



Climate Smart Coffee: AI-powered climate adaptation tools for small-scale coffee farmers

**Speaker: Ashley King-Bischof, Founder and CEO,
Sprout, Inc**

Check out this technology !
WIPO GREEN 147432





Integrated AI + Insurance Infrastructure For Climate-Resilient Agriculture

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Climate change is a disproportionate risk for 500+ million smallholder farmers around the world.



Increasing Extreme Weather
95% of Agriculture is Rainfed



Rising Pests + Diseases Pressure
Limited Rural Information Infrastructure



20% Yield Loss Potential
60% rely on Agriculture for Livelihoods

Structural Protection Gap in Smallholder Agriculture

Insurance penetration remains below 3% despite policy recognition.

Only 3%



of smallholder farmers have agricultural insurance, yet FAO identifies it as a key climate resilience pillar.

Why Traditional Insurance Fails at Smallholder Scale

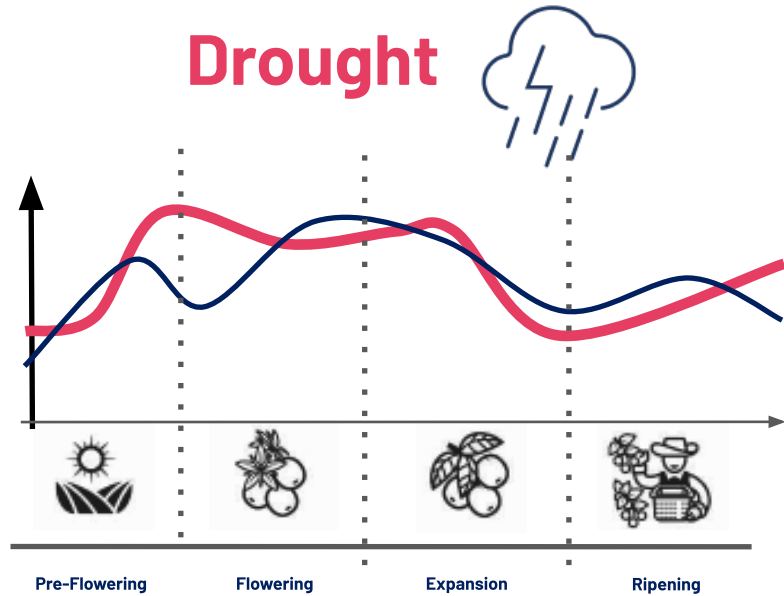
- High transaction costs
- Small premiums → low margins
- Climate volatility increases payout risk
- Limited distribution channels
- Farmers need to experience insurance to best understand its value

