

AI for Every African Farmer

A multimodal agricultural intelligence platform helping farmers diagnose crop problems, access trusted advice, verify inputs and reach markets—in Kiswahili and beyond.

GOOGLE AFRICA APPLIED AI LAB

Powered by Google Gemini • First developed using Google AI Studio

mkulimaforum.app



African farmers make high-stakes decisions with limited, fragmented information.

A crop symptom, counterfeit input or delayed market signal can erase an entire season of income.



Diagnosis gap

Crop diseases, pests and nutrient deficiencies are often identified late—or treated through guesswork—because agronomists are not always accessible.



Trust gap

Farmers struggle to verify agrochemicals, labels and recommended usage, increasing exposure to counterfeit or unsuitable products.



Access gap

Advice, weather, prices and buyers sit across disconnected channels, while many farmers face low bandwidth, language and device constraints.

The result: avoidable crop loss, wasted inputs, weaker bargaining power and lower household resilience.

One AI-native agricultural companion—from crop symptom to commercial decision.

Mkulima Forum combines multimodal AI, localized knowledge, community expertise and market services in one farmer-first experience.



01

See

Farmer captures a crop, label or input package with a phone camera.

02

Understand

Google Gemini analyzes image + question + local context.

03

Act

The app explains likely issues, safe next steps and prevention in clear Kiswahili.

04

Connect

Farmer can verify inputs, ask experts, compare prices and reach the marketplace.

MULTIMODAL

KISWAHILI-FIRST

LOW-BANDWIDTH

ACTION-ORIENTED

More than a scanner: a complete agricultural intelligence layer.

The live MVP is designed around the actual decisions farmers make throughout a season.



AI Plant Scanner

Identify likely diseases, pests and nutrient deficiencies from crop images.



Mkulima AI

24/7 conversational support for crops, livestock, fertilizer and farm management.



Input Verification

Analyze product labels and connect farmers to registration and safety information.



Market Intelligence

Surface current crop prices and help farmers make better selling decisions.



Farmer Marketplace

Connect demand and supply for inputs and produce with safer transaction flows.



Expert Community

Escalate uncertainty to verified experts and peer farmer knowledge.

Designed for smartphone, web and progressively for SMS/USSD access in low-connectivity contexts.

Google Gemini is the intelligence engine at the heart of Mkulima Forum.

The first working version of Mkulima Forum was developed using Google AI Studio, enabling rapid experimentation with multimodal prompts and farmer-centered workflows.

Google Gemini

multimodal reasoning

Images • language • context • structured
outputs

Google AI Studio

Rapidly prototyped the original product experience and prompt workflows.

Gemini API

Powers image understanding, farmer Q&A, classification and structured guidance.

Grounded knowledge

Roadmap to combine Gemini with curated agronomy, regulatory and market datasets.

Responsible AI

Confidence indicators, safety guardrails and human escalation for uncertain cases.

Mkulima Forum is an independent product using Google technologies; no Google partnership or endorsement is implied.

Three shifts make an African agricultural AI platform possible today.

Multimodal models are finally capable enough, smartphones are reaching deeper into rural markets, and climate volatility is increasing the value of timely intelligence.



Multimodal AI matured

Farmers do not need to describe every symptom precisely. A photo, a short voice note and local context can become a useful decision-support interaction.



Local-language UX matters

Kiswahili-first interaction removes a major barrier between frontier AI and millions of farmers across East Africa.



Climate risk is rising

Earlier detection, better input decisions and accessible prevention guidance can directly strengthen farm and household resilience.

The opportunity is to build the trusted intelligence interface for African agriculture—not another generic chatbot.

Start with farmers; build an intelligence network that creates value across the ecosystem.

A freemium farmer experience drives adoption, while higher-value services serve agribusinesses, institutions and trusted ecosystem partners.



Smallholder farmers

Free core tools; premium seasonal intelligence and assisted services.



Agro-dealers & brands

Verified listings, lead generation, demand insights and compliant product education.



