smallholder farmers like her," he says.



Salim (2 L) with farmers packaging soybean in packaging materials he supplied

Beyond digital connection to include brokerage Salim has linked his farmers to financial institutions to give them loans to purchase packaging materials. So far, he has given out over 300 million UGX (~US\$ 83,000/ 75,000 Euros) through the Agricultural Credit Facility in partnership with Opportunity Bank and Bank of Uganda to provide packaging materials and other inputs to smallholder farmers. He has also gained popularity due to the work he does in the area. *"I am now famous and important in the community. Now people in the village who used to laugh at me see me as a technical person who uses digital tools and makes money.* [...] they admire me", remarked Salim. "In Bugiri, if you don't have my signature as DC [Digital Connector], you will not get money from the bank", he added.



Not all is rosy with digital tools in agriculture

His business model of digital connection has not been smooth all the way. Salim says digital penetration was not easy for most farmers because:

- Most farmers preferred to meet him physically,
- Some didn't know how to use electronic gadgets
- Poor internet connectivity makes communication difficult at times, given that some farmers are in remote areas
- Some fear fraud and were hesitant to trust him. "At the start of this project, the farmers used to fear us digital connectors, thinking that we are fraudsters..." said Salim. He overcame this through detailed explanation, regular engagement, and training "Now they are okay that they don't have to see me [...] In fact, they are now very happy with the efficiency of my extension services since I can serve many of them very fast and in a short time. I serve virtual clients first" he says.

#### LOOKING AHEAD:

Salim has big dreams. His goal is to produce bulk customized materials and supply entire Africa, open up an e-shop, and keep selling small pieces to smallholder farmers who can afford a few pieces at a time. He has plans of capitalization to boost his ability to produce minimum production quantities and smallholders' purchasing power through training and preparing them to acquire loans that are affordable and interest-free. With more support, his dream will be a reality. He is already expanding his horizons. Weeks before our interview, he was invited to Juba in South Sudan to discuss the possibility of providing digital packaging materials and extension information. The clients liked his business idea, and discussions are underway to have a Memorandum of Understanding signed. Whenever he makes presentations in various fora, many people express interest in working with him, and "this is exciting", Salim says.

To him, the future for digitalization of agriculture is bright, and it is evolving. "Without these gadgets (pointing at his phone), you can't do much", he

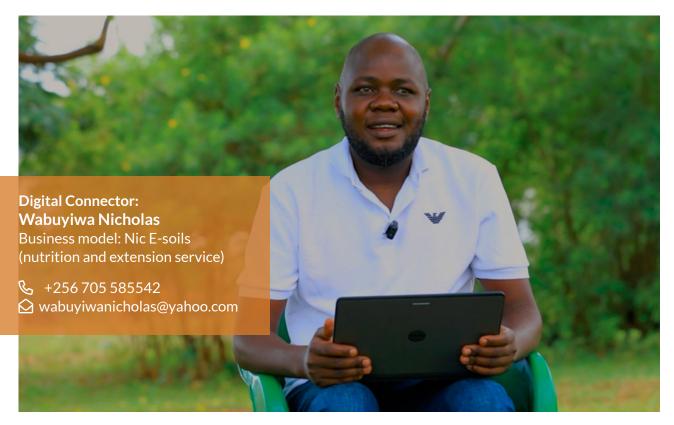
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Before meeting Salim, I used to leave my work, home and children, move long distances and spend a lot of money on transport looking for

packaging bags for my soybeans. If I don't get them, I would just sell soyabeans in basin or basket. Now I just use my phone to call him, I then send mobile money and he sends me the bags. I no longer have to move long distances," Husnat Nabirye, Soybean farmer, Nabigingo A village, Bugiri district.



