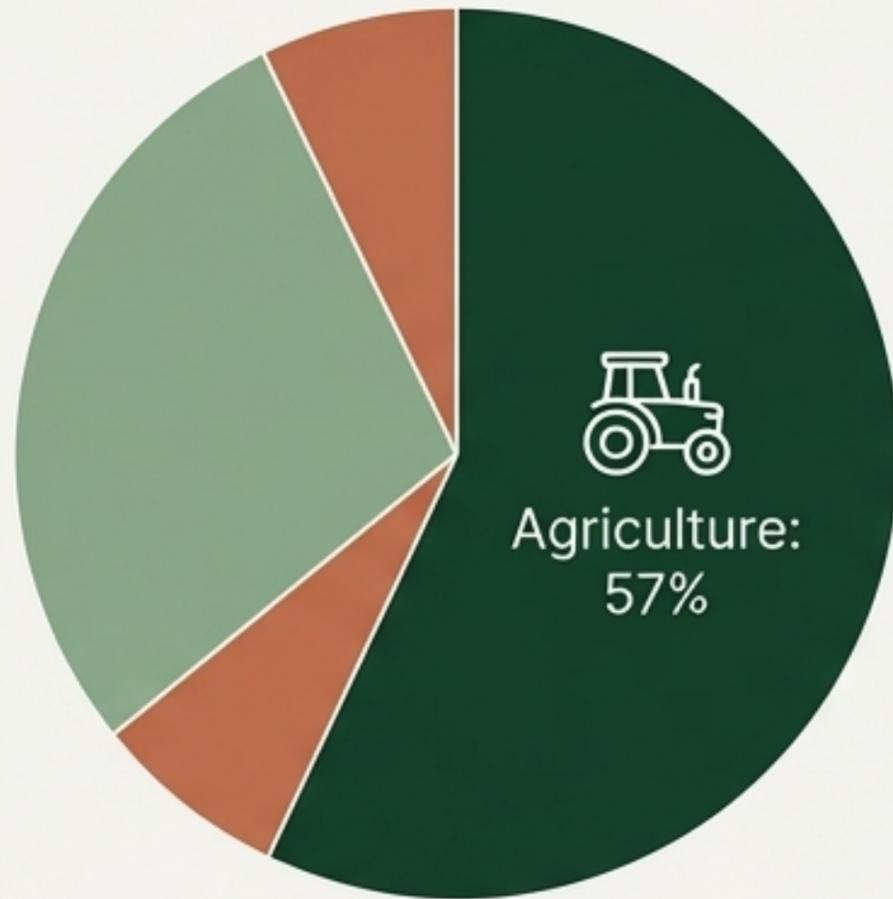# Agri Safe

Agri Safe: Augmented Agronomy

DeepTech & Data Platform for Agricultural Risk Reduction.
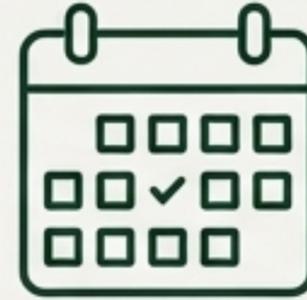
The Existential Threat: Water Scarcity and Blind Irrigation
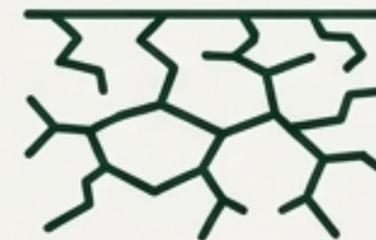

Agriculture: 57%

Agriculture consumes **57%** of available water resources, yet covers only 7% of the land.