Buyers & processors

Sourcing access, crop availability signals and farmer aggregation.



NGOs & government

Deployment dashboards, extension support and anonymized program insights.

Revenue pathways

Premium farmer plans

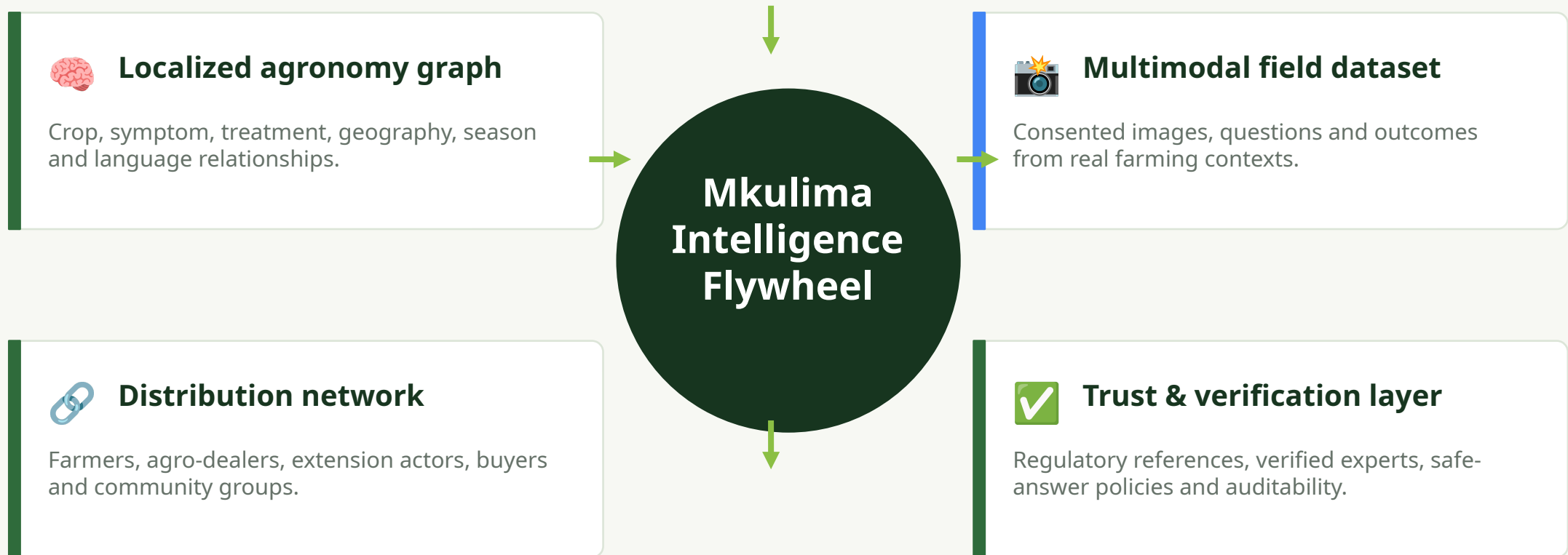
Marketplace commissions

B2B subscriptions

Enterprise/API deployments

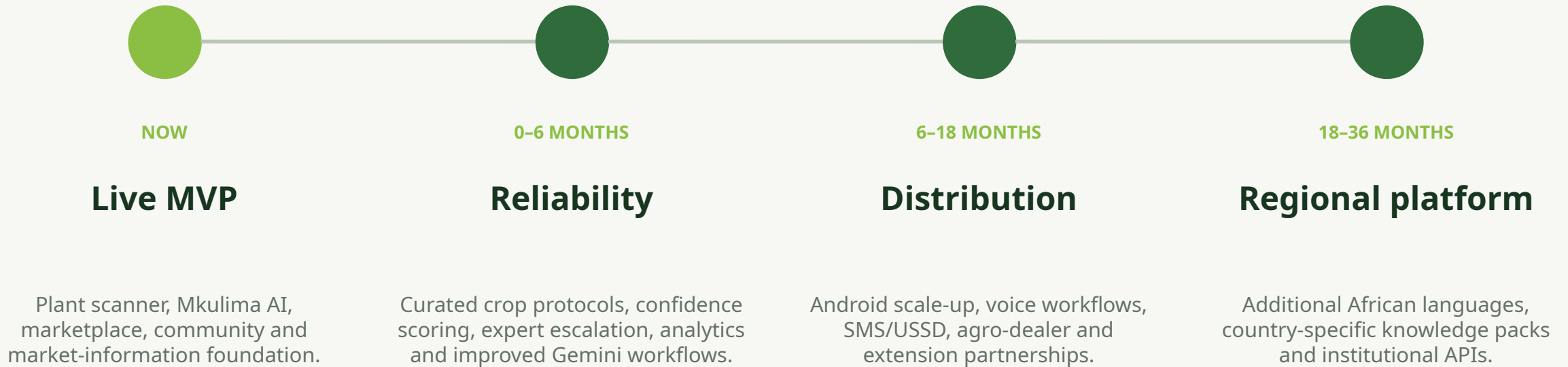
The moat is not only the model—it is the African agricultural intelligence system around it.

Each farmer interaction can improve localized workflows, knowledge quality and the platform's ability to route the right answer, product or expert.



From live MVP to a trusted agricultural AI infrastructure for Africa.

We will deepen reliability first, then expand distribution, datasets and country coverage.



North star: the most trusted, accessible and locally grounded AI decision layer for African farmers.

We want to collaborate on the hard technical problems between a compelling demo and a trusted field product.

Google's multimodal models and applied AI expertise can help Mkulima Forum become safer, more accurate, more scalable and more useful to farmers.



1. Multimodal reliability

Improve crop-image reasoning, uncertainty detection, structured diagnosis outputs and context-aware follow-up questions.



