




TRANSFORMING AGRICULTURE IN AFRICA ...
.... THROUGH IMPROVED DECISION-MAKING

UNOOSA Space Economy: Africa in Focus June 2021

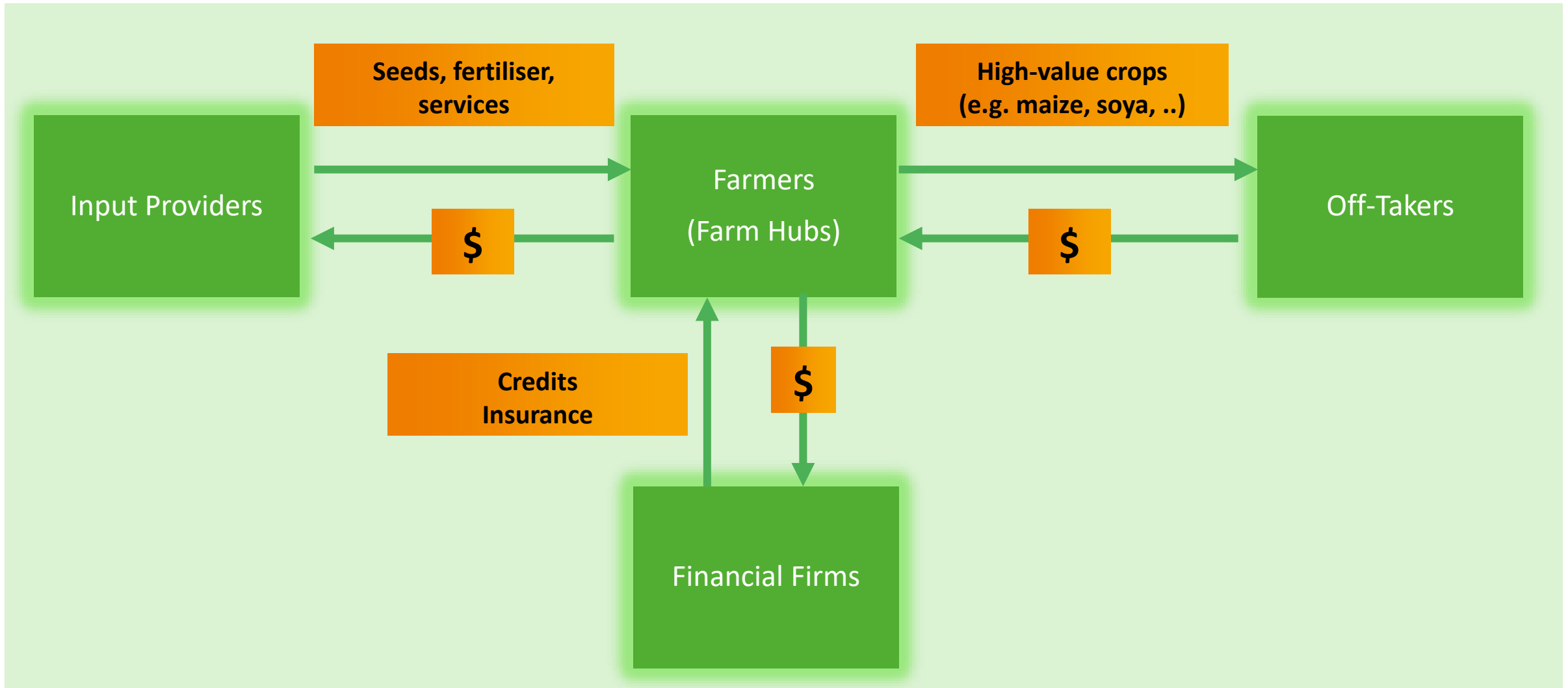
A portrait of Kizito Odhiambo, a young Black man with short hair and a light beard, wearing a light blue button-down shirt. He is smiling slightly and looking directly at the camera. The background is a blurred outdoor setting with greenery and a building.