Up to **45% of water is lost** due to inefficient network management and empirical habits.
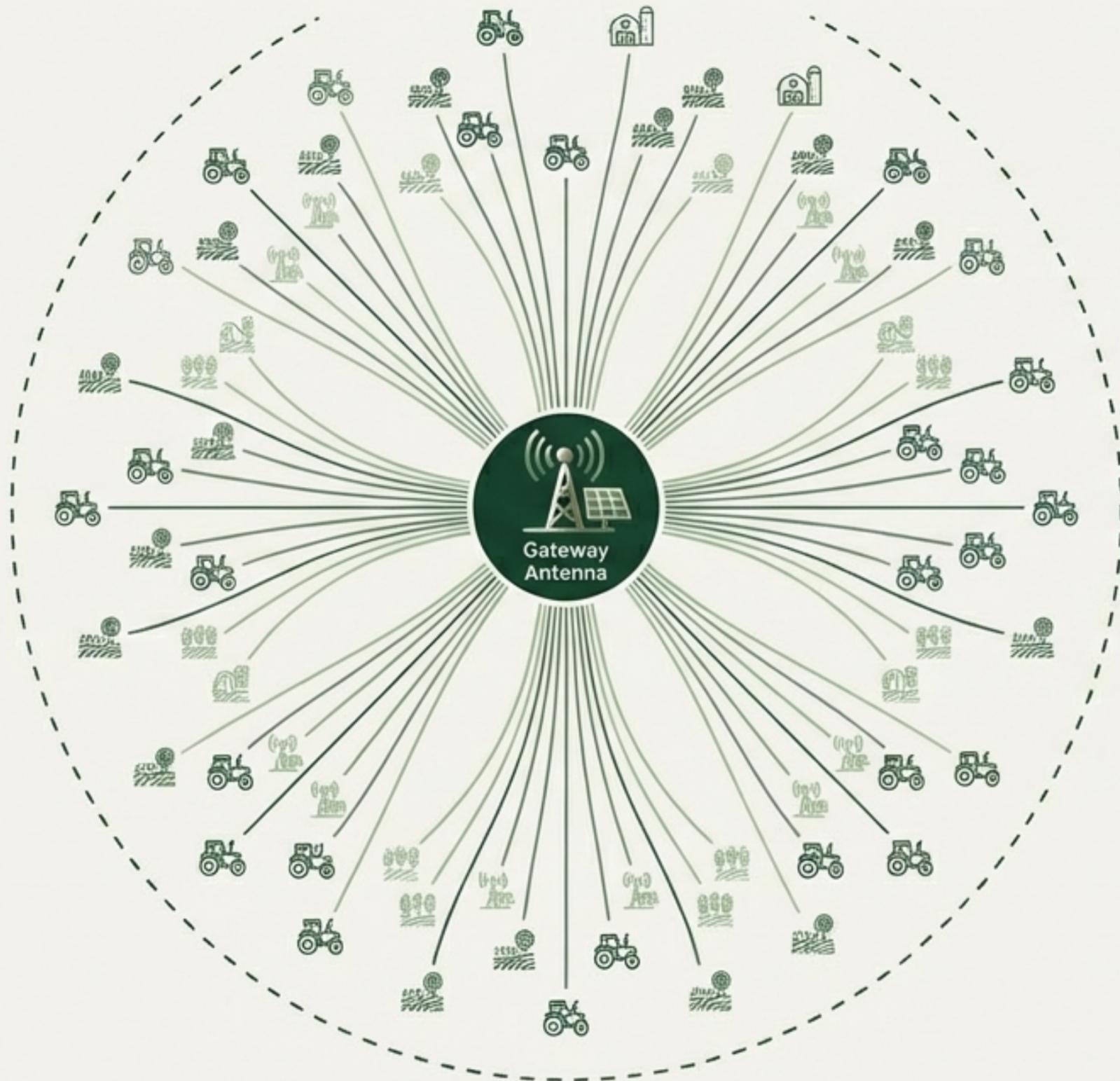
Blind Irrigation

The Impending Reality

Irrigation is still largely done blind, based on empirical habits rather than the actual needs of the plant. The problem isn't just the climate; it's how we manage the complexity.

The Paradigm Shift: Shared IoT Infrastructure

The 1-for-50 Model

- A single LoRaWAN Gateway covers a massive 7km radius.

- Connects up to 32,000 devices simultaneously.

- Mutualizes infrastructure costs across 20 to 50 neighboring farms.

The Unfair Advantage

Transforming climate constraints into economic performance through a plug-and-play shared network that drastically lowers CAPEX for small and medium farmers.

From Sensor to Decision: Treating Unmanageable Complexity

1. IoT Sensors

2. LoRaWAN Gateway

2.4 Million Scenarios
Calculated continuously per farm to execute a single, optimal irrigation decision.

1. IoT Sensors
Solar-powered field sensors measuring soil moisture, EC, climate, and pressure.

2. LoRaWAN Gateway
Centralized, long-range data transmission.

3. AWS Cloud & AI
The EX2A Digital Twin processes real-time agronomic data.

4. Automated Action
Automatically triggering valves and pumps.

NotebookLM

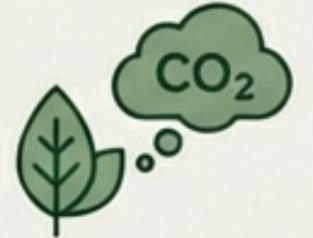# Proven Results on the Water-Energy-Food Nexus

-35%
Water Consumption
Reduction through precise, real-time irrigation adjustments.

-20%
Energy & CO_2
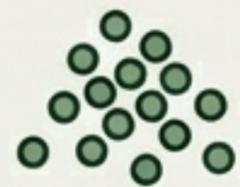Reduction in energy usage and emissions via optimized pumping.

