



STATE DEPARTMENT FOR AGRICULTURE
MINISTRY OF AGRICULTURE AND
LIVESTOCK DEVELOPMENT



NATIONAL PROJECT COORDINATING UNIT

NATIONAL AGRICULTURAL VALUE CHAIN DEVELOPMENT PROJECT (NAVCDP)

Project ID: P176758

TERMS OF REFERENCE

for

Digital Agriculture Transformation Expert

January, 2026

Client:

The Principal Secretary
State Department for Agriculture
Ministry of Agriculture and Livestock Development
P.O. Box 30028-00100, Nairobi.
Kilimo House, Cathedral Road
Email: info@kilimo.go.ke

1.0 Project Background

National Agricultural Value Chain Development Project (NAVCDP) is a Community Driven Development Project that seeks to increase market participation and value addition for targeted small-scale farmers in Kenya who are engaged across 33 counties plus 2 counties. The NAVCDP intends to build on the foundation set by two World Bank funded projects namely, the National Agricultural and Rural Inclusive Growth Project and the Kenya Climate Smart Agriculture Project. *The Project Development Objective (PDO) is to increase market participation and value addition for targeted farmers in select value chains in project areas.*

The project will support about 4 million farmers engaged in sixteen (16) value chains across 33 counties. It is anticipated that 50 percent of these farmers will be women. Targeting a high number of women farmers will positively impact their incomes and on the food and nutrition status of households. However, the roll out of project benefits under the project may result in exclusion of some farmers from vulnerable and disadvantaged category (orphans, and child headed households, the sick, elderly, and female headed households, people with disabilities) as per ESS1 as well as vulnerable and marginalised communities as per ESS7. The risk of exclusion and inadequate consultation with VMGs is rated as substantial. The key challenge for the project would be to ensure that the women farmers are meaningfully engaged in the project and that they accrue the project benefits. In addition, women farmers may be challenged with low literacy level and limited access to land which is a key resource for the project.

1.1 Project Description and Components

The project will deepen investments in existing interventions around productivity enhancement, community led farmer extension, water management and data driven value chain services. It will also introduce intensified investments into select value chains, scale-up value addition, and market linkages with agribusiness off-takers and small and medium enterprises; support farmer-led irrigation development (FLID); enhance access to credit; and support the rollout of urban food system pilots in select clusters.

Component I: Building Producer Capacity for Climate Resilient Stronger Value Chains

Component I is focused on sustainable productivity enhancement, climate resilient and nutrition sensitive production and increased market participation for project farmers through improved access to credit, inputs and digital extension services while linking them to high-capacity Farmer Producer

Organizations (FPOs). Inclusion of women smallholders will be a key focus area with at least 50 percent of CIG members supported under the project estimated to be women farmers. Subcomponents here include Sub-component 1.1: Farmer Capacity Building and e-E-Voucher support; Sub-component 1.2: Farmer Producer Organization (FPO) level Climate Smart Value Chain Investments; and Sub-component 1.3: Improve Creditworthiness of CIGs and FPOs.

Component 2: Climate smart value Chain Ecosystem Investments

The component will finance the enabling ecosystem investments identified as part of county level, regional level (spanning several counties) and national value chain development plans for each of the nine identified value chains. The sub-components include Sub-component 2.1: Farmer-led irrigation development (FLID); Sub-component 2.2: Market access and infrastructure development; Sub-component 2.3: Data and digital investments; and Sub-component 2.4: Research linkages, technical assistance, and institutional.

Component 3: Piloting Safer Urban Food Systems

This component will support the rollout of Urban Food System pilots in Nairobi, a major urban cluster in the country, and parts of Kiambu and Machakos bordering the city as the peri-urban areas. The focus will be to demonstrate proof of concept of an efficient, climate smart and safe urban food system. The component has three subcomponents: Sub-component 3.1: Urban and peri-urban agriculture; Sub-component 3.2: Urban market infrastructure; and Sub-component 3.3: Policy and institutional strengthening.

Component 4: Project Coordination and Management

This component will finance activities related to national and county-level project coordination, including planning, fiduciary (financial management and procurement), staffing & human resource (HR) management at the national level, environmental and social safeguards implementation, monitoring and compliance, development of the Management Information Systems (MIS) and Information & Communication Technologies (ICT), regular M&E, impact evaluation, communication, knowledge management and citizen engagement. This component has two subcomponents namely Sub-component 4.1: Project coordination; and Sub-component 4.2: Communication, monitoring & evaluation (M&E), and information communication technology (ICT).

Component 5: Contingency Emergency Response

This zero-budget sub-component will finance immediate response activities following natural disasters (e.g., droughts, floods and or any sudden surge of a crop and livestock pest or disease like the locust or fall army worms) impacting the agricultural sector. The emergency response financing would be triggered upon formal request from the National Treasury (NT) on behalf of GoK. In such cases, funds from project components would be reallocated to finance immediate response activities as needed. Procedures for implementing the contingency emergency response will be detailed in the Immediate Response Mechanism Operations Manual (IRM-OM) to be prepared and adopted by GoK within six months of project effectiveness.

