

An aerial photograph of a rural landscape, likely in Africa, showing a patchwork of agricultural fields. The map is overlaid with a semi-transparent green layer that contains irregular orange and yellow patches, indicating areas of specific interest or data. The fields are separated by dark lines representing roads or boundaries. In the center, there is a white rectangular box with a thin black border containing text.

TERRASENSE RESEARCH

Africa's first high-resolution climate intelligence platform

THE PROBLEM

BANKS SEE AGRICULTURE AS **TOO RISKY DUE TO LACK OF RELIABLE DATA**, COLLATERAL, AND RISK MITIGATION TOOLS.

17%

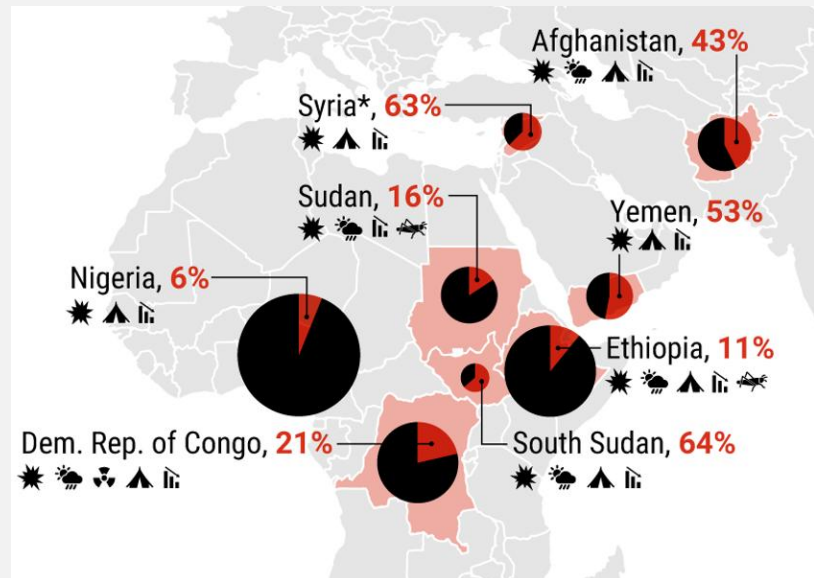
Of African countries have proper weather monitoring systems

\$15B

Lost annually to climate impacts

50%

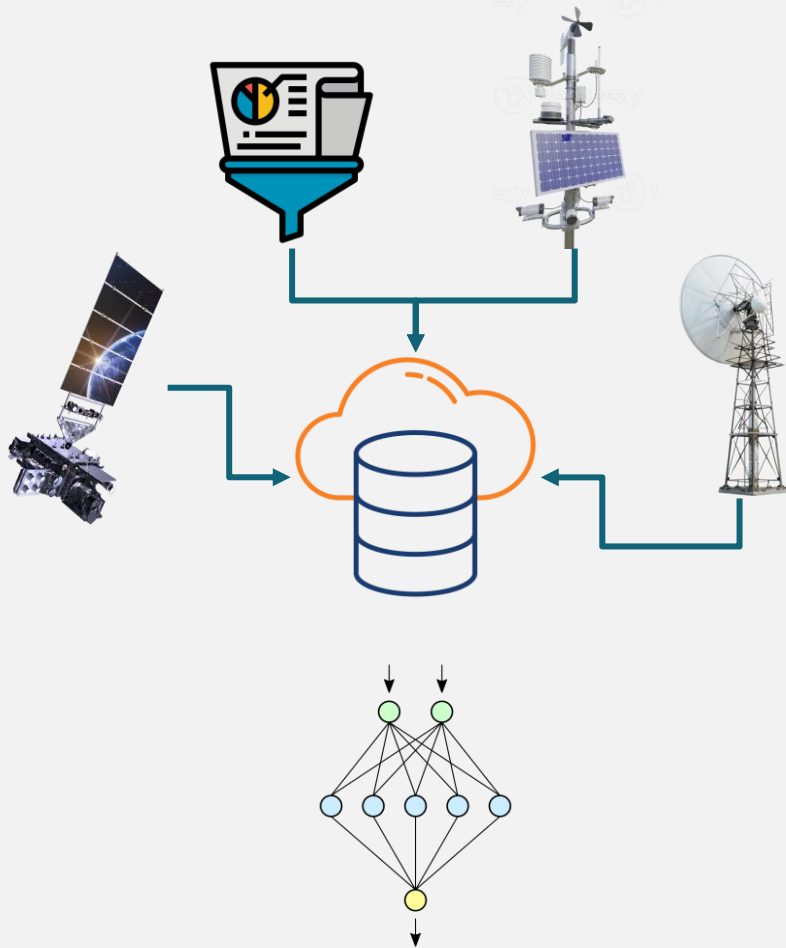
Projected decrease in agricultural productivity by 2050



The consequences of unreliable climate data are visible in rising food insecurity — especially where risk is highest.

