

CALL FOR EXPRESSION OF INTEREST (EOI)

AI-Enabled Agricultural Advisory Solution Partner

Issued by:

RWANDA CENTRE FOR THE FOURTH INDUSTRIAL REVOLUTION

1. About Rwanda C4IR

The Rwanda Centre for the Fourth Industrial Revolution (C4IR) is a partnership between the Government of Rwanda and the World Economic Forum. It works to advance the responsible and inclusive use of Artificial Intelligence and other emerging technologies to support Rwanda's national development priorities.

Rwanda C4IR is legally registered as the Center for AI Policy and Innovation (CAIPI); for consistency, this EOI refers to it throughout as C4IR.

Within C4IR, the Rwanda AI Scaling Hub (“the Hub”) leads the design and delivery of AI solutions that create real, measurable impact, with AI Enabled Agricultural Advisory as one of its priority use cases.

2. Background

Agriculture is the backbone of Rwanda's economy: 20% of GDP, over a third of exports, and the livelihood of nearly 70% of households. The Fifth Strategic Plan for Agriculture Transformation (PSTA 5) sets an ambitious growth path for the sector (2.0% to 6.1% GDP growth by 2028/29). That growth depends on getting personalized, expert agricultural knowledge into farmers' hands, and that is precisely where the system is under strain. Rwanda's extension model, Twigire Muhinzi, works well where it reaches people: yields are up by roughly 38% and milk production by 75% among the farmers it serves. But only 16,654 agents, under Twigire Muhinzi, currently cover 35% of the country's 3.4 million farmers; where the advice reaches farmers it is often generic rather than tailored to a farmer's soil, crop, or region. There is also no real-time channel for farmers' actual, on-the-ground problems to feed back into research and policy. The problem, in short: too few experts, generic advice, and no feedback loop at a moment when the sector's growth targets assume the opposite. There is a need for an advisory platform capable of delivering services that are simultaneously mass-reaching, personalized, content-rich, and able to close the feedback loop to sector leadership.

The platform is built around three user groups. Smallholder farmers are the primary users: average age 48.5, near-universal feature phone ownership, and mostly farming under 0.5 ha. They need direct, personalized answers on crop and livestock advisory, pest and disease management, and weather/climate guidance, delivered by voice and simple text (SMS) rather than app-only or web/WhatsApp chat-only channels. Extension officers, field agents, and farmer promoters are secondary users: the platform is not meant to replace them but to make them more efficient and consistent, through features such as digital record-keeping, an in-field knowledge refresher, a second opinion (e.g. a photo of a sick plant for quick diagnosis), and a way to escalate/report recurring issues upward. Ministry of Agriculture and Animal Resources in Rwanda (MINAGRI), Rwanda Agriculture and Animal Resources Development Board (RAB), and other agencies are tertiary users who do not need farmer-facing advice at all; what they need is visibility: what farmers are asking, where the gaps are, how needs are trending, and how their response can reach more farmers faster,

replacing today's slow, periodic survey cycle with a real-time picture of what's happening on the ground.

Our approach is a Kinyarwanda-first advisory platform designed to reach the largest possible share of farmers, taking into consideration their literacy level, type of phone, or internet connectivity. As described in Section 4.2, the platform's inputs, outputs and channels should be diverse enough to serve users across these different conditions. We invite firms to explore how their respective solutions could offer the widest possible coverage in line with this vision. The platform will be grounded in a curated, governed national agricultural corpus and benchmark dataset, so the selected partner builds on validated data and real user-research findings rather than raw, unstructured information. Success looks like a sovereign, AI-driven advisory solution that multiplies rather than replaces what Rwanda's extension system can already do: pushing effective farmer coverage beyond the 69% PSTA 5 target, delivering advice that is genuinely personalized to a farmer's soil, crop, and region, and closing the feedback loop so MINAGRI and RAB can see farmer needs as they emerge rather than months later.

3. Purpose of This Call for Expression of Interest

The purpose of this EOI is to identify firms with an existing, operational AI advisory solution that are interested in, and capable of, participating in a structured benchmark evaluation of that solution against an agricultural golden benchmark dataset developed by C4IR.

