



AFRICAN DEVELOPMENT BANK Digital Agriculture Flagship

“Promoting Data-driven and Tech-enabled Agriculture in Africa”

Kemi Afun-Ogidan

Principal Agribusiness Officer

2nd June 2021

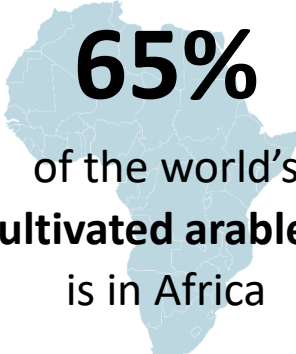


AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT

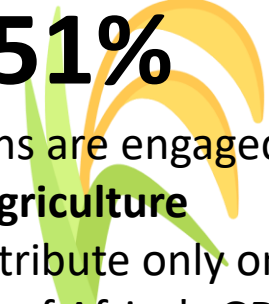
Africa's agriculture in context

STATE OF AGRICULTURE IN AFRICA

65%
of the world's
uncultivated arable land
is in Africa



51%
of Africans are engaged in
agriculture
but contribute only one
quarter of Africa's GDP



US\$ 47 billion
was spent on
food imports
into Sub-Saharan Africa in
2017



MEGATRENDS

POPULATION GROWTH & EXPANDING MIDDLE CLASS



URBANIZATION & TECHNOLOGICAL CHANGES



EVOLVING DIETARY PREFERENCES



IMPACT BY 2050

2.5 billion
people living in Africa

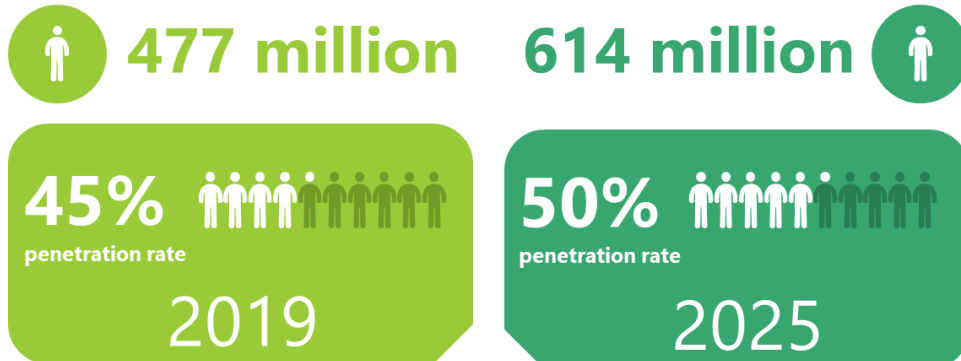
over 60%
increase in Africa's food
demand

By 2030, African food
market will be worth
US\$ 1 trillion

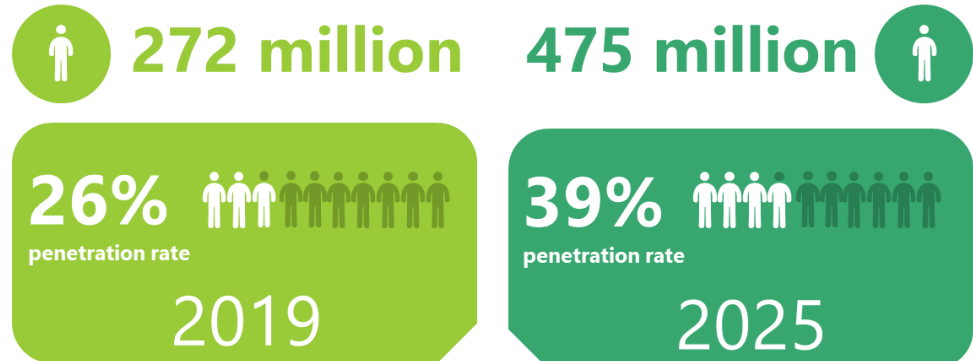
The rise of digitalization in Africa

Increasing internet connectivity and mobile phone adoption

Unique mobile subscribers in Africa



Mobile internet users in Africa



Policy changes



Business opportunity

Rwanda: up to **85%** of rural consumers will have access to mobile services in 5 years (Sce: AfDB-FAO-CIAT)

Mobile Money
548 million of mobile money accounts in Africa (12% growth) (Sce: GSMA, 2021)

COVID-19 & e-commerce
 Jumia: 50% increase in transactions YoY (mid 2020)
 Club Kossam (Agribusiness in Senegal): Turnover doubled

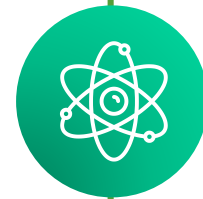


The opportunity to digitalize African food systems



Agriculture in Africa

- African smallholder farmers who produce 80% of Africa's food supply
- Increasing prevalence of extreme weather events – droughts, flooding, cyclones, FAW, locust invasion
- Climate change threatens 56% of crop production in Africa.