## NICHOLAS REVOLUTIONALIZES SOIL HEALTH SERVICES WITH A BLEND OF ARTIFICIAL INTELLIGENCE



Wabuyiwa Nicholas, a 38-year old graduate of agriculture is a Digital Connector and the Director of Nic e-soils nutrition and extension services. Based in Bugiri District, he came to know about the digital connectors project through his friend who sent him the call for proposal. Through BAIDA Innovation Platform, he wrote a proposal to become a Digital Connector, and was selected for training. UFAAS provided him with different trainings on how to develop his business model.

Before becoming a Digital Connector, Nicholas was an extension worker, and everything was done traditionally and manually and hence hectic. Through his new business model, he now provides e-soil testing and e-soil nutrient delivery services to farmers.

Nicholas says he has benefitted from being a Digital Connector in several ways:

- Through UFAAS, he was connected to ISDA organisation with the Virtual Agronomist, where he was introduced to use of Artificial Intelligence in agricultural extension. He was trained on how to use GPS, how to measure land and capture coordinates and how to assess soil health. He tests the farmers'soil /plots of land, virtually and digitally. This reduced the cost of testing soil by farmers from Uganda Shillings (UGX) 60,000 (~US\$18/ 15 Euros) per acre to UGX 6,000 (~US\$1.8/ 1.5 Euros).
- He has connected 1,506 farmers on the virtual Agronomist platform
- Through ISDA, he gets a commission for the service, which is a reliable source of income. He has directly reached out to 100 farmers, and he gets a commission of UGX 3,000 (~US\$ 0.83/ 0.75 Euros) per farmer for that service. For any emergency he attends to he gets an extra UGX 1,000 (~US\$ 0.27/ 0.25 Euros).
- The project has also made him famous within and outside Bugiri District, and he is known as the Soil doctor.

To facilitate the adoption and integration of digital technologies among farmers, Nicholas sensitizes the farmers about the benefits of using several digital tools such as in soil testing. He also trains farmers who are interested in agricultural digitization to disseminate knowledge about its benefits to others.

To ensure that farmers not only understand but also actively utilize digital technologies, Nicholas has employed these programs. He is working on hands-on services where farmers can see different results of the products and services he is offering.

He shared an example where one farmer Jasper [not real name] in Nabukalu Sub-county, did not believe in soil testing and fertiliser use, saying it was a waste of time and money. To demonstrate that the technologies work, Nicholas experimented with Jasper's neighbor Sulaiman. He tested his garden soils, provided appropriate inputs, and he got very high yields. Jasper was impressed by Sulaiman's yields and he called Nicholas to provide the same service."...he had to call me, and he even paid more than what Sulaiman had paid. This was proof that my extension model works and it increases yields of the farmers' crops," narrated the industrious Nicholas.

To expand and improve his services in the future, he and other digital connectors in the District are developing a dashboard from where farmers can easily access their services as a one-stop center. He is continuously sensitizing farmers on each platform he has developed so as to expand his services to other districts. With agricultural digitization, Nicholas sees a reduced cost of production by farmers. For support to help him achieve his goals, Nicholas seeks support to develop a dashboard.



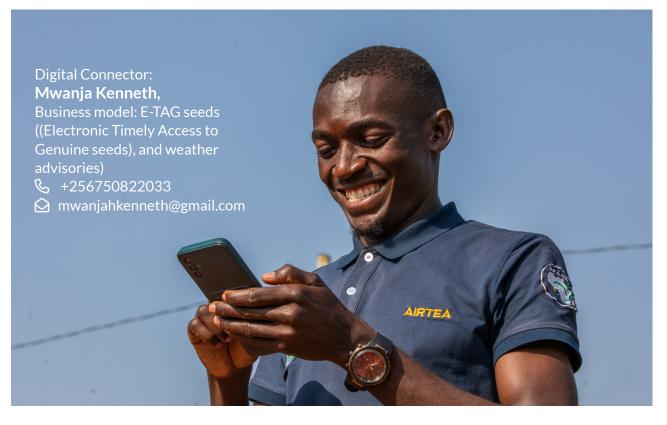
66 "Before I think about planting, I reach out to Nicholas with a phone call or message. I first consult Nicholas who advises me to test the soil and advises on the fertilizers to use, and the crops suitable" Adong Josephine, Farmer, Kazimbakungira village, Bugeso Parish, Iwemba Sub county, Bugiri District.

