PAFO COLEAD

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Innovations Session N°28

Digitalisation & AI in Agrifood: Tools for Efficiency and Market Access

INNOVATIONS SERIES

Global Gateway

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SESSION N°28 | PANEL 2

The bigger picture — what it takes to scale digital and AI solutions in agrifood

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Outline

01 **Digital agriculture: The promise and the reality**

02 The implementation ecosystem

03 Example of some FAO activities

04 **Key Recommendations**



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Mobile internet connectivity: the global divide

Sub-Saharan Africa has the lowest mobile internet use and the largest usage and coverage gaps.

	Global	Sub-Saharan Africa
Connected	59% 4.8 billion people	25% 310 million people
Usage gap	38% 3.1 billion people	66% 820 million people
Coverage gap	3% 270 million people	9% 110 million people

Usage gap: covered by mobile internet networks, but not using mobile internet.
Coverage gap: living outside mobile internet network coverage.

Source: GSMA, 2026. *The State of Mobile Internet Connectivity report*

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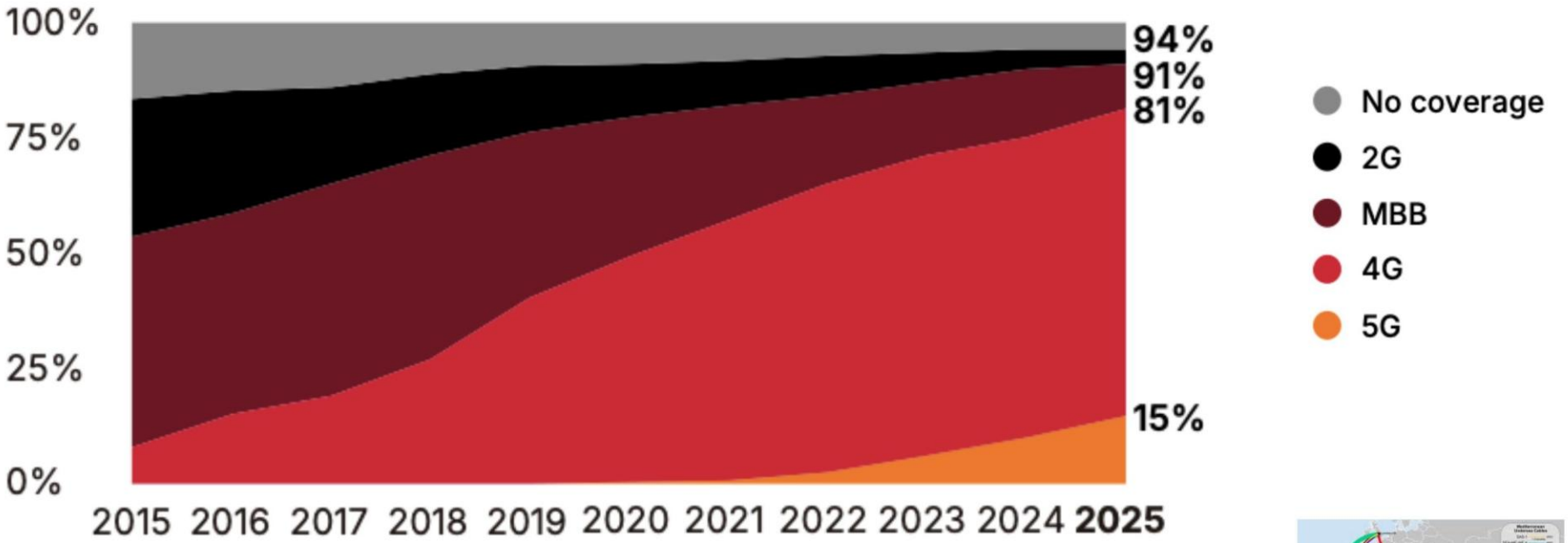
A mixed but improving picture of connectivity

Sub-Saharan Africa

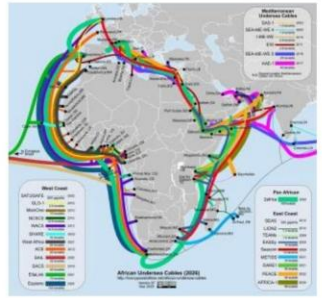
(GSMA, The State of Mobile Internet Connectivity 2026)



In **Africa in 2025**:

- **55% of urban residents** used the Internet.
- **21% of rural residents** used the Internet. (ITU)

STARLINK



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Digital agriculture meaningful use (beyond reach)

SUB-SAHARAN AFRICA • 2023

5%

Use of digital agriculture services across the region

Source: Beanstalk report

KENYA • 2024 • 60 DECIBELS STUDY

27% **of farmers report significant use of digital agriculture services**

Most Kenyan users would feel the loss if access to the service ended

Response to: "How would you feel if you could no longer interact with the provider?"