Integrated Climate Protection Model

Combining Insurance and Real-Time Advisory to Reduce Risk and Cost



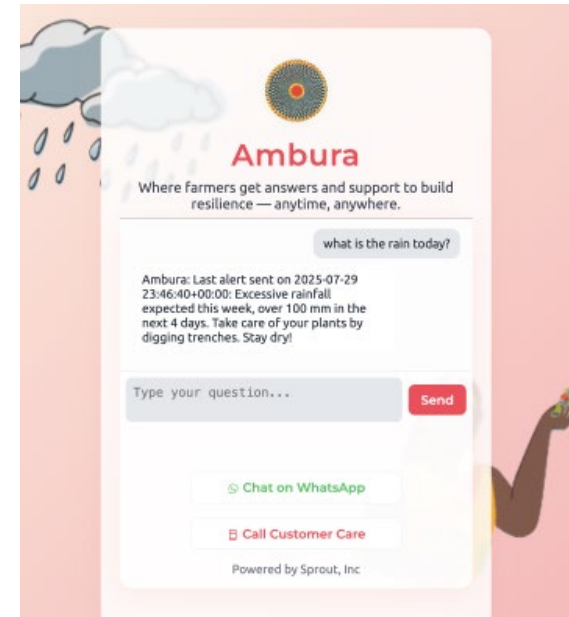
Parametric Climate Insurance



Catastrophic Risks
Low frequency, high impact



Real-Time Climate Advisory



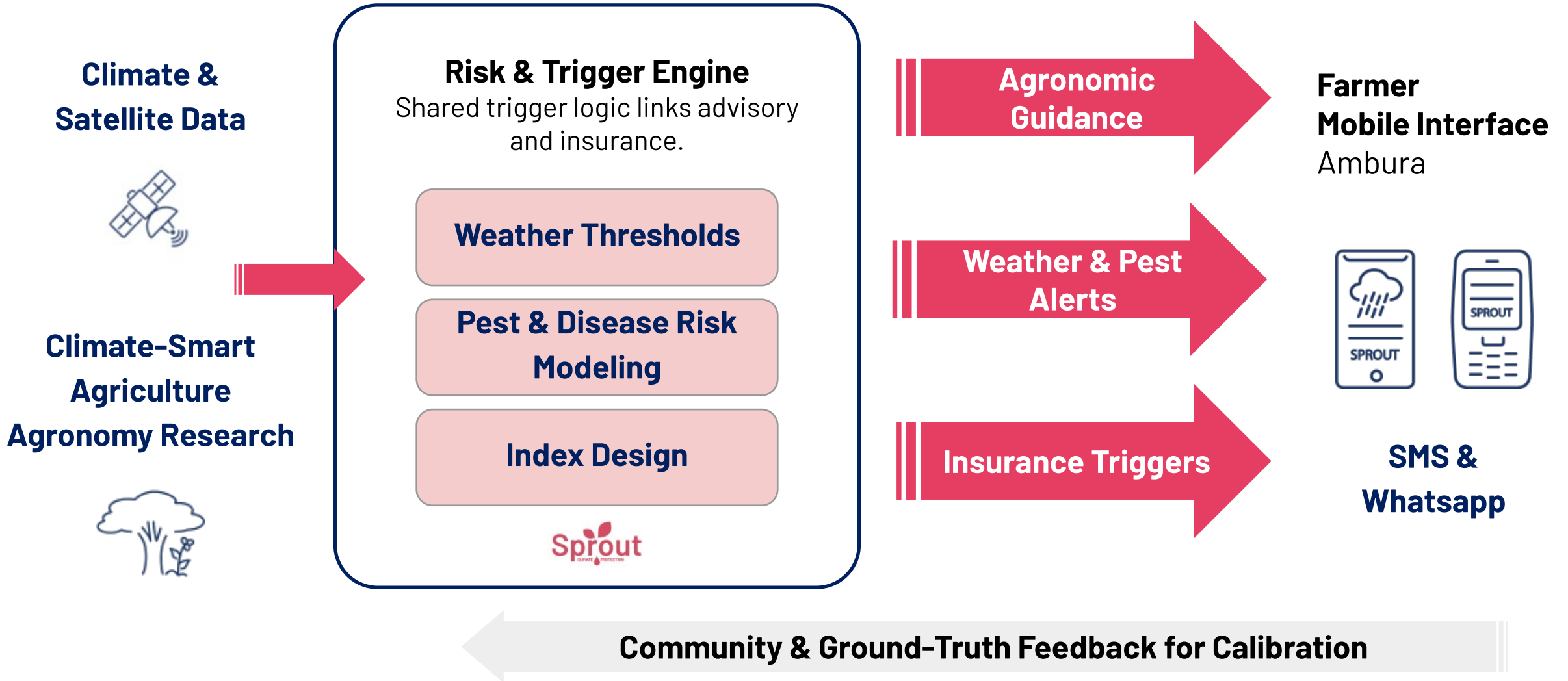
Manageable Seasonal Risks
High frequency, low impact