Adong Josephine, one of Nicholas' clients

Challenges encountered during the implementation of his business model include; Lack of an application that brings them together as digital connectors, yet their services work along each other. "We are few within the district, yet we have to reach a large number of farmers" said Nicholas

Appreciation: Nicholas appreciates UFAAS for the opportunity of being a Digital Connector, saying that the project has increased his income, earned him fame, and the yields of the farmers have increased.

## "I AM NOW ABLE TO SUPPORT MY FAMILY" DIGITAL EXTENSION BRINGS More Cash in Kenneth Mwanja's Pocket



Mwanja Kenneth (29) is a Digital Connector operating in Magoola village, Buwunga Sub-county, Bugiri District. A holder of a diploma in agriculture, Kenneth applied to be a Digital Connector through a farmer association BUDIFA (Bugiri District Integrated Farmers and Agri-business Association). He went through a series of trainings, mentorships, and facilitations and later came up with a business model, E-TAG seeds (Electronic Timely Access to Genuine seeds), and weather advisories.

He found out that farmers still have a challenge in accessing quality seeds and other agro-inputs, so he came up with a model to digitally link farmers in the community to quality inputs. To curb the challenge of weather changes, he linked with Uganda National Metereological Authority where he gets timely digital weather advisories to guide farmers on when to plant or harvest depending on the weather forecasts.

To Kenneth, taking the role of a Digital Connector was a great opportunity:

- He has reached over 1000 farmers, trained 3 youth DCs and 52 framer groups.
- He has developed meaningful partnerships with three seed companies, 10 agro-dealers, and suppliers where he promotes the products digitally and gets a commission. In the last season of 2024, Kenneth increased his earning from commissions by UGX. 1,200,000 (~US\$ 333/ 300 Euros).
- It is a source of income, and this has boosted his earnings. "I am now able to support my family," says Kenneth.

To facilitate the adoption of digital technologies among farmers, Kenneth has trained more Digital Connectors to carry on the role even in his absence. He also engaged farmer group leaders to extend the services to farmers. Through these community leaders, farmers make their orders, and he delivers on time.

To ensure that farmers actively utilise digital technologies, Kenneth has strongly engaged the youths in most of the farmer groups with the digital agricultural aspects other than the physical. He has also set up demonstration gardens for each improved seed he comes across, where his farmers learn. He has made it easy for the farmers in the community to reach him through phone calls and WhatsApp. In addition, he created a WhatsApp platform that has over 200 farmers and he profiled for easy tracking and follow up.



Kenneth and Rogers in a bean field

Among the many farmers Kenneth has served, he is proud of one Rogers, a soya bean and maize farmer who has ordered genuine seeds for the last two seasons, and he is now getting higher outputs.

To Kenneth, the future digitalization of agriculture is vibrant as long as more youths are involved. To expand his services in the future, Kenneth will train more youths to join him since he cannot do the work alone. He wants to engage as many local and farmer group leaders as possible since this makes it easy to create awareness and mobilization. He is also working on creating more channels, from calls and WhatsApp to other social media channels, where he can market his services. **66** Before engaging in digital farming, I used to sow seeds from previous harvest and the output was low and I could plant at any time I wished. Kenneth taught us that about the disadvantages of planting the same seeds from previous harvests. I just call him when I need advice or new seeds"

Ojambo Rogers, Magoola village, Buwunga sub county, Bugiri District



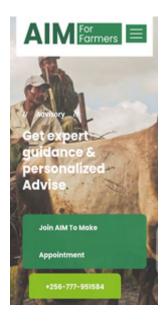
Challenges encountered in implementing his business model include; poor internet connectivity, weather changes such as too much rain or too much sunshine, especially when he has to physically meet the farmers, and limited capital when it comes to equipping new core workers with digital tools.