Tech evolution in Food & Agri

- Technology is rapidly changing the way food is produced, transformed, and distributed.
- Opportunity to leapfrog transformation of African agriculture and address climate concerns.
- 40 – 70% increase in agri yield and income when digital solutions are used.

Challenges to scale Digital Agriculture in Africa

- High cost of delivery, limited digital infrastructure and insufficient enabling policy/ incentive environment
- DigitAg solutions are still small-scale, dependent on donor funding and in the pilot stage in SSA



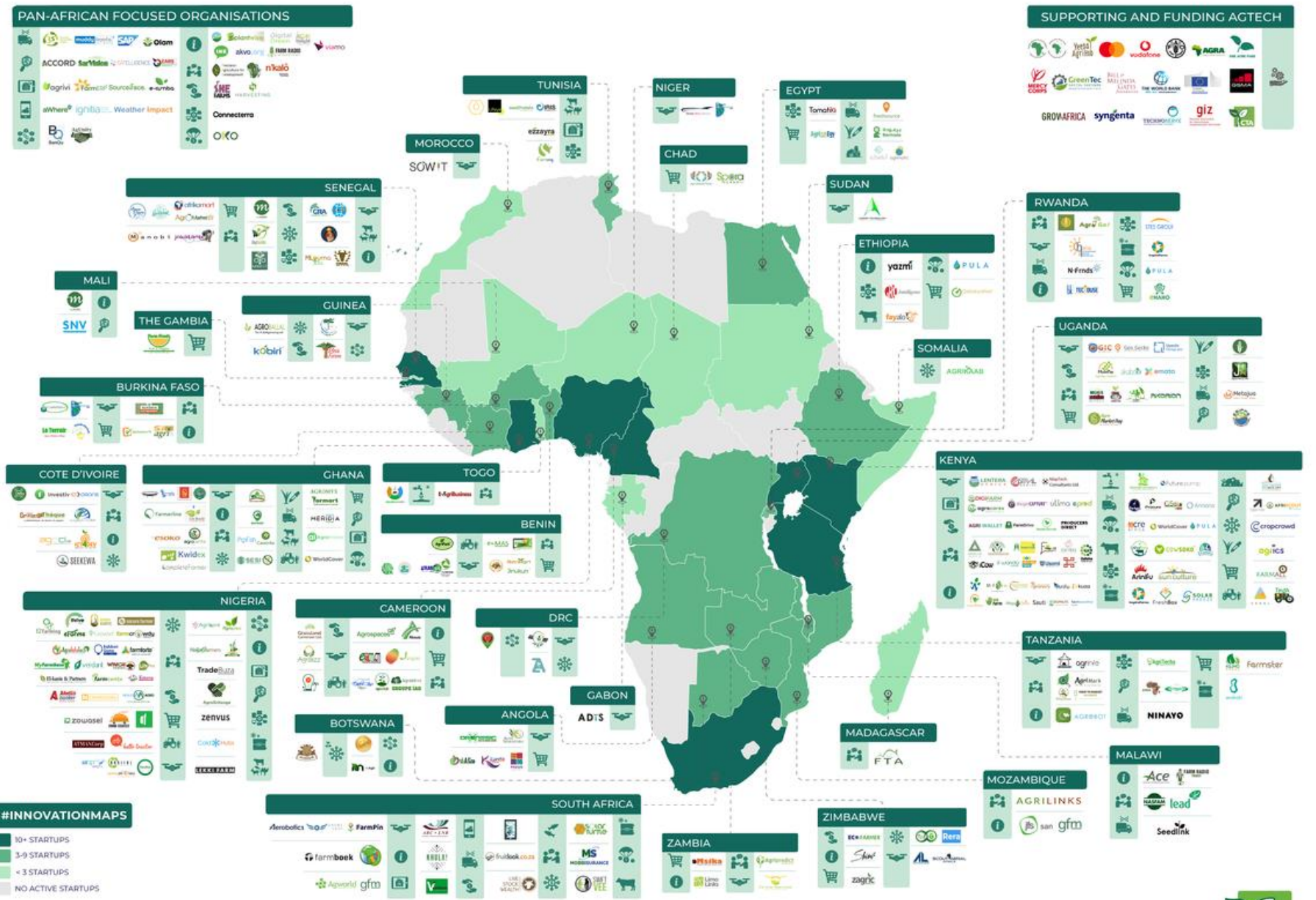
- Only 13-35% of African farmers use digital solutions (~32mn), of which only 25% are women
- More than 70% of registered users of digitAg services are youth and most digital innovations are being developed by young tech start-ups