The disappointment results belong to the 2024 Kenya study.

THE ADOPTION GAP IS STRUCTURAL

01 Affordability

02 Knowledge & skills

03 Safety & security

04 Relevance

05 Fundamental enablers

Advisory services, market access, access to finance, etc.

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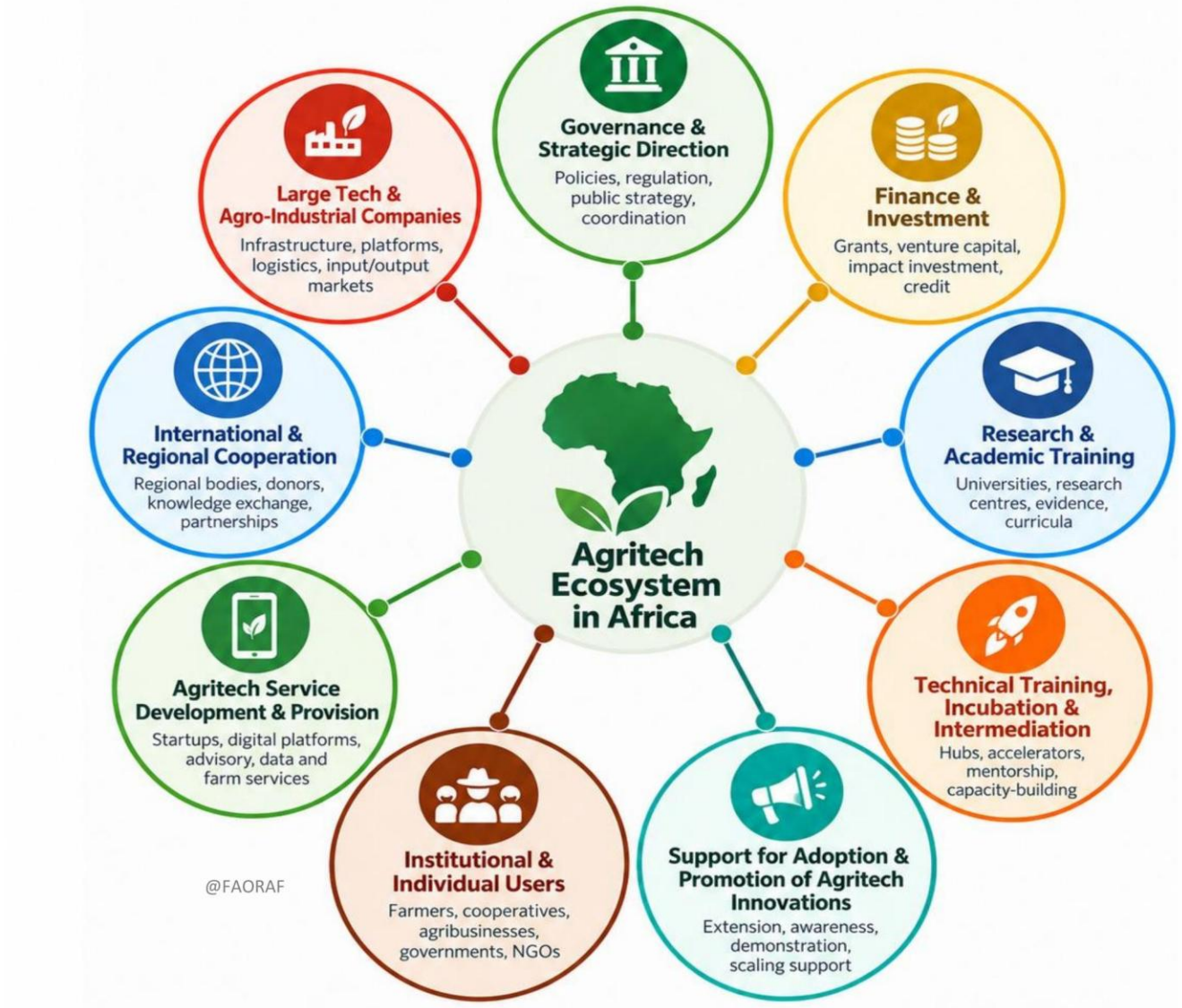