2. Local-language intelligence

Optimize Kiswahili agricultural conversations, voice interactions and retrieval over localized knowledge.



3. Responsible scaling

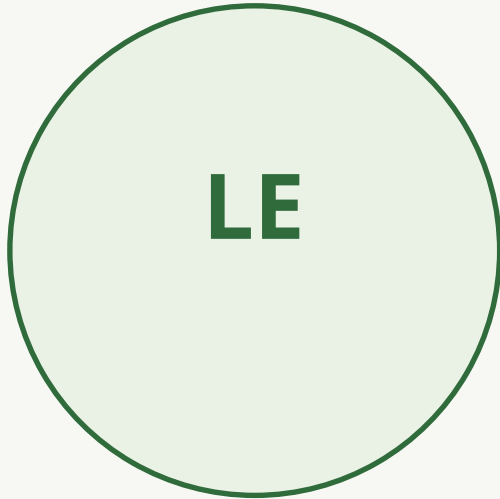
Design evaluation datasets, safety guardrails, expert-in-the-loop systems and cost-efficient production architecture.

Proposed collaboration outcome

A field-ready Gemini-powered agricultural agent validated with Tanzanian farmers and designed for expansion across Africa.

Built in Tanzania, for the realities of African agriculture.

Mkulima Forum is led by a technology entrepreneur focused on practical AI systems for agriculture, education and inclusive economic development.



Lotaanywaki Elisha Memiri

Founder • Entrepreneur • Software Developer

Lota develops technology-driven ventures for Tanzania and East Africa, with a particular focus on artificial intelligence, software, agribusiness and practical systems that improve access to knowledge and markets.

TANZANIA

AI + AGRITECH

PRODUCT BUILDER

AFRICA-FIRST

lotaelisha@gmail.com

Dar es Salaam, Tanzania

Let's put a trusted AI agronomist in every farmer's pocket.

Powered by Google Gemini. First developed using Google AI Studio.

Live product demo

<https://mkulimaforum.app>

lotaelisha@gmail.com



SCAN TO OPEN