Growth of agritech solutions across Africa - 2019

AFRICA'S AGRITECH LANDSCAPE

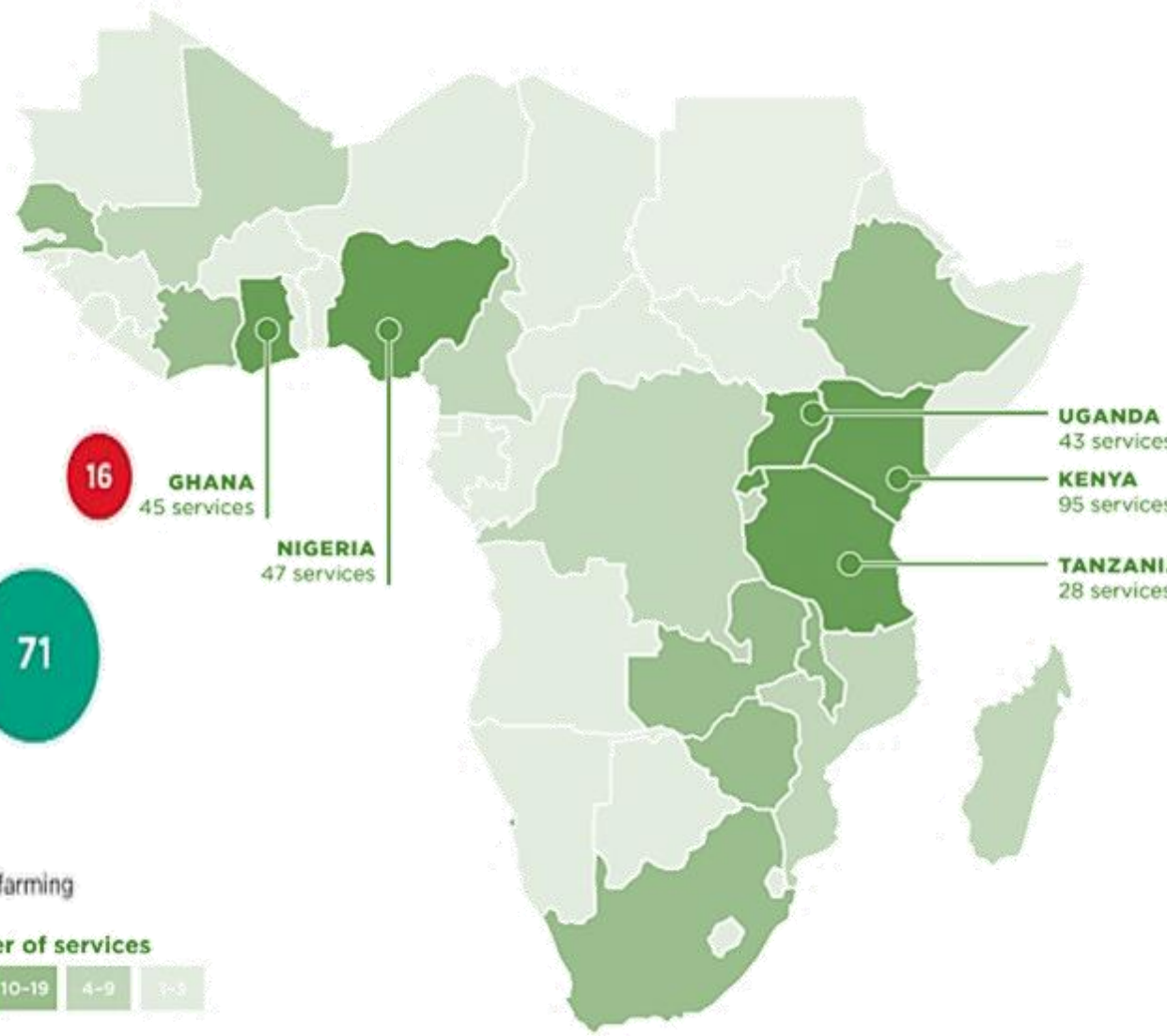
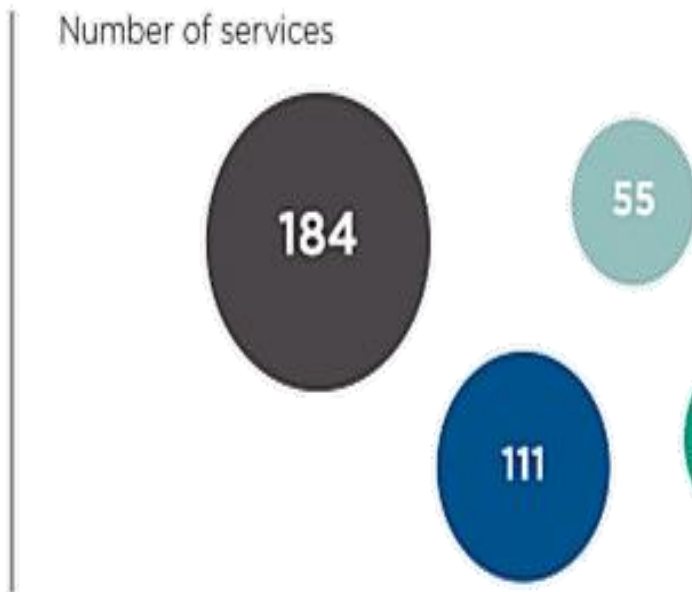
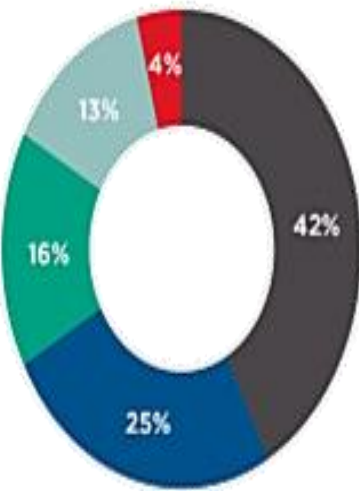
280+ AGRITECHS VENTURES