He still requires more support from technical leaders since his partnership with these leaders is yet to be streamlined. This will ease mobilisation of the farming communities. *"Extra training, outreaches and visits to fellow digital connectors in the country and beyond are also critical for benchmarking and possibly learning from each other"*, he said.

# BRIDGING THE EXTENSION-TO-FARMER GAP WITH UNIQUE DIGITAL TOOLS: "MORE FARMERS HELPED, MORE MONEY," ANDREW MUNYOLE



Munyole Andrew, 26, is a Digital Connector for Luweero District under ZAABTA Innovation



Platform. With a degree in agriculture, Andrew's business model is AIM (Advisory Information and Marketplace for farmers). AIM provides a unique holistic package to farmers along the whole value chain from production up to market through a digital format.

Before, farmers had limited access to quality inputs in the form of feeds, good breeds, quality

equipment, seeds, and also market for their produce after production was low, possibly due to lack of advice. Aware of this gap, Andrew took the challenge to bridge this gap digitally with AIM for instant advice and a marketplace for farm inputs and outputs. Andrew recounts how profiling of farmers was for them to test how the business would operate. This involved providing services for free, training farmers in groups about the new way of receiving advisory and information, creation of motivation scenes.

"We had very few farmers in early adoption ordering for services and actively engaged in service delivery. Later on with continuous mentoring and coaching from the AgConnectors, WhatsApp links and catalogs were created, and with this, farmers trusted me" said Andrew. Andrew works with both small-holder and large scale farmers and because of the demand, he diversified beyond animal to include crops advisory. "I had to adjust and support farmers too in crop sector as I couldn't focus only on animals because farmers have diverse enterprises," says Andrew.

To him, becoming a Digital Connector was a big opportunity in a number of ways;

• His business model has expanded from animals to also crops advisory.

- His income has increased through the commissions and salary he gets from some farmers and the agribusiness suppliers. "You can't spend a week without getting some money on the phone either for animal advisory/equipment or crop advisory and from market linkage", remarked the youthful Andrew.
- Has developed skills of partnership, collaboration, and research.

Having been empowered by the project, Andrew is also paying forward to empower other extension workers in Buikwe District through training. He



collaborates with experts with whom he shares IT patterns to develop a better application. His projections are 1200 farmers reached and annual revenue of UGX 24,000,000 by 2025 (~US\$6500/6,000 Euros). "The ratio of extension to farmers is very low at 1:1800. We have to bridge this with digital tools," says Andrew.

Leaving no one behind; to ensure the inclusivity of farmers without smartphones, Andrew is collaborating with his IT partners to develop instant messaging on feature phones about weather and other useful information.

Andrew shared a case where his services have helped a farmer. He met a farmer who usually travels out of the country and leaves the farm in the hands of the farm manager. When they talked about digitalisation, the farmer picked interest and introduced Andrew to his farm manager with whom they are managing the activities of the farm (farm management, season planning, pasture establishments, market sourcing for farm products) digitally. Through his AIM model, Andrew coordinates with the Farm Manager, gives him all the required advice, and links him to ready markets for the farm products. Digitalisation has facilitated linkage to inputs and markets, and for this particular farmer, he earns a salary and commission on selling farm produce.

Andrew currently collaborates with sellers of genuine inputs. He plans to start up his own agro-input shop, register his company, and get a platform to train more people in digital extension services for faster adoption of the business. He seeks funding to help him fully develop his application and make it more user-friendly and easily accessible by farmers even without the internet.