*Reducing Cost
Through
Combined
Technologies*

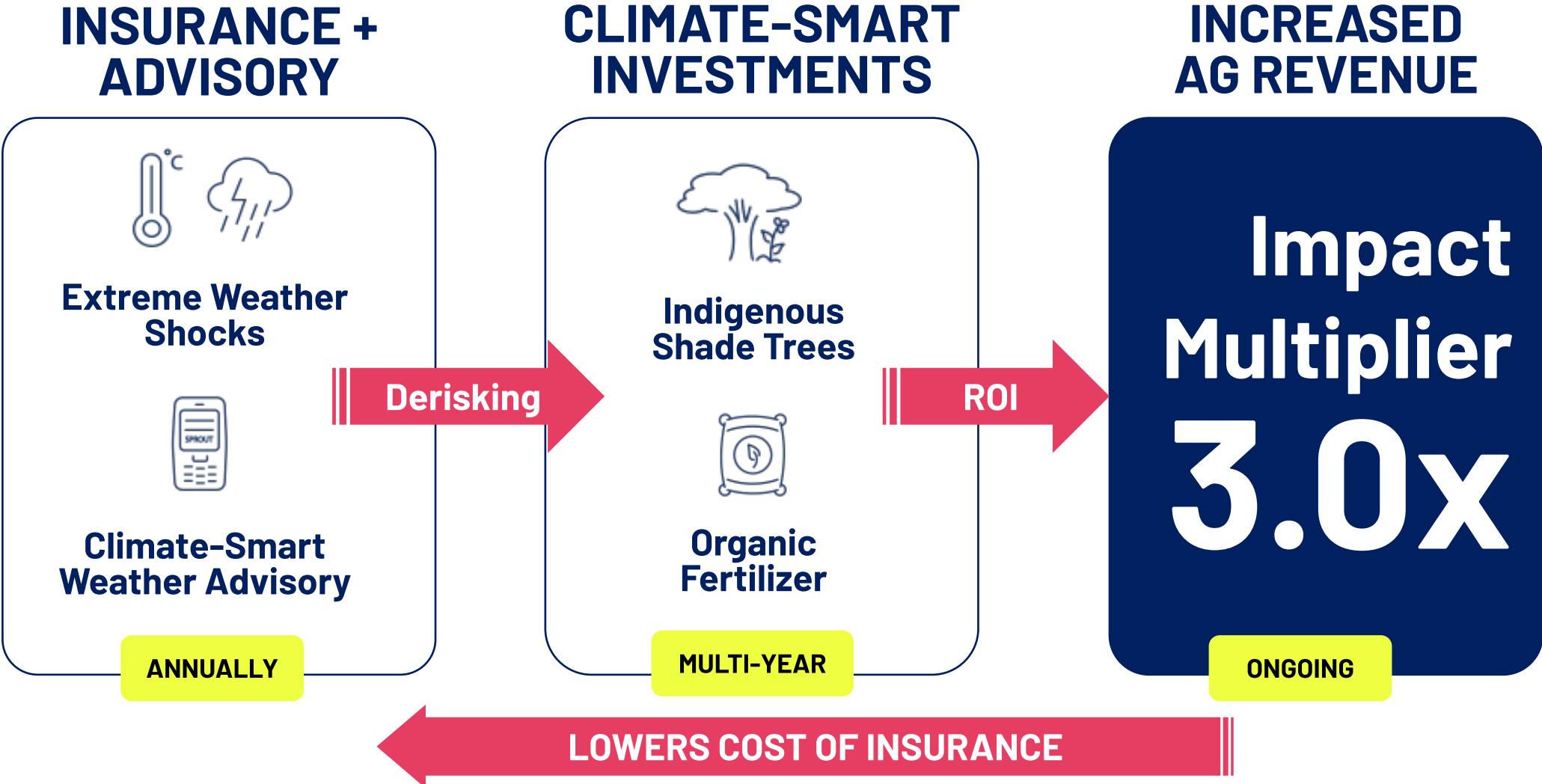
Proprietary Climate Risk Architecture

Trigger architecture for scalable climate risk protection



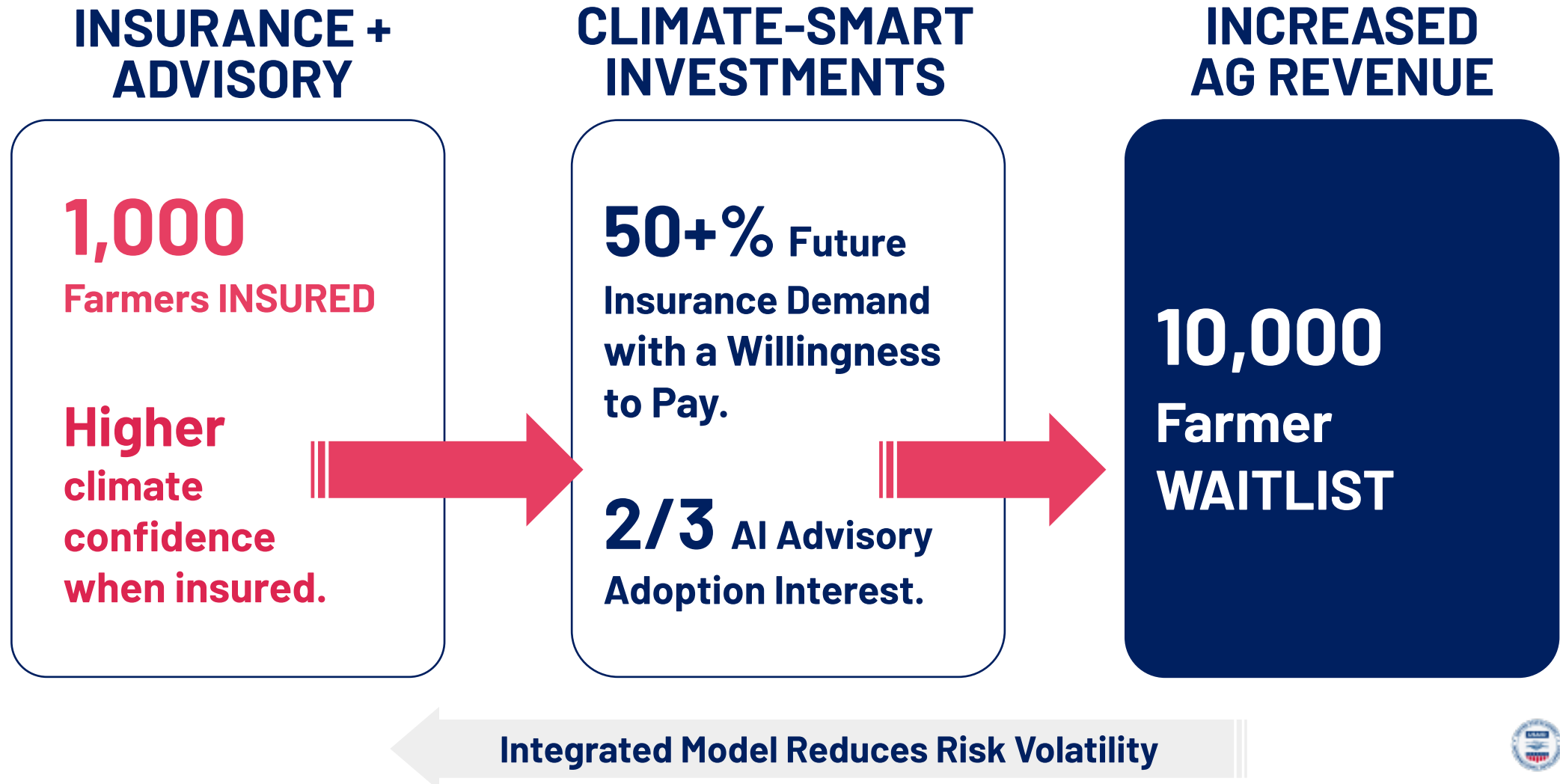
Derisk Climate-Smart Ag Investments

We combine insurance and advisory to desrisk investments in climate-smart agriculture to increased resilience.



Evidence: Model Increases Confidence & Investment

USAID-Funded Randomized Controlled Trial (RCT) in Kenya 2024



In-House Technology with Scalable Infrastructure

Deployable Across Crops & Regions



Monitoring & Dashboards

AI Advisory Integration

Insurance Design Engine

Crop Modeling and Index Calibration

Satellite and Climate Data

GLOBAL CROPS

**COFFEE
COCOA
RICE
COTTON**

**REGIONS
SUPPORTED**

**AFRICA
LATIN
AMERICA
SOUTHEAST ASIA**

Partnership Opportunities

Pathways for Climate Change Adaptation with WIPO GREEN

Distributing Effective Insurance Programs Requires Partnering

National Agriculture Programs

- Integrate AI-driven climate intelligence into public extension systems
- Deploy digital advisory within national Climate-Smart Agriculture initiatives

Financial & Insurance Institutions

- Expand agricultural portfolios with data-grounded risk modeling
- De-risk climate-smart financing

Agricultural Value Chains & Sourcing Partners

- Improve sourcing stability through subsidizing insurance
- Embed advisory tools in recruitment & traceability systems



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