- ### Services
- ADVISORY SERVICES & MARKET ACCESS**
Organisations that provide advisory services, training, networks, support or market access to farmers.
 - UNMANNED AERIAL VEHICLES & DRONES**
Organisations producing, distributing, or operating UAVs and drones used in agriculture.
 - TRACTORS, EQUIPMENT & LABOUR**
Organisations that provide access to equipment through technology.
 - LOGISTICS AND SUPPLY CHAIN**
Organisations that facilitate transport or storage of goods, provide deliveries or connect different links in the agricultural supply chain.
 - MARKET INFORMATION**
Organisations that provide access information such as pricing, harvest, pricing, etc.
 - IRRIGATION**
Organisations that provide equipment or services related to irrigation.
 - CROWDFUNDING & CROWDFARMING**
Crowdfunding organisations dedicated to raising capital for farms and livestock, or providing a platform for farmers to connect and share farm activities.
 - FERTILISERS AND INPUTS**
Organisations that provide services related to soil health, inputs and fertilisers.
 - AI, INTERNET OF THINGS & SMART DEVICES**
Organisations that provide artificial intelligence solutions, IoT or smart devices to facilitate farming activities.
 - FARM MANAGEMENT**
Organisations that provide farm management platform or services to help farmers perform daily activities.
 - AGRI PRODUCTS OR LIVESTOCK MARKETPLACES**
Organisations that provide a platform for agriculture related e-commerce.
 - APPS AND SERVICES FOR LIVESTOCK**
Organisations that centre their services around livestock related products.
 - BLOCKCHAIN**
Organisations that provide blockchain related software and to help farmers do business through a trusted and secure system.
 - INSURANCE FOR FARMERS, ASSETS, AND LIVESTOCK**
Organisations that provide a insurance related products for farmers.
 - GEOLLOCATION, GIS, MAPPING AND SATELLITES**
Organisations that use or manufacture mapping technology.
 - FORECASTING & MONITORING**
Organisations that provide forecasting, weather and monitoring services.
 - FINANCIAL SERVICES**
Organisations that provide or facilitate access to financial services and payments solutions.
 - COLD STORAGE**
Organisations that provide access to cold storages - often including solar powered solutions.
 - WASTE MANAGEMENT**
Organisations that turn waste into energy or fertilisers that used by farmers.
 - URBAN FARMING AND HYDROPONICS**
Organisations working on urban farming, aquaponics, and hydroponics.