The digital agriculture ecosytstem in Africa

9 functional groups of actors

Relationships to be strengthened
Fragmentations to be reduced

Innovative private sector – research – civil society - government

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Improved continental policy awareness and guidance on the potential of digitalisation for agrifood systems



- More work on national digital agriculture strategies
- Inclusion of digitalisation in continental policy frameworks such as **the Kampala CAADP Declaration and Action Plan**
- **AI strategies being developed**, including with links to agriculture, for example in Benin
- **Digitalisation of seed systems, etc.**

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FAO Strategic Framework --- FAO Science & Innovation Strategy

FAO Africa Strategy for digital agriculture

DATA

Governments & country partners use better data and improved analysis for agrifood system development planning

COUNTRY SUPPORT

Better informed digital support to countries

IMPACT

Local digital agriculture ecosystems strengthened to deliver scalable inclusive solutions for SDG impact

https://www.fao.org/3/cb8305en/cb8305en.pdf





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Cadre stratégique de la FAO — Stratégie de la FAO pour la science et l'innovation

Stratégie Afrique de la FAO pour l'agriculture numérique



DONNÉES

Les gouvernements et partenaires nationaux utilisent de meilleures données et analyses pour la planification du développement des systèmes agroalimentaires

APPUI AUX PAYS

Un appui numérique mieux informé aux pays

IMPACT

Des écosystèmes locaux d'agriculture numérique renforcés pour fournir des solutions inclusives et à grande échelle au service des ODD



https://www.fao.org/3/cb8305en/cb8305en.pdf

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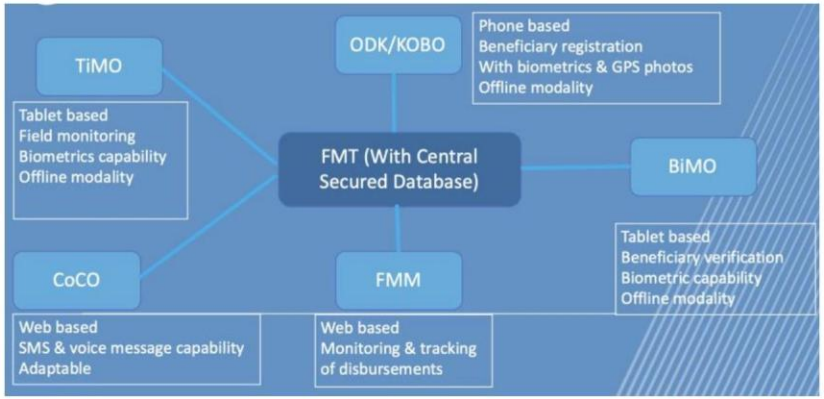
Snapshots of FAO's support for the digitalisation of agrifood systems in Africa

+150 platforms and digital tools including new AI tools



IDEA platforms to enable and strengthen digital farmer registries in many countries





Collab with Smart Africa to promote AI innovations and entrepreneurship

Digital Villages Initiative

AI in agriculture Roadmap

e-agriculture Online Courses



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Projet : favoriser les villages numériques grâce à un conseil innovant et des services de marché rentables

Objectif : transformer les systèmes agroalimentaires dans les zones rurales du Malawi, du Rwanda et du Zimbabwe, grâce à des technologies numériques efficaces, y compris des outils d'IA.



Chatbots vocaux et SMS par IA

Gemini ChatGPT

Résultats clés

- Renforcement des services de conseil agricole grâce aux innovations numériques, notamment le big data et les services basés sur l'IA.
- Amélioration de la promotion de l'agribusiness social et de la vente sociale
- Renforcement des capacités numériques et du réseautage pour les groupements d'agriculteurs, les champions du numérique, les agents de vulgarisation et les unités de développement rural –
  - Plus de 2000 personnes formées --- institutions renforcées
  - Près de 80 000 agriculteurs touchés



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Project: Fostering Digital Villages Through Innovative Advisory, Profitable Market Services

Aim: Transform agri-food systems in rural Malawi, Rwanda, and Zimbabwe, using effective digital technologies, including AI tools.