Firms that submit a satisfactory EOI and perform competitively in the benchmark will be formally invited to respond to the full Request for Proposals (RFP) for the AI-Enabled Agricultural Advisory Solution Partner, at which point a complete Technical and Financial Proposal will be required.

Disclaimer: *This Expression of Interest should not be construed as a Request for Proposal, nor as a bid or binding offer of any kind. It serves solely to invite qualified firms to bring their existing solution forward for benchmark evaluation; full details of this process are set out in Section 5 below. While the broader initiative will ultimately culminate in the development of the AI-Enabled Agricultural Advisory platform, C4IR is conducting this benchmark exercise as a preliminary step, to objectively assess the performance of each existing solution. Participation in this Expression of Interest is a prerequisite for participation in any subsequent Request for Proposal under this initiative; firms that do not take part in this EOI process will not be eligible to submit a proposal at the RFP stage.*

4. Use Cases and Solution Context

4.1 Core Use Cases

The following three use cases have been prioritized for primary users. They are indicative, not exhaustive; secondary and tertiary users will need their own supporting functionality, with further specifics to be defined through rounds of user research throughout the project duration.

- **Crop & Livestock Advisory:** soil and input guidance; yield tracking; breeding guidance; feeding and health routines, etc.
- **Pest & Disease Management:** identifying pests and diseases; forecasting risk; recommending treatment and prevention, etc.
- **Weather & Climate Intelligence:** planting windows and irrigation/harvest guidance; risk alerts for drought; climate-smart practice recommendations, etc.

4.2 Expected Modalities of the Solution

Multimodality of interaction and delivery

The AI advisory platform should offer multiple ways to interact, through a range of input and output options, meeting users where they are by taking into account their literacy level, digital skills and internet connectivity. The platform should accept voice, text, image and structured menu inputs (e.g. USSD/IVR), and respond in voice, text or visual formats. These will be delivered through a diverse set of channels such as IVR, USSD/SMS, WhatsApp, mobile/web apps and agent networks (an indicative, not exhaustive, list), so every user can engage in the way that suits them best.

Language

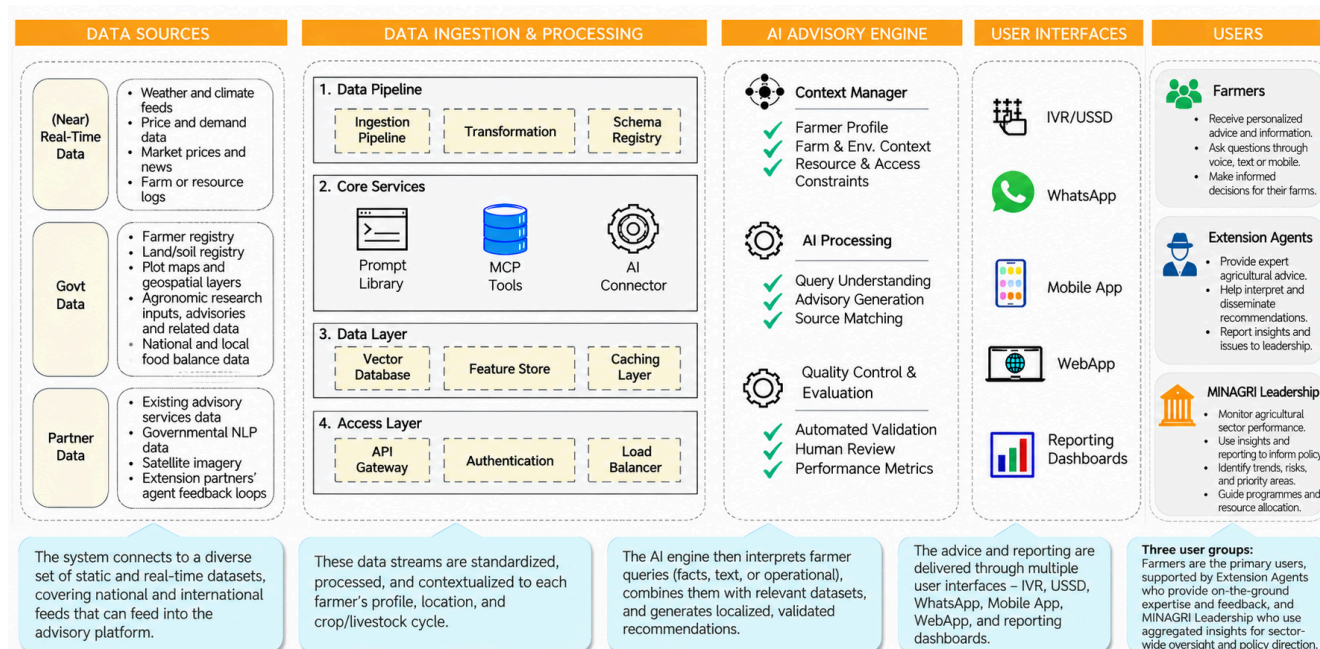
Kinyarwanda is the primary language of interaction. C4IR is especially interested in strong Kinyarwanda speech-to-text, text-to-speech and voice models that make the advisory delivery channels experience feel natural.