2.0 Overall Objective of the assignment

The overall objective of the assignment is to provide strategic and technical leadership in the integration of Artificial Intelligence (AI) and Internet of Things (IoT) solutions within the agricultural sector, ensuring that digital transformation initiatives are inclusive, ethical, and sustainable. Specifically, the Advisor will strengthen the Ministry's capacity to leverage AIoT for precision agriculture, climate-smart practices, supply chain efficiency, and food security enhancement. The role also aims to promote stakeholder engagement across government, industry, academia, and farming communities, while mitigating risks related to data privacy, technological exclusion, and sustainability.

3.0 Scope of consulting services and specific services

3.1 Scope of consulting services

The consultant will be responsible for:

- Advising the Principal Secretary, State Department for Agriculture, on current and emerging trends in digital agriculture, AI, and IoT applications;
- Supporting capacity building of technical teams and stakeholders to enhance digital agriculture competencies;
- Leading and coordinating resource mobilization efforts, including the preparation of grant and funding applications to support digital agriculture programs; and
- Providing ongoing technical guidance to ensure effective implementation and sustainability of smart agriculture systems and solutions.

3.2 Specific tasks

The Digital Agriculture Transformation Expert will:

- Provide strategic advice on AIoT applications in precision agriculture, pest and disease management, soil/water monitoring, and value-chain optimization.
- Support the development of policies and frameworks for ethical, inclusive, and sustainable use of AIoT in agriculture.
- Lead efforts in **grant applications, project funding, and resource mobilization** to support Digital Agriculture initiatives and digital agriculture programs.
- **Monitor and provide technical advice on government and partner-funded Digital Agriculture and other digitalization projects** to ensure alignment with national priorities, impact, and sustainability.
- Strengthen innovation ecosystems, startups, and living labs to accelerate digital agriculture.
- Provide guidance to providing guidance to programs led by research/extension institutions, rather than leading postgraduate mentorship directly
- Facilitate **international collaborations and research partnerships** with universities, governments, and development agencies.
- Represent the Ministry in **global conferences, technical committees, and expert panels** to enhance Kenya's position in Digital Agriculture.
- Support **monitoring and evaluation** of Digital Agriculture projects to ensure impact, sustainability, and alignment with national agricultural development goals.
- Organize benchmarking visits locally and abroad on application of AIoT best practices in Agriculture.

4.0 Duration and location of the Assignment

The overall assignment period is twenty-four (24) calendar months. The assignment will be for an initial contract duration of twelve (12) calendar months from commencement date of the contract. The contract duration is subject to extension based on satisfactory performance, extension of the project, budget availability and project needs.

The position of the assignment shall be based in Nairobi, Kenya, MOALD, Cathedral Road, Nairobi, Kenya.

5.0 Reporting requirements and timelines for submission of deliverables

The Digital Agriculture Transformation Expert will generally work from Monday to Friday, 0800h to 1700h, on a full-time basis and shall be responsible for providing services in line with this ToR.

The Advisor shall report directly to the Principal Secretary, State Department for Agriculture, and work in close collaboration with relevant directorates, technical teams, and project stakeholders. The Expert will be required to prepare and submit the following reports on or before the 5th working day of every month:

1. Monthly Reports

- a) A concise summary of activities undertaken, progress made in AloT implementation, and immediate challenges encountered.
- b) Key highlights of farmer and stakeholder engagement, policy inputs, and ongoing pilot initiatives.
- c) These reports shall be submitted no later than five (5) working days after the end of each month.

2. Ad-hoc Policy Briefs and Technical Reports

In addition to scheduled reports, the Expert may be requested to provide technical reports, briefs, or presentations on specific Digital Agriculture-related issues as required by the Principal Secretary or ministry leadership.

All reports shall:

- Be prepared in a format agreed upon with the Monitoring and Evaluation (M&E) Unit and other thematic leads.
- Capture achievements, challenges, solutions provided, and recommendations.
- Include both quantitative indicators (e.g., number of pilots deployed, farmers trained, partnerships secured) and qualitative insights (e.g., inclusivity of interventions, ethical considerations, sustainability impacts).
- Serve as key inputs to the overall project performance monitoring and national reporting processes.