AI Voice & SMS chatbots

Gemini **Meta AI** ChatGPT



Key results

- Enhanced **Agricultural Advisory** Services by leveraging digital innovations, including big data **and AI-enabled services**.
- Improved social agribusiness promotion and social selling
- Strengthened **Digital Capabilities** and Networking for farmers' groups, digital champions, extension officers and rural development units –
  - **More than 2000 people trained --- institutions capacitated**
  - **Close to 80,000 farmers reached**

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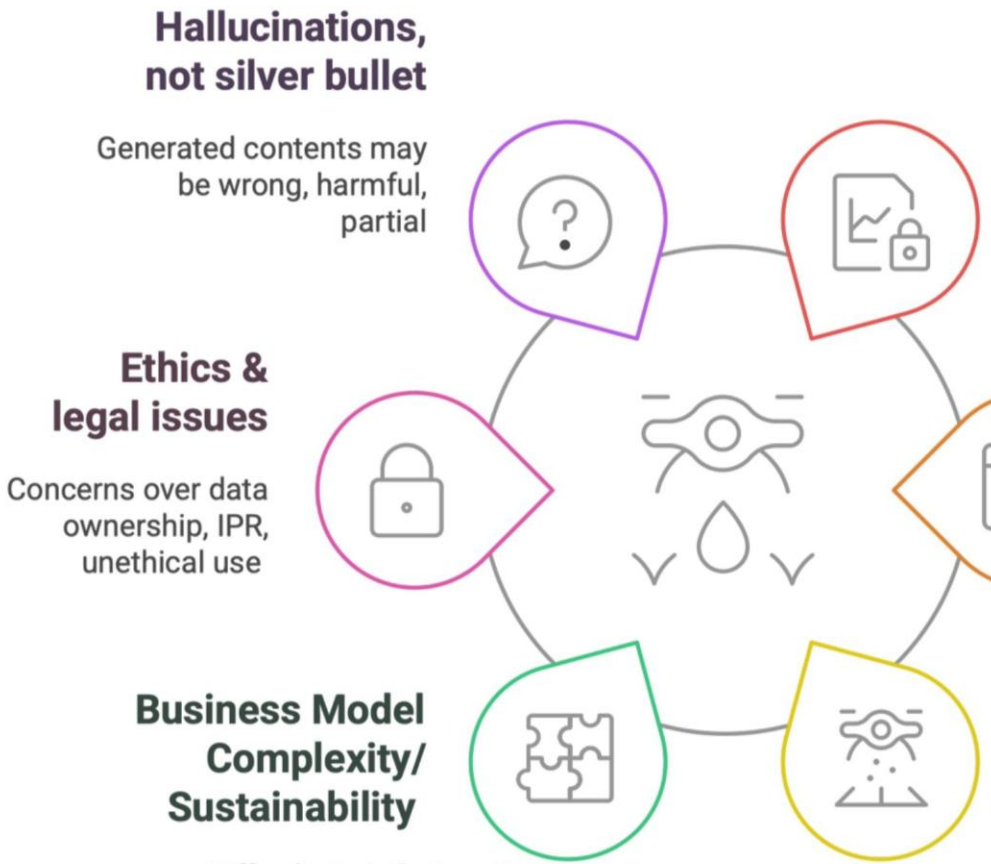
Key challenges for (Gen) AI adoption in Ag in Africa



Hallucinations, not silver bullet

Generated contents may be wrong, harmful, partial

Data Availability and Validation

Limited local / value chain agricultural data for AI training

Ethics & legal issues

Concerns over data ownership, IPR, unethical use

Digital / Data Infrastructure

Poor digital infrastructure with unreliable internet also for public entities

Business Model Complexity/ Sustainability

Difficulty in tailoring AI models to specific needs; business model for gov and service providers

Digital Capabilities

Insufficient digital skills among agriculture stakeholders ; Need of advanced IT capabilities in Africa