4.3 Indicative Solution Architecture and Technical Principles

The AI advisory platform is envisioned to connect to multiple data sources (real-time, government and partner data) through a data ingestion and processing layer that builds on the national agricultural corpus. An AI advisory engine interprets user queries and generates localized, validated advisory. The platform is delivered through multiple user interfaces to farmers, extension agents and MINAGRI leadership.

The architecture proposed below is indicative, not prescriptive:

Figure 1: Proposed architecture



Technical Principles

What we prefer:

- AI/LLM-based conversational agents in Kinyarwanda.
- Multi-channel delivery, with image-based pest and disease identification as a feature.
- Offline-tolerant designs that stay usable on constrained rural connectivity.
- Open-source models that can be hosted within Rwanda, keeping data storage and processing local.
- Open-standards design for governed, interoperable access.
- Modular, flexible system architectures capable of accommodating new advisory capabilities and user functionalities without requiring fundamental redesigns.

What we want to avoid:

- Proprietary, vendor-locked AI models, or closed "black-box" technology whose data handling or decision logic can't be inspected or audited.
- Platforms that lock Rwanda into a single supplier for hosting, data or future development.
- Any storage or processing of Rwandan personal data outside the country without NCSA authorisation, per Law N° 058/2021 on data protection and privacy.

5. Selection and Evaluation Process

5.1. The Benchmark

The benchmark evaluation is designed to test the solution as it would genuinely be experienced by its primary end users: smallholder farmers. Rather than assessing the underlying AI model in isolation, we assess the solution's intelligence as a whole; the model, the harness, and everything else that shapes the solution.

The evaluation will be conducted in two rounds:

- **Baseline round:** each solution is assessed as it currently stands, establishing a starting point for the solution providers.
- **Final evaluation:** following a refinement window in which curated training data is shared to help improve the solution, the same solutions are reassessed, providing a clear measure of both absolute performance and capacity to improve. The final evaluation will be the basis for inviting the top-performing firms, individually or as a consortium, to the RFP stage.

5.2. The Process

The path from initial interest to final solution partner selection runs through three stages:

Stage	Name	What Happens
1	Expression of Interest	Interested firms respond to this EOI
2	Benchmark Evaluation	Firms whose EOI is accepted grant programmatic access to their solution for a two-stage benchmark (baseline scoring, a refinement window with curated training data, and a final evaluation)
3	RFP Invitation	Top-ranking candidates from the benchmark are invited to submit a full Technical and Financial Proposal in response to the formal Request for Proposal, leading to final selection of the Solution Partner.