Growth of agritech solutions across Africa - 2020

As at 2020, 437 services in Sub-Saharan Africa

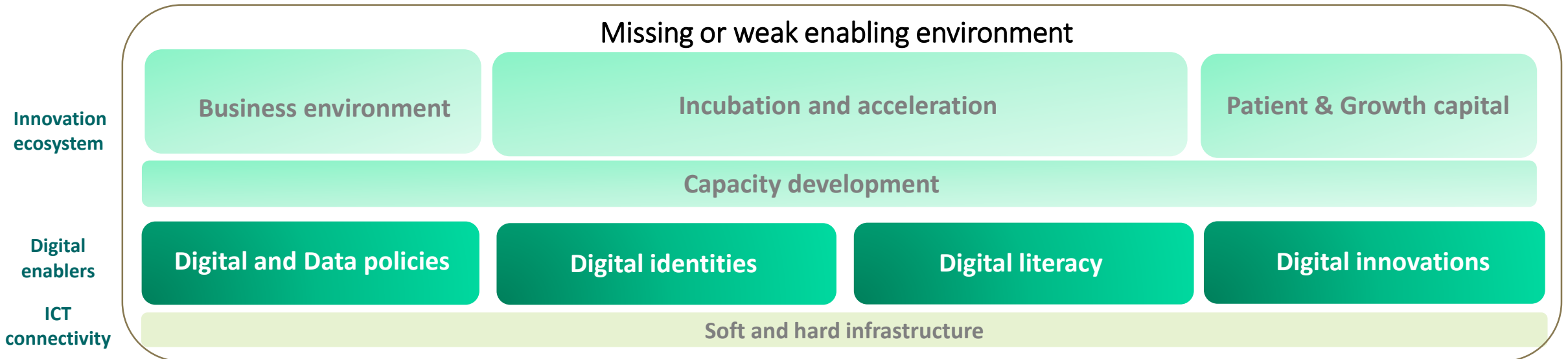


■ Digital advisory
 ■ Agri digital financial services
 ■ Digital procurement
 ■ Agri e-commerce
 ■ Smart farming



Barriers to scale digital ag solutions in Africa

- Digital infrastructure, regulatory frameworks and data policies needed to support innovators reach the last mile are insufficient or lacking in some cases.
- Digital literacy and human capacity to develop, access and utilize digital Ag solutions is still nascent.
- Many Agtech companies are yet to find a commercially viable business model to deliver digital solutions to smallholders and agri-SMEs.