KL, RAF

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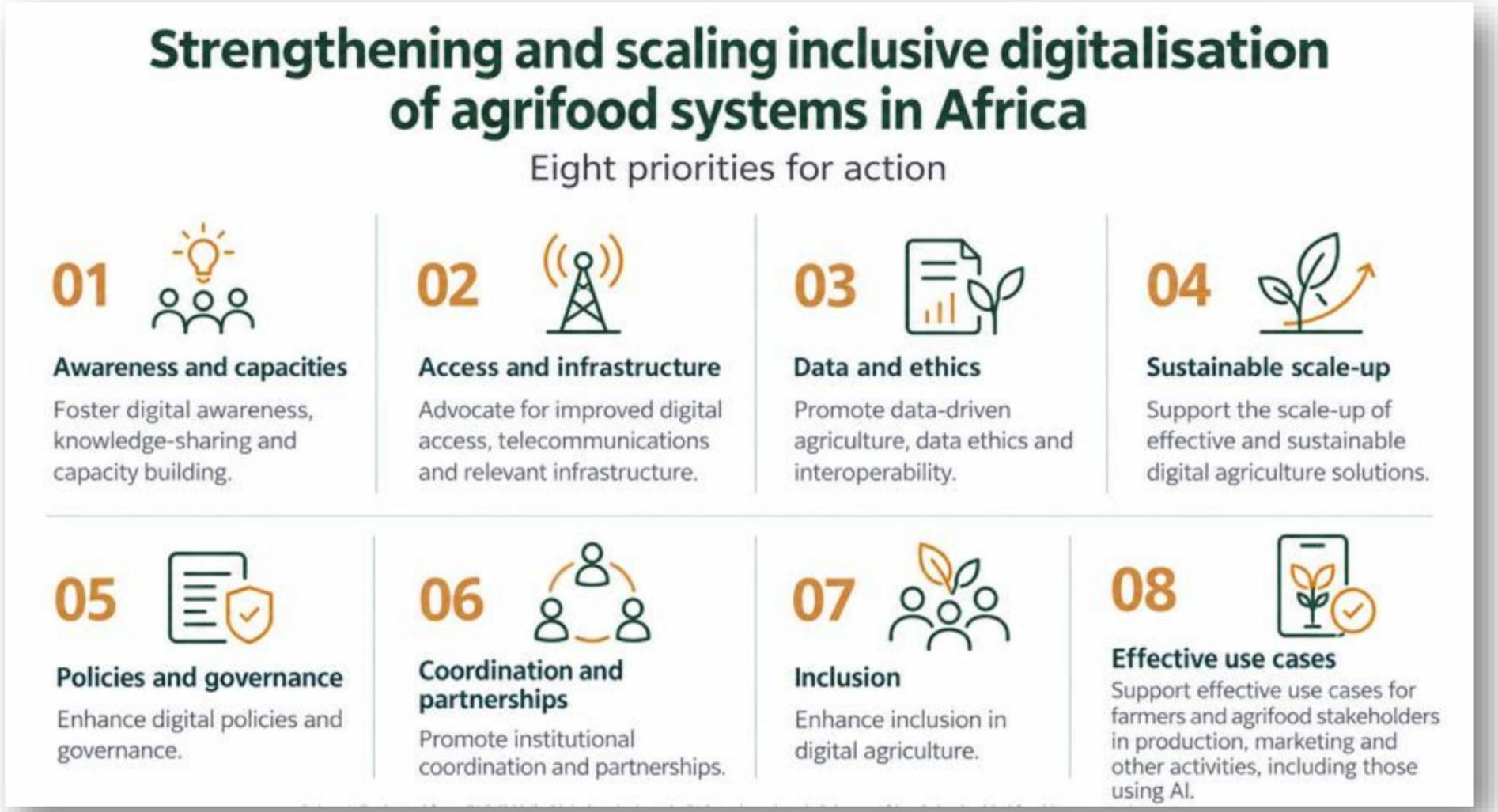

Adapted from the report **Digital agriculture in FAO projects in sub-Saharan Africa (2024)**

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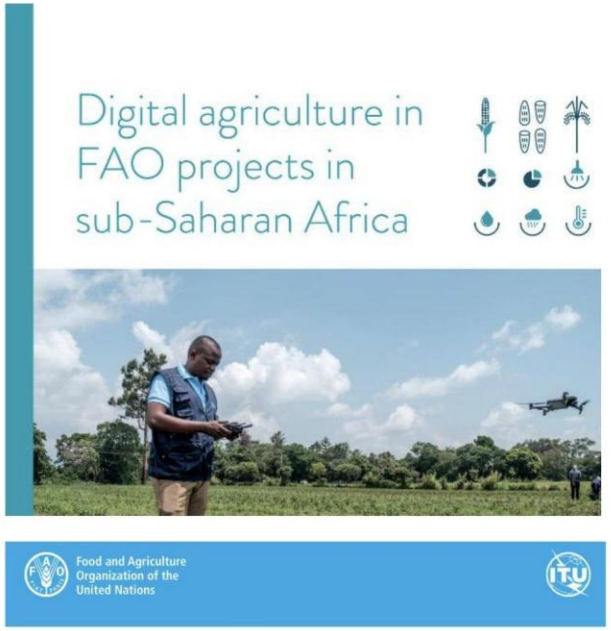
More information







Check reports and more on :

DVI Africa portal:

www.fao.org/digital-villages-initiative/africa

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Thank you