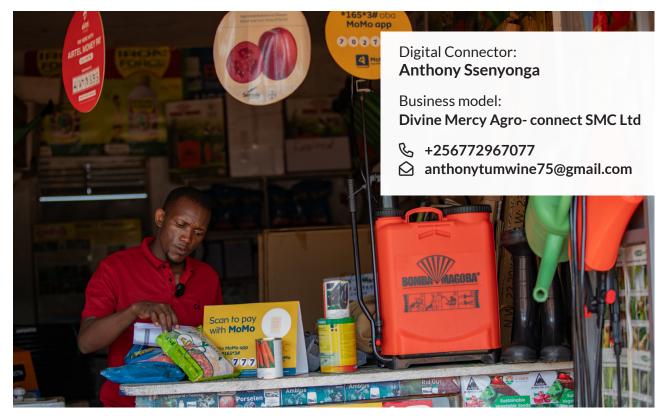
While Andrew faced some challenges in implementing his business model, he has found ways to address them; For poor internet connectivity to farmers in remote villages, farmers are given an option to call as they are getting used to the application, profiling of farmers was not easy but through the continuous support and funds he would get from the business, he re-invested to profile more farmers. "The more farmers helped, the more the business, thus more money", said Andrew.

In his conclusion, he greatly appreciated the AIRTEA project, UFAAS and all other implementers of agricultural digitalisation and the Digital Connectors program for giving them the opportunity to run the project as pioneers.

66 Before engaging with Andrew, my work was so hectic. I used to move long distances looking for good seeds, fertilizers, veterinary services for the animals and birds and to sell farm products. [...] now I use the phone to call, send messages and pictures of the crops, birds and I get instant feedback"

Tumwebaze Moses, Farm manager, Bwetyaba village, Namuyenje parish, Nakisunga sub county, Mukono District

## ACCESS TO INPUTS MADE EASY WITH SSENYONGA'S DIGITAL - DMAC MODEL IN LUWEERO



Ssenyonga Anthony is a Digital Connector in Zirobwe Town Council, Luweero District and the CEO Divine Mercy Agro- connect SMC Ltd since 2019. His business model is Digitised Quality Inputs Dealership, Extension and Advisory (Digital-IDEA).

He operates an agri input shop where farmers access quality agricultural inputs.

Becoming a Digital Connector was a great opportunity for him and the farmers:

- Farmers no longer have to come physically to the shop. They place orders, pay with mobile money and I deliver to the farmer groups or homes.
- His income has also greatly increased through the sales he makes within and outside Luweero District. He earns some commissions from the Agro-input companies from the deals he makes between them and the farmers.
- He has partnerships with many companies and agro-input dealers like CABI, Sunculture among others. Anthony has so far linked 30 irrigation farmers to Sunculture and he expects a commission of UGX: 90,000 (~US \$ 25/ 22.4 Euros) once the installations are finalised.
- The role has earned him fame within and outside Luweero District

To facilitate the adoption and integration of digital technologies among farmers, Anthony has done a number of things, including:

i) training more youths to mobilise and train farmers in agricultural digitalisation,

ii) encouraging farmers to make good use of their phones for useful purposes of research, consultation in digital farming rather than other unnecessary things,

iii) creating a WhatsApp group with 312 farmers from which they can easily communicate and interact with their fellow farmers on useful agricultural practices and also easily access his services,

iv) using and promoting other digital agricultural information apps like the CABI App on Google play store to teach,

v) Demonstrating and diagnosing pests and disease threats to farmers' crops..

In addition, he has set up demonstration gardens for seed even at his agro-input shop for farmers to learn from.



He shared with us an instance where his business model has significantly helped a farmer.

Anthony got into contact with a farmer, Rwokya Alex, who used to grow cereals like rice and maize; beans among others, but later switched to growing perennial crops-bananas and coffee. Even with these, Alex nearly abandoned the enterprises because of limited information. "The gardens were not healthy, and he had no idea about what was happening" said Anthony. Anthony provided him with relevant and detailed information about banana and coffee farming. He helped him diagnose the crops, prescribed the right fertilizers and pesticides, and supplied them. With trust, virtual engagement and delivery, Alex now has one of the best banana and coffee projects.