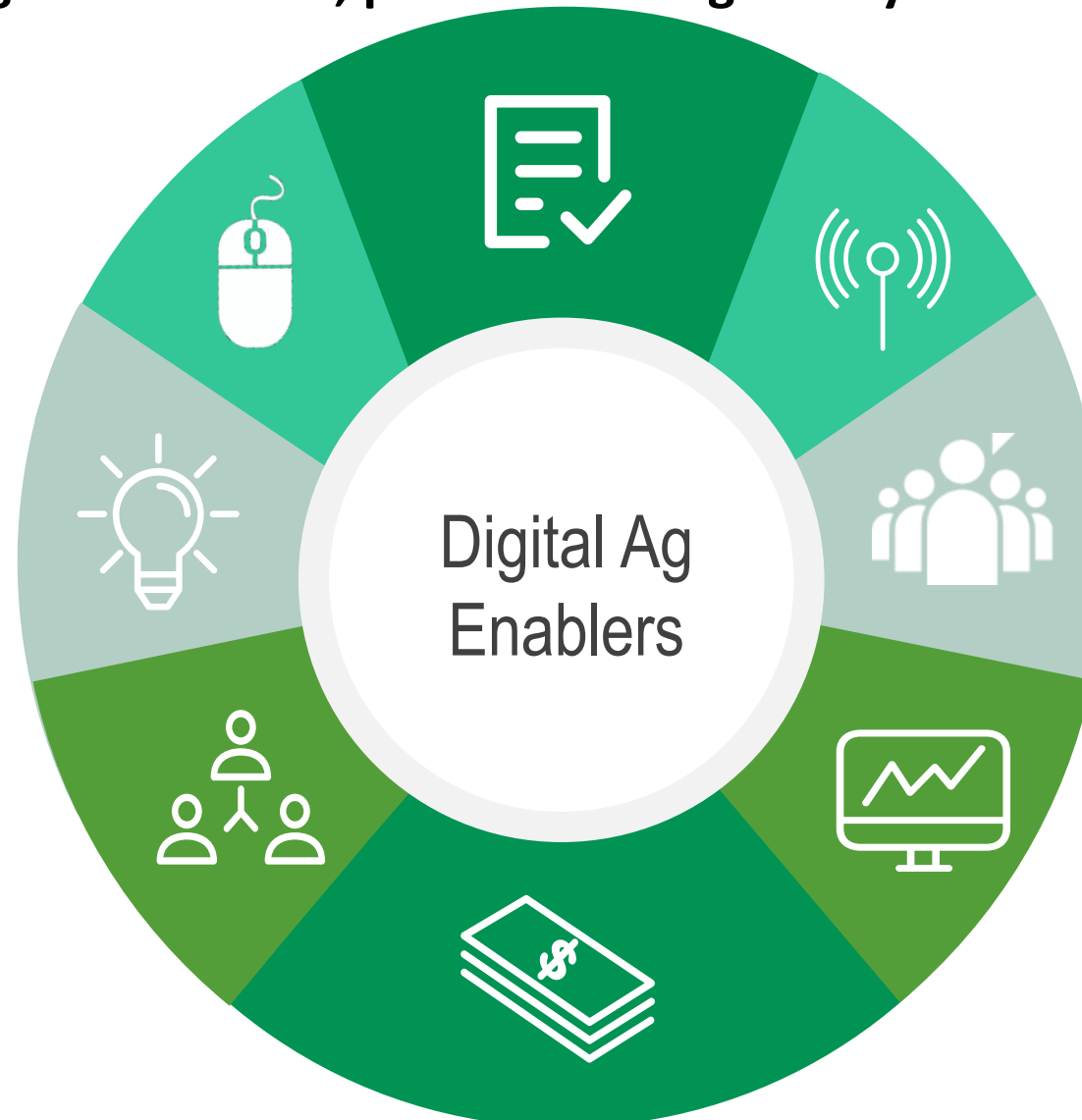
Public sector enablers for Digital Agriculture in Africa

Agriculture data, policies and regulatory framework

IT skills & digital literacy

Emerging tech
innovation & research

ICT4Ag incubator and
accelerator ecosystem



Digital infrastructure

Digital IDs & mapping

Data collection & analytics

Financing for Agtech startups & businesses

Digital innovations integrated into all Feed Africa Investments

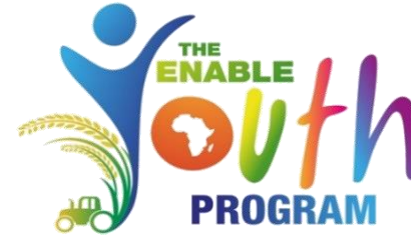
AfDB invests US\$ 1 – 2 billion in African agriculture per annum



Tech. for African
Agriculture
Transformation



Africa Fertilizer Financing
Mechanism



ENABLE Youth



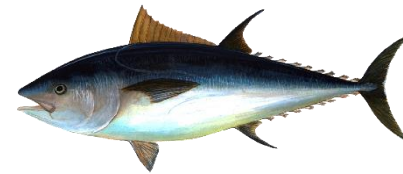
Special Agro-Industrial
Processing Zones



Climate Smart Agriculture



TAAT – Savannahs



Blue Economy



Livestock Flagship



Post Harvest



Digital Agriculture



African Leaders for
Nutrition



Global Agriculture and
Food Security Program

Feed Africa Digital Agriculture Flagship

Digital Ag Use Cases

- Integrated big data platforms for input-output advisory and marketplaces;
- Blockchain for traceability and supply chain efficiencies
- Automated systems for smart farm operations and precision agriculture
- Fintech for agriculture