-25%
Fertilizers
Reduction in NPK inputs through precise automated fertigation.

+10% to 15%
Food Production
Increase in crop productivity and yield homogeneity.

Economic Impact: Generates net financial gains of €124 to €554 per hectare annually, achieving full ROI in under 24 months.

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Field-Tested and Validated at Scale

522 Hectares

Equipped, monitored, and automated.

1 Active Monitoring

Deployed across diverse farms in Europe and North Africa, managing multi-sector operations and varying crop types.
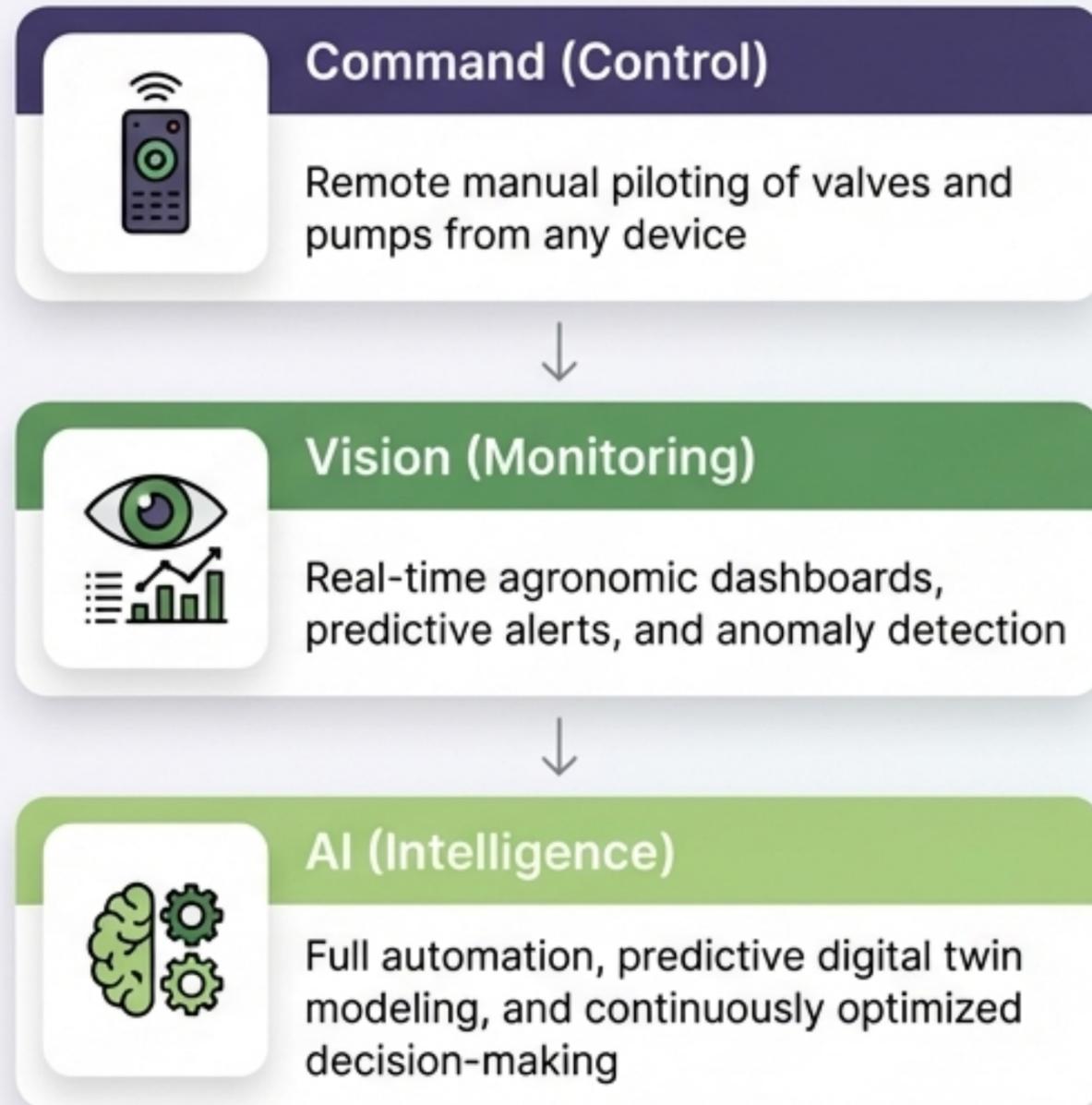
2 Technology Readiness (TRL 7-8)

Achieved robust, industrial-grade IoT architecture proven through continuous operation across multiple agricultural seasons.