#### Future plans

Anthony is planning to design a website to enable him host and establish a product catalogue. He welcomes all partnerships with many NGOS, agro input dealers and manufacturers. Anthony expressed need for more training especially in IT technologies like web designing to complement his skillset, in order to establish more digital platforms to serve his clients better." Such skills on website design will help me to market my business more and get more clients" Anthony stated.

Challenges faced in the implementation of his business model include: high cost of internet, inadequate funds for training other digital connectors, some farmers lack phones and other gadgets to help them reach out to the Digital Connectors. Some farmers with phones cannot use them due to low literacy levels.

Appreciation: He appreciated UFAAS and all other implementers for spotting, training and facilitating them as digital connectors. He also thanked the local government extension workers and his innovation platform ZAABTA for the referrals to clients and orders.

> 66 "I use my phone to call and send messages to Anthony, and I receive instant feedback. Digital farming has greatly improved my yields and has saved me money".

Rwokya Alex, Farmer, Wakatayi village, Zirobwe Town Council, Luweero District.

### QUALITY BIO-INPUTS AND SERVICES OFFERED DIGITALLY -ANNE AJWANG



Digital Connector: Anne Ajwang Mwesigye

Business model: **Bio-inputs** 

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Ajwang Anne Mwesigye is a graduate of Agriculture and Community Development. She is currently an extension service provider working with Caritas Kasana where she works directly with farmers in the districts of Nakaseke, Luweero and Nakasongola through trainings under a program called Professionalization of Small Scale Farmers (PROSSFA). She was introduced to UFAAS and the Digital Connectors for Farming Communities (DC4FC) Project through the Food and Agriculture Organization (FAO).

Through the trainings under the DC4FC, she added on skills of reaching the farmers digitally. She was able to develop a model she tagged E-2A for quality inputs supply and extension services. This is because farmers were encountering a lot of constraints due to poor, expensive, or counterfeit bio-inputs that had frustrated them.

E-2A provides bio-inputs and market information through digital platforms and training of farmers in agro-enterprise selection, production, and value addition. At least 50% of the farmers have embraced e-services and can access quality bio-inputs and market information. She mainly links up with Dynapharm Limited and Bukoola Chemicals Ltd as her suppliers. As a result, the farmers who are willing to pay some little money for the services are benefiting.

However, some of the farmers have a poor mindset about digitalisation and paying for services. They don't see the reason why they should pay for the services. To address this, Anna is continuing with mobilization, sensitization, and engagement of stakeholders. One of the strategies, was connecting their farmer networks to a brewery where they sold their dried cassava at a good price.

She plans to continue digital connection and expand territory by engaging different stakeholders in mobilization and trainings. She still needs support to promote and expand her cottage industry of bio-inputs.

> Madam Anne is our extension worker from CARITAS who advises us on our farming, from production to marketing. Before, all the time we had an issue, we would call her to the farm and at times

she would take long to reach us. But later, she told us that she can solve a lot digitally without coming, and this is instant. She also linked us to a platform with market information and through this, we are able to get good markets for our produce."

Mayengo, a Commercial Vegetable Farmer in Nakaseke District

### THE LONG JOURNEY OF DIGITALLY PROVIDING AGRICULTURAL INSURANCE, NADIA BABIRYE



Digital Connector: Nadia Babirye

Business model: Agricultural insurance

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Babirye Nadia, with a Degree in Psychology, developed a passion for working with and supporting farmers, in her free time, to solve problems that hinder them from realising their potential in agriculture. Being a nonagriculturalist by profession, her interest was mainly in agricultural insurance for rural communities.

Through the trainings under the DC4FC Project, she gained skills of how to effectively reach farmers digitally, with whatever service you want to provide. She developed a business tagged e-Agricultural Insurance, aimed at providing digital access and knowledge to agricultural insurance in the rural communities in Bugiri District at affordable costs.

As a Digital Connector, she has been able to sensitise farmers about agricultural insurance through:

- Taking advantage of farmers' meetings and events organised by fellow DCs and other extension workers.
- Participating in agricultural events to identify potential partnerships with agriculture, IT, and insurance leaning companies
- Radio Talk Show at Eastern Voice 102.2 FM, where she presented her business idea, during one of the agricultural programmes.