01

Digital Ag
middleware
infrastructure



02

Enabling policies
for agri digital
transformation



03

Digital upskilling &
Capacity building for
innovation
ecosystems



04

Proof of Value, &
Insight & Analytics
collaborations

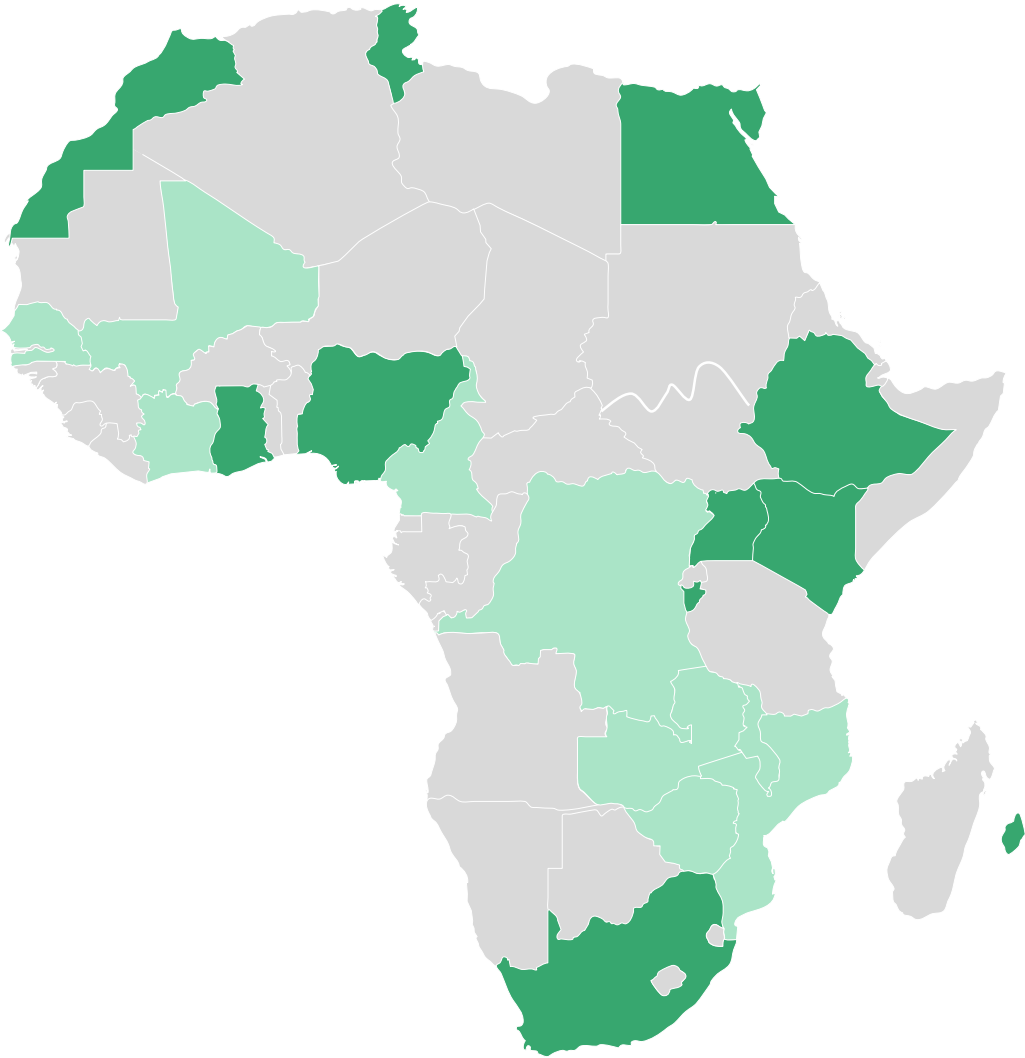


- Smallholder farmer digital literacy programs
- Youth techpreneur incubation and accelerator ecosystems

- Farmer digital IDs for G2P, B2B and B2C payments
- E-registries as building blocks for advisory and planning
- Digital agronomy data surveillance/observatories and management systems