5.3. What to Submit for the EOI (Submission Package)

To be considered for the benchmark evaluation, firms should submit all three:

- **Organizational Profile (10 slides maximum):** Institutional overview, alignment with strategic objectives, and demonstrated history of successful AI agricultural advisory product execution.
- **Completed Technical Checklist (Annex 3):** A verified self-assessment detailing compliance with the Hub's architectural parameters, including mandatory programmatic API integration for benchmarking: **an essential requirement for consideration.**
- **Solution demo (15 minutes maximum):** A link to a short recorded demonstration of the existing solution in operation. Applicants will also be expected to deliver a live demonstration, either in person or online, during the demo period.

5.4. Timeline

Milestone	Date
EOI issued	28 September 2026
Information session	1 October 2026
EOI submission deadline	6 October 2026
Demo Day	7-8 October 2026
Pre-selection	9 October 2026
Onboarding	15 October 2026
Benchmark Evaluation	October 2026

5.5. How to submit

Deadline	6 October 2026
Submit to	procurement@c4ir.rw
Subject line	EOI for AI-Enabled Agricultural Advisory Solution Partner – [Company Name]
What to submit	All items listed in Section 5.3, sent as PDF attachments, with the demo link included in the email
Information session registration	[registration link] the Zoom link will be shared upon registration

ANNEX: RESOURCES YOU WILL FIND READY

1 Benchmark Datasets, Ready for Model Evaluation and Fine-Tuning

A dedicated benchmark dataset has been built specifically to evaluate and refine candidate solutions during the two-round evaluation:

Dataset	What It Contains	Minimum Volume
Agriculture Q&A pairs	Curated agriculture questions and expert answers from farmers and agronomists.	5,000 pairs
English–Kinyarwanda sentence pairs	Parallel agriculture sentences for testing and improving translation quality.	2,000 sentences
Audio-script pairs	Recorded agriculture audio matched to transcripts, for speech recognition and voice evaluation.	20 hours

2 An Agricultural Corpus, Ready to Build On

Alongside the benchmark, the Hub is curating a structured, AI-ready agricultural data corpus, the platform's knowledge base. It combines validated, static, policy-aligned agronomic knowledge with dynamic, fast-changing contextual data:

Category	Illustrative Contents
Government (static)	RAB crop-production manuals, crop calendars, pest and disease identification guides, approved pesticide/agrochemical lists, soil-fertility guidance, fertiliser recommendations, farmer and livestock registries.
Government (live)	Weather and climate data, market and trade data, pest and disease surveillance, subsidy and input-tracking systems such as SNS.
External/Private (live)	Live weather forecasts, private-sector farmer performance and input data, satellite and remote-sensing feeds.
External/Private (static)	International agricultural knowledge bases (e.g. CGIAR, FAO, ILRI), climate and environmental baselines, academic and training materials.

The corpus is published as a Digital Public Good on RISA's government data-sharing platform, with programmatic, governed access through open APIs and an MCP server giving the selected partner a ready foundation to build on rather than starting from raw, unstructured data.

3 Technical Checklist

To be completed and submitted with your Expression of Interest (Section 5.3, "What to Submit for the EOI")

This checklist confirms your solution's fit with the technical principles set out in Section 4.3 of the EOI. Please tick every box that applies. This is a self-declaration made in good faith; it will be further verified during the Benchmark Evaluation and, for shortlisted firms, at the RFP stage.

We confirm that:	Confirmed ☐
We can provide programmatic (API) access to our solution for the benchmark stage. (Prerequisite for evaluation)	☐
Our solution can be hosted within Rwanda, and we can meet data-residency requirements under Law N° 058/2021.	☐
Our architecture is modular and can accommodate new advisory capabilities without fundamental redesigns	☐
We are willing to share technical documentation on our solution, models, harness, and data handling upon request	☐
Our solution does NOT lock C4IR/MINAGRI/RAB into a single proprietary vendor for hosting, data, or future development	☐
Our solution does NOT use a closed "black-box" model whose decision logic cannot be inspected or audited	☐
Our solution does NOT require proprietary hardware unavailable to Rwanda-based teams	☐

Note: Programmatic API access is mandatory for participation in the benchmark. For all other conditions, if any do not align with your current platform capabilities, kindly provide a brief explanation instead of leaving the item unmarked; solutions showing partial alignment remain eligible subject to an adequate risk mitigation strategy.