The problem she is currently facing is, finding a genuine partner who will be interested in subscribing her farmers at a commission. She is also part of the initiative of all the DCs under the DC4FC project to form a general App where they will all be linked for the different service provision.

#### Towards becoming an insurance agent:

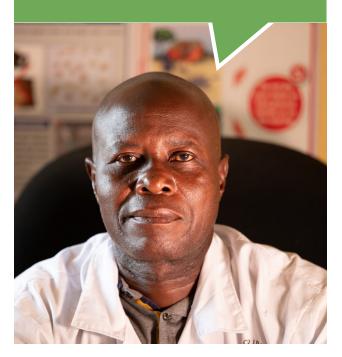
Unlike other DCs, Nadia realized that she cannot provide agricultural insurance services without a thorough training to become an agent. Through the DC4FC Project, UFAAS connected her to the agricultural insurance consortium of Uganda (https://aic.ug), consisting of (13) insurance companies offering agriculture insurance covering crop and livestock risks. Under a partnership of AIC and the Insurance Training Institute, Nadia underwent a training.

66 Mrs. Kagoya reported that before being sensitised by Nadia, she could just plant soybeans without any advice and information on the weather changes, pests and disease threats. She is now aware that there is a solution and looks forwards when this will be actualised

# SOME VOICES FROM THE INNOVATION PLATFORM MANAGERS AND DISTRICT LEADERS/TECHNICAL STAFF

"Digital connectors have greatly benefited the farming communities in a way that they have bridged the gap between the suppliers and farmers and now farmers can easily access genuine seeds, fertilisers, instant information and advice and access ready markets"

Moses Makaka, Innovation Platform Manager, Bugiri District



The farming community has indeed benefited from this Digital Connectors project. With the digital platforms, it becomes easy for farmers to relay their concerns/challenges in a very short time and the response is also very timely." With the road network challenges, fuel and the limited number of technical people to reach out to farmers, these digital connectors have bridged all these gaps and farmers are easily getting access to genuine timely inputs, information, advisory services, packaging and insurance"

Dr Sarah Majogo, District Production and Marketing Officer, Bugiri District Local Government "Digital connectors are doing a great job here in Zirobwe and Luweero at large. Ssenyonga provides farmers with quality and timely inputs and extension services."

Nanyombi Annet, Assistant agricultural Officer at Zirobwe Town Council, Luweero district





"The digital connectors have offered advisory services to farmers. They have given advice on the type of inputs to use, at what stage, how to use them and the effects to the crops. [...] In partnership with Sunculture and the irrigation digital connector, they were able to get 3 water pumps for the farmers at only 15% payment as a give away to its customers"

Nankya Prossy, Assistant General Manager Zirobwe Agaliawamu Agribusiness and training Association (ZAABTA), Luweero District



Digital connectors help us with feedback from the farmers-they tell us which varieties are the best and what is happening in the communities. [...] The people selected were also good 'connectors'. These days, I can also draw on them to train farmers on other things. [...] Even the extension workers in the District Local Government are also shifting to digital because they have learned from these digital connectors that e-extension is efficient. [...] Our District was even the best implementer of the Parish Development Model",

Kirya Peter, Agricultural Officer, Bugiri District Local Government

"It's just obvious that the project has contributed to employment of the youths because it is the youths that are mostly versed with the digital era and more involved in the digitisation services. We thank UFAAS so much"

Dr Sarah Majogo, District Production and Marketing Officer, Bugiri District Local Government



## DIGITAL CONNECTORS' ASPIRATION: A DIGITAL DASHBOARD

Going forward, the digital connectors plan to jointly develop a digital dashboard to ensure complementarity of their services and greater impact on farming communities.





## DIGITAL CONNECTORS FOR FARMING COMMUNITIES

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