3 Real-World AI Training

Algorithms are not theoretical; they are trained continuously on massive, localized agronomic data sets from active fields.

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A Scalable, Modular Product Offering

Combining hardware deployment with highly scalable SaaS Annual Recurring Revenue

Command (Control)

Remote manual piloting of valves and pumps from any device

Vision (Monitoring)

Real-time agronomic dashboards, predictive alerts, and anomaly detection

AI (Intelligence)

Full automation, predictive digital twin modeling, and continuously optimized decision-making

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Massive Market Demand and Commercial Traction

TAM: Operating within a **$10B+** intelligent irrigation market growing at a **15% CAGR**.

522 ha
Currently Deployed & Validated

30+
Recent On-Site Field Validations

2,300 ha
Hot Commercial Pipeline
In active commercial negotiation for immediate rapid scaling.

Meetings with cooperatives confirming a critical, unmet need.

NotebookLM
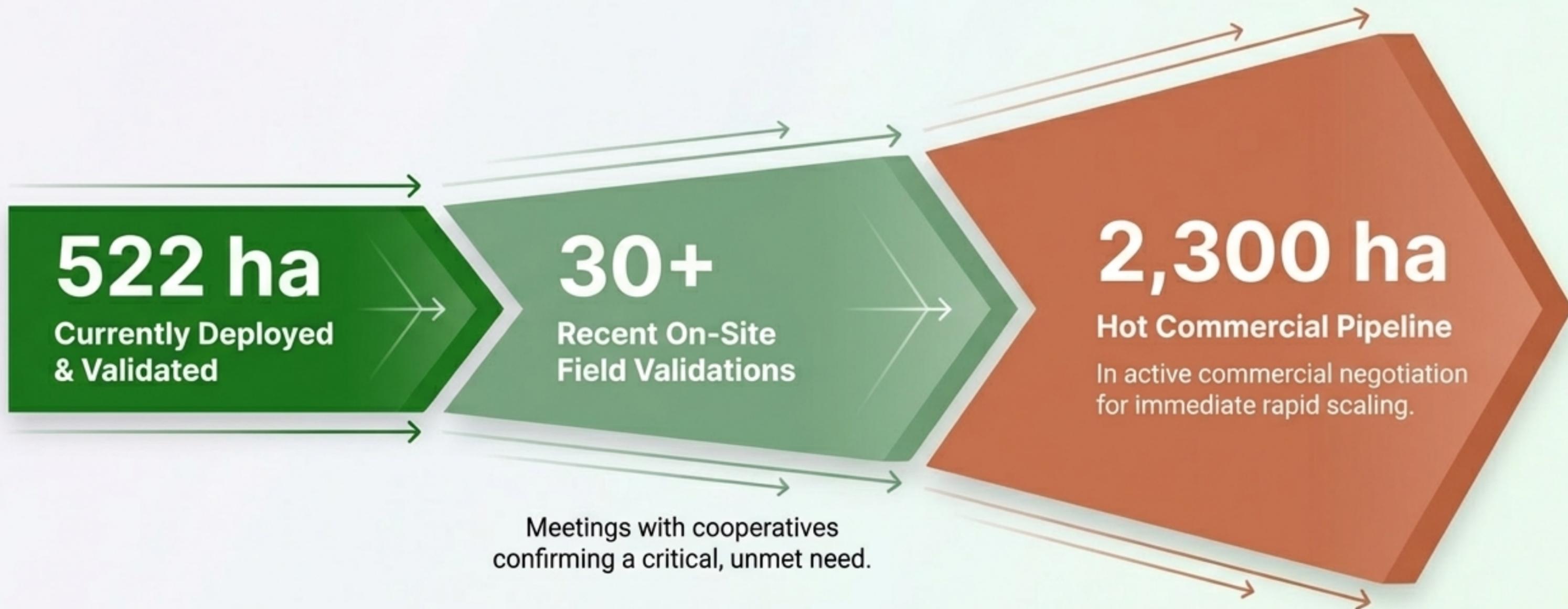
The Team and Ecosystem Driving the Change

Mohamed Mekki Maalej	Sana Darghouth
CEO & Co-founder	CFO & Co-founder

Institutional Trust & Partners

Nubbo	Le Village by CA	Réseau Entreprendre	INP Purpan	Crealia	AWS

Let's Scale Resilient Agriculture Together

- **Strategic Partners**: To accelerate local adaptations and integrate into broader tech ecosystems.
- **Distributors & Cooperatives**: To scale hardware deployment across new territories.
- **Impact Investors**: To fuel the rapid expansion of a highly scalable, WEF Nexus-positive model.

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