All reports will be submitted to;

Principal Secretary,
State Department for Agriculture
Ministry of Agriculture and Livestock Development
Capitol Hill Towers, Cathedral Road,
P.O. Box 8073-00200,

Nairobi
Email: info@kilimo.go.ke

Attention:
National Project Coordinator
NAVCDP
E-mail info@navcdp.go.ke

6.0 Payment and Remuneration

The Digital Agriculture Transformation Expert shall be remunerated based on a monthly rate (inclusive of all clearly identified taxes), which will be negotiated with the successful candidate during negotiations. Payment shall be made monthly upon submission and approval of the monthly reports. Payment shall be monthly upon submission and approval of the monthly reports. Costs incurred by the Advisor outside the office will be reimbursed upon submission of a statement of expense and verifiable supporting documentation to the National Project Coordinator. When travelling individually on Program duties, subsistence allowance shall be paid in the equivalent of the Public Service Job Group “N” rates as currently published by the Government of Kenya (GoK’s) Salaries and Remuneration Commission (SRC). All individual travel shall be approved by National Project Coordinator

7.0 Minimum Requirements for Expert Qualifications and Experience

The Digital Agriculture Transformation Expert should have the following minimum qualifications and experience:

- i. A minimum of Master’s Degree in Internet of Things, Embedded Systems, Artificial Intelligence, or related fields, with research focused on AIoT applications in Agriculture from an institution/ University recognized in Kenya.
- ii. A minimum of 5 years of specific experience professional experience in the areas of Artificial Intelligence, Internet of Things, and Embedded Systems. A proven track record of AIoT adoption in Agriculture, Food Security, or Smart Cities, supported by evidence of practical applications, policy advisory work, or impactful projects.
- iii. A minimum of 8 years of general experience (working experience) as an Expert in government or county leadership on the adoption and governance of AIoT. Experience working in multi-stakeholder environments (academia, government, and industry collaboration) Experience of

publications, policy briefs, technical reports, or documented project outcomes in the areas of Artificial Intelligence and Internet of Things, with applications in Agriculture and Food Security. Experience of presentations in international conferences, workshops, or other professional fora related to Artificial Intelligence, Internet of Things, Agriculture and Food Security

- iv. Professional registration with valid membership and valid annual practicing license from either of the following: - (i) Internet Society of Kenya (ii) The Information Technology Association of Kenya (iii) Computer Industry and Services Association of Kenya or equivalent professional body recognized in Kenya.

8.0 Management and Accountability of the Assignment

The project is implemented by the State Department for Agriculture who is the client for the Services. The Principal Secretary, State Department for Agriculture has appointed the Agriculture Secretary to whom the specialist will report.

9.0 Obligations of the Client

Services and Facilities provided by the Client are as follows;

- i. Telecommunication/access to Wi-Fi.
- ii. Suitable office/ equipment.
- iii. Transport to field assignments, as and when required.

10.0 Obligation of the Digital Agriculture Transformation Expert.

The Digital Agriculture Transformation Expert will work under the direct supervision of the Principal Secretary, State Department of Agriculture, while collaborating closely with the Directors of ICT and Agricultural Extension Services, the Monitoring and Evaluation Unit, County Agriculture Officers, and other thematic leads within the Ministry. The Expert shall also maintain working relationships with relevant external partners, including research institutions, development agencies, and private sector actors, to ensure that the adoption of AIoT technologies is well-integrated, inclusive, and impactful across agricultural value chains. On matters of a sensitive or strategic nature, the Expert shall seek direct guidance from the Principal Secretary and maintain the highest standards of discretion and confidentiality.

The Expert shall perform and carry out the services with due diligence, transparency, efficiency, and economy, consistent with internationally accepted professional practices and in line with Government of Kenya policies, guidelines and frameworks. The Expert shall adopt sound management approaches, safeguard the legitimate interests of the State Department of Agriculture, and act in good faith in all dealings with third parties. The Expert also has a continuing obligation

to disclose any situation of actual or potential conflict of interest that may affect, or be perceived to affect, the impartial execution of duties. Failure to disclose such situations may result in disqualification or termination of the contract.

In addition, the Advisor shall ensure that:

- i. A high level of professionalism, integrity, diplomacy, and initiative is consistently demonstrated in all engagements.
- ii. Activities and deliverables are completed within agreed timelines, to the highest standards, and in compliance with the Government of Kenya policies and partner guidelines.
- iii. Efficient information and knowledge management systems are established and maintained to support decision-making, reporting, and learning within the Ministry.
- iv. The interests of the Client—the State Department of Agriculture are held paramount at all times, without any consideration for personal benefit, future engagements, or conflict with other assignments.
- v. Digital agriculture innovations are applied in a way that directly contributes to agricultural transformation, food security, climate resilience, employment opportunities to the youth and inclusive economic growth.

11.0 Confidentiality, Property Rights of the Client in Reports and Records

All the reports, data, and information developed, collected, or obtained from the implementing agencies etc. Client, and other Institutions during this exercise shall belong to the Client. No use shall be made of them without prior written authorization from the Client.

At the end of the assignment, the Specialist shall relinquish all data, manuals, reports, and information (including the database, codes, and related documentation) to the Client and shall make no use of them in any other assignment without prior written authority from the Client.