„Our mission is that the African continent can feed itself and be self-sufficient during my generation. We founded agriBORA to build an agritech platform in the clouds that empowers agribusinesses on the ground with digital tools across the value chain.“

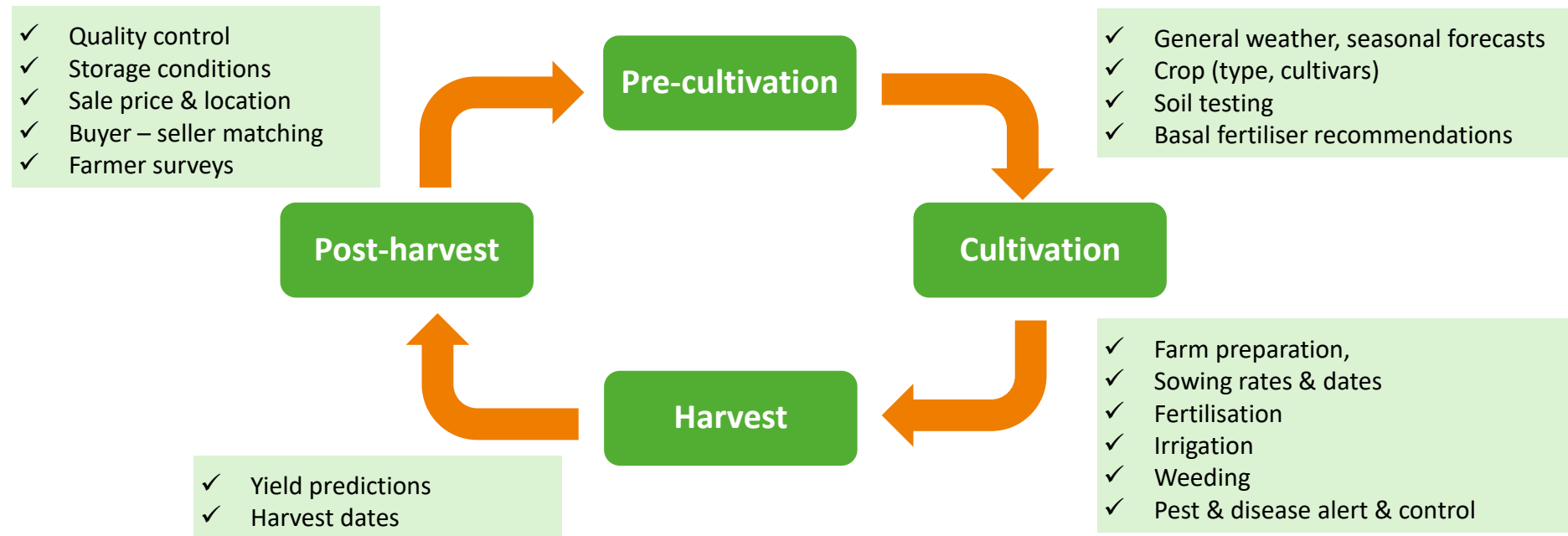
Kizito Odhiambo, Founder and Managing Director agriBORA

Smallholder Farmers in the Middle of the Eco-System

We make smallholder farmers visible, bankable and accessible to their business partners



Bringing Space Technology To Individual Farmers In Africa



- Farmers in Africa have to answer the same basic questions as farmers all over the world.
- Our goal is to support them by making the same technology available to them as to their counterparts in Europe.



KEEP THE

CURRENT SOURCES.

TAKE ADVANTAGE OF

NEW TECHNOLOGIES.

Data driven decisions



Complement conventional advice with new possibilities

Conventional Sources in Africa

- Own knowledge, neighbouring farmers.
- National and local government agriculture departments.
- Field agents of seed, pesticide and fertiliser companies.
- Newspapers, TV and radio.

New Sources and Technologies

- Satellite and drone-based remote sensing.
- Satellite-based positioning.
- New algorithms for deriving information.
- Big data management, machine learning, AI.
- Cloud technology.
- Improved telecommunications (mobile connectivity).

Challenges for Africa's Smallholder Farmers

To provide the right solutions, we have to understand the constraints.

