

Technology in harmony for good living

BY MARY LÓPEZ

CHALLENGES ROOTED IN THE LAND AND HOW WE CAN FIX IT

Smallholder coffee farmers in mountainous areas face two persistent, invisible challenges:

- Unmonitored environmental conditions, leading to avoidable crop damage and resource waste.
- Post-harvest coffee pulp, which is often discarded rather than reused.

Meanwhile, most agri-tech tools are too expensive, too complex, or simply detached from rural needs.

Opportunity: What if we could build tools that are visual, accessible, and regenerative — tools that speak the language of the land and the people who live from it?



BUILT FOR THE FARM AND THOSE WHO CARE FOR IT

TechKo is a simulated platform that shows how regenerative technology could support small coffee farms.

Through a simple, intuitive dashboard, it introduces two core modules:

Coffee Guardian

Simulates the monitoring of soil moisture, temperature, and pest presence.

Provides actionable recommendations like:

→ Delay irrigation

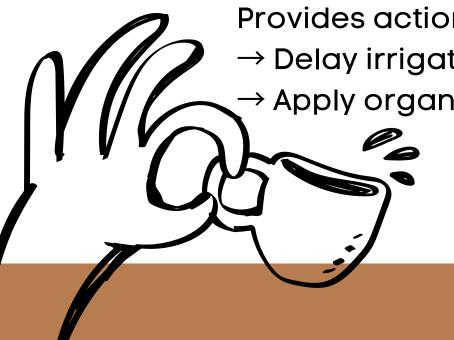
→ Apply organic pest control

P BioCompBot

Simulates a composting unit that turns discarded pulp into organic fertilizer.

Tracks compost progress with clear, visual indicators.





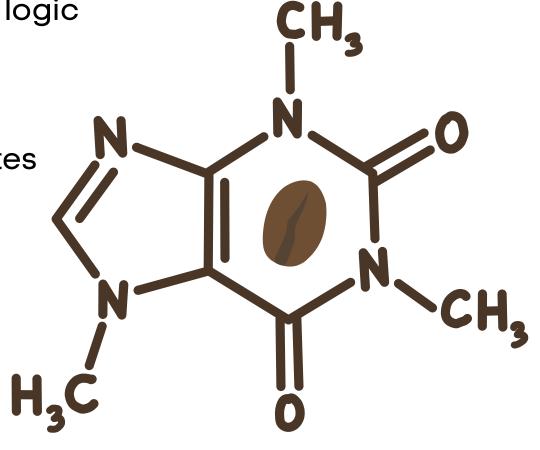
BEHIND THE DASHBOARD: A SYSTEM THAT THINKS LIKE A FARMER

- ☑ Simulated sensor data reflects real-world conditions from Arduino + LoRa-type devices
- Visual alerts are color-coded and intuitive
- ✓ Rule-based AI logic provides clear, rural-friendly suggestions

Composting simulation includes automatic rotation, moisture and temperature logic



TechKo doesn't just inform — it guides and educates with simplicity and trust.



WHY THIS ACTUALLY WORKS FOR SMALL FARMERS

- Doesn't require constant connectivity
- ✓ Visual-first design reduces digital literacy barriers
- ✓ Requires minimal training uses familiar color-based alerts
- Modular: composting and monitoring can be used separately or together
- ✓ Speaks with their logic not Silicon Valley's

TechKo is not designed for labs. It's built for real life in the hills.