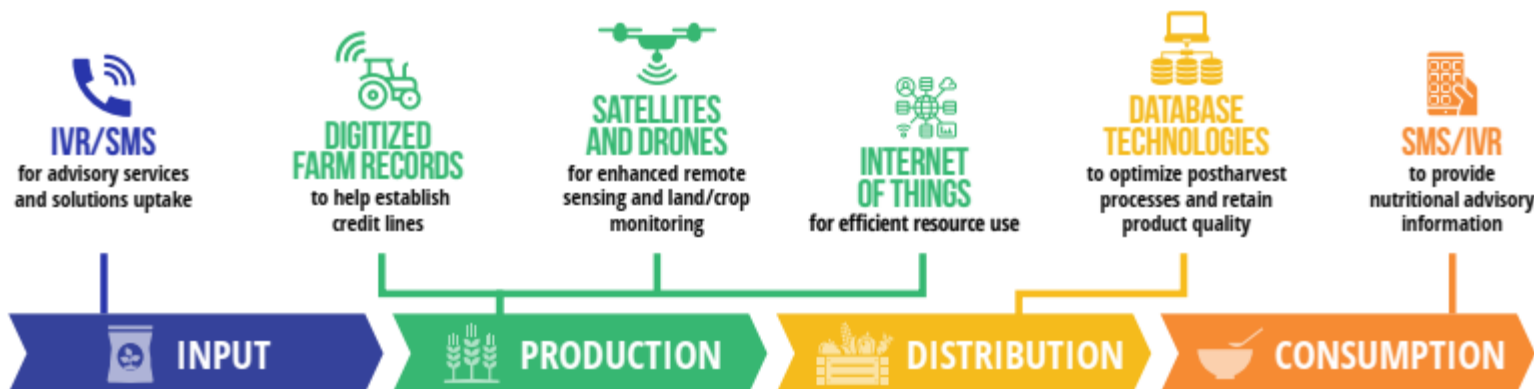
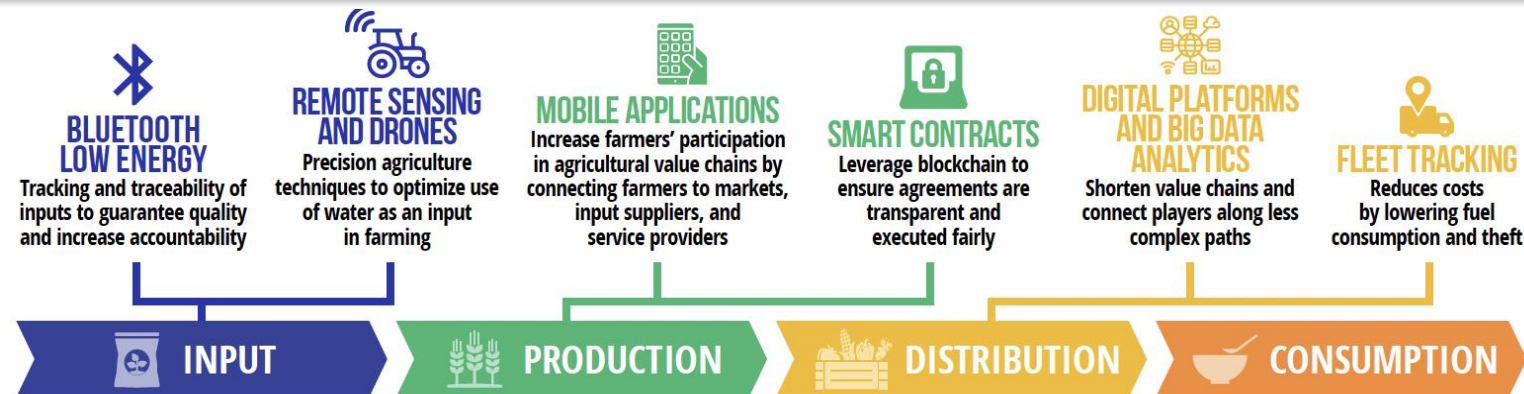
- Digital agriculture strategies;
- Policies for data governance and stewardship;
- Digital innovation teams;

AFDB Digital Agriculture Investment Roadmap



Champion Countries	Mid-Track Countries	Early Starter Countries
Countries leading Africa's digital agenda	Countries with growing tech services	Countries at the nascent stage of digital development
Kenya, Nigeria, South Africa, Tunisia, Morocco, Egypt, Rwanda, Ethiopia, Ghana, Uganda, Mauritius	Cote d'Ivoire, Cameroon, DRC, Mozambique, Senegal, Mali, Malawi, Zambia, Zimbabwe	Other countries where there is opportunistic demand

Country level digital transformation



Partnership Opportunities

Africa is rapidly digitalizing and open for business

Investments to scale

- Climate Smart digital technologies
- Equitable digital Agri-marketplaces
- Fintech for Agriculture
- Inclusive, gender-focused digital upskilling and job creation



Potential partner institutions

- ICT & Tech private companies
- Agritech impact investment funds
- Global FMCGs digitalizing their supply chain
- Development partners, Philanthropies, Family Offices
- Governments

THANK YOU!



Contact :

Kemi Afun-Ogidan
O.AFUN-OGIDAN@AFDB.ORG