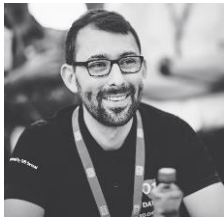
- A highly fragmented system – 7 million smallholder farmers in Kenya alone.
 - Difficult for suppliers and off-takers to do business efficiently.
- Many farmers are not precisely located (no address).
 - Difficult to provide location-based services.
- Lack of access to the internet.
 - Difficult to take advantage of advances in digital technology.
- Lack of understanding of the possibilities offered by new technologies.
 - Insufficient training in all aspects of these technologies.
- Lack of trust between farmers and business partners
 - Caused at least partly by lack of transparency in the system



The agriBORA Team



Kizito Odhiambo,
Founder, CEO, Engineer, IT Expert



Nicolas Caspari,
Technical Lead, Data Scientist,



Levi Chikombe,
Operations Lead, Economist



Kennedy Oketch,
Agriculture Lead, Agric. Economist



John Lewis,
New Business Ventures

The agriBORA Digital Hub

Uses a range of digital technologies to provide information, advice and services to our clients and users.

Weather Analysis



Satellite Monitoring

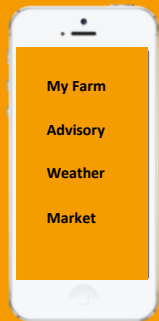


Soil Type Data



Data Sources

Mobile Data Capture



Location Based Insights



Farmer Data & Customer Interface

Products and services



Farmer Interaction

- Registration
- Messages



Agro Advisory

- Weather
- Phenology



Farm Intelligence

- Growth Monitoring
- Yield Prediction



Market Linkage

- Aggregation
- Price agreements



Financial Services

- Mobile Payment
- Insurance



Consultancy

- Projects
- Surveys

Example Services

Developing the Digital Hub

Complementing and Enhancing the Work of Our Operations Team

Registering the farmers.

- The more information captured in the database, the better the support provided.

Providing better information to support better decisions

- We transform sensor data from multiple sources (including satellites) into information which leads to informed decision-making.

More efficient and transparent relationships with suppliers

- Suppliers of seeds, fertilisers and pesticides as well as mechanical services have a more efficient and transparent relationship with farmers, leading to increased trust.

Improved market linkage

- Through the digital hub, farmers and the end-buyers establish a direct relationship.

Supporting Youth Organisations to understand and use new technologies

- Helping young people to understand the possibilities of digital technology.



Experience in Kenya - The Alizeti Project

Strategically important for agriBORA



Background

- The “Alizeti Project” was proposed by agriBORA to the European Space Agency (ESA).
- Alizeti represents a continuation of our successful relationship with ESA and the EU.

Alizeti will support Further Development of the agriBORA Digital Hub

- The digital marketplace where smallholder farmers trade with their suppliers and buyers.
- The platform from which a range of services are provided to all clients and users.

Scope

- Alizeti addresses the partnership between the farmers and the processors dealing in high-value crops.
- The project started in May 2021, has a total cost of €400K and will run for two years.
- We have 6 processors of high-value crops (soya, sorghum, potatoes, sunflowers, maize, tea) as pilot clients.
- We expect to register at least 100.000 new farmers on the agriBORA platform database.
- ESA / DLR are supporting Alizeti with a grant of €200K.

Commercial Space in Africa

Some personal thoughts

Lessons learned

- You need to be realistic about the environment and available infrastructure
- Technology alone isn't enough – you need the human touch
- Most European investors don't understand business in Africa

Building the commercial space sector

- Cooperation between universities (made easier by common language and time zones)
- CubeSat programmes
- Driven by downstream markets (e.g. agriculture, energy, mobility, health)
- DLR Networks (Space2Agriculture, Space2Motion, Space2Health) as examples
- Links to Copernicus and Galileo programmes



Advice to Entrepreneurs

- Research, build your networks
- Build a very clear value proposition and validate it (ask the hard questions)



THANK YOU

FOR YOUR ATTENTION

agribORA GmbH

Robert-Bosch-Str. 7
64293 Darmstadt
Germany

info@agribora.com
+49 176 31204271
+254 705859648

www.agribora.com