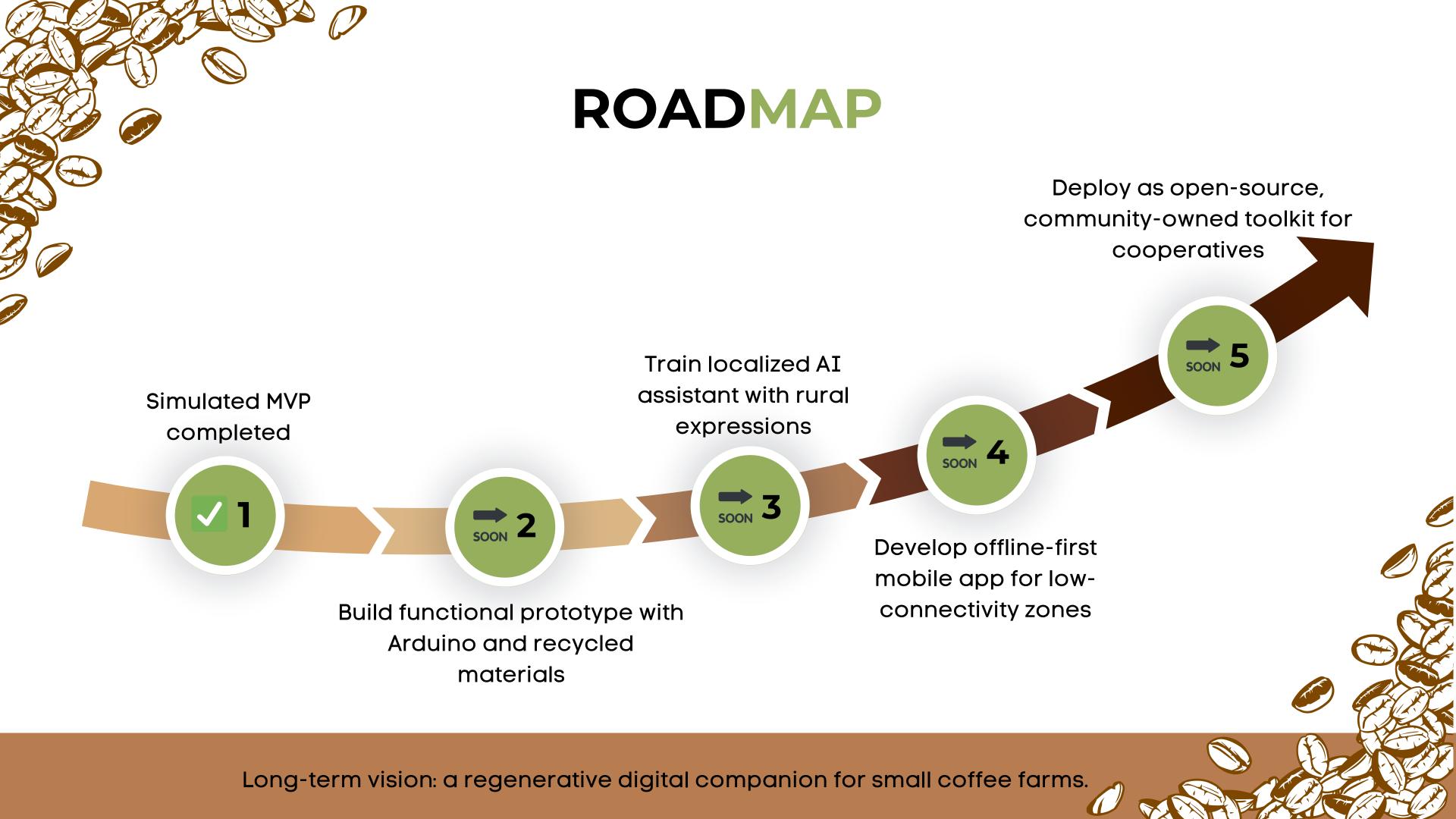


IMPACT THAT STARTS AT THE ROOT

- Converts agricultural waste into valuable compost → less chemical use
- Optimizes irrigation → saves water in fragile ecosystems
- Empowers digital inclusion → brings small farmers into regenerative tech
- Educational and open → Creative Commons licensing, remixable and shareable
- ightharpoonup Community-first vision ightharpoonup fosters cooperation between farms, not competition







A REGENERATIVE AND COLLABORATIVE MODEL FOR TECHNOLOGY ADOPTION

Primary user: Smallholder mountain coffee farmers

Paying customer: Coffee brands · Cooperatives · Sustainability-focused funds

3 Complementary revenue streams

1. B2B2C Model (Brand → Farmer)

Who pays: Coffee brands committed to ESG & traceability

They receive:

- "Powered by TechKo" visual certification
- Access to traceable environmental impact data
- ✓ Real farm stories for purpose-driven brand storytelling

We provide: Platform + physical kit + regenerative monitoring system

2. Low-cost TechKo Kits for Sale

- ✓ Includes: sensors + composting unit + mobile app access
- ✓ Estimated price: To be confirmed after Phase 2 (technical validation)
- Feasibility of self-assembled kits with recycled parts will be explored through local partnerships, maintaining minimum quality standards.

3. Licensing / Subscription for Cooperatives

They receive:

- Aggregated data dashboard
- ✓ Cross-farm benchmarking

based on number of farms

- Technical support & regenerative implementation assistance

 Model: Scaled monthly subscription
- Freemium Access for Farmers
- Free access to basic dashboard & composting guide

TECHNOLOGY THAT LISTENS TO THE LAND

This is not just about IoT and dashboards.

It's about giving voice to a farm.

It's about turning coffee pulp into fertilizer – and waste into wisdom.

It's about tools that listen to the rhythms of nature, instead of controlling them.

Inspired by the Guaraní concept of teko — the art of living in balance — TechKo wants to help coffee growers not just produce more, but live better.





CREATED BY



MARY LÓPEZTECHKO FOUNDER