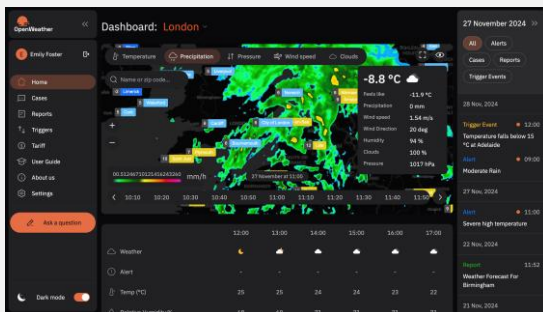
Source: <https://www.gzeromedia.com/the-graphic-truth-global-hunger-hotspots-in-2021>

Existing global models are too coarse for Rwanda's diverse microclimates, and current infrastructure is fragmented, slow, and inaccessible to most users.



Our Solution

- 1-kilometer resolution forecasts – 50× more precise than global models
- Integration of satellite imagery with ground station data through partnerships with African agencies
- Actionable climate intelligence for agriculture, insurance, and logistics sectors
- Bloomberg Terminal for climate intelligence in Africa's \$3 trillion economy



EARLY PROOF POINTS

- 8 months of development: 6 months on AI model, 2 months on platform.
- Successful 1km resolution forecast validation against historical data
- Basic analytics dashboard testing with agricultural users in Rwanda
- Partnership with the Rwanda Meteorology Agency
- 1st place at NextGen Space Challenge (£1,000 prize)
- UK Innovate partnership for critical datasets and computational resources
- Upcoming meeting with the Rwanda Space Agency

NextGen Space Challenge Pitching Event Winners

Watch the next generation of space leaders share their space technology ideas that can tackle global challenges and drive impactful change by viewing this webinar recording: <https://bit.ly/NextGen-Space-Event>



Yasmin Karsan



Jules Udahemuka



Billy Nyaga
Brenda Chapkemol
Lynne Wonder Kariuki

Funded by:  Innovate UK  UK International Development

In partnership with:     

Source: <https://iuk-business-connect.org.uk/events/nextgen-space-challenge-pitching-event/>

STRONG PARTNERSHIP



Innovate
UK



WHY WE'RE UNIQUELY POSITIONED TO WIN

	Terraform Analytics	Global Providers (AccuWeather/IBM)	Agricultural Intel (aWhere/Gro)
Resolution	1KM precision	15-50KM resolution	10-20KM resolution
Local Data Integration	✓	✗	Limited
Africa-First Approach	✓	✗	✗
Financial Inclusion Focus	✓	✗	Limited

Our technology critically **de-risks agriculture for banks and insurers**, enabling farmers across Africa to access financial services more easily.

\$1B MARKET OPPORTUNITY

WEATHER VOLATILITY MAKES IT **HARDER**
FOR AFRICA TO DO AGRICULTURE

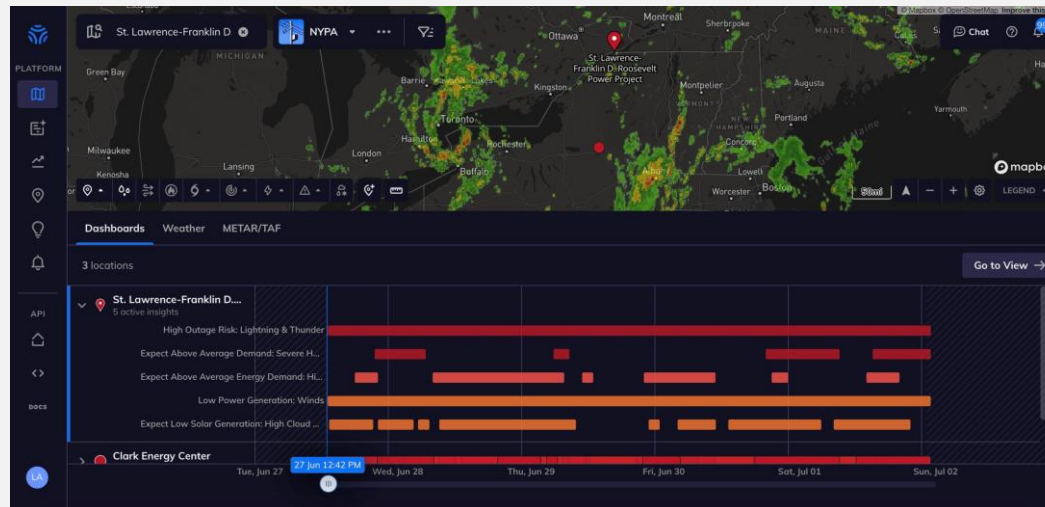
- **Government:** Climate adaptation programs
- **Agriculture:** Yield optimization
- **Insurance:** Risk modelling
- **Logistics:** Supply chain planning

Projecting **\$ 1M+ recurring revenue** within two years as we expand beyond Rwanda

REVENUE MODEL

OUR PLATFORM AND BUSINESS MODEL ENABLE **RAPID SCALING**
(Business model scales like a vertical SaaS platform)

- **Basic Subscriptions:** Essential short-term forecasting and risk analysis for small enterprises and farmers.
- **Premium Tiers:** Long-term forecasts (3 - 6 months) and comprehensive analytics for larger organizations.
- **Enterprise Solutions:** Customized packages for government, banks, insurance, and supply chain companies.
- **API Access:** Third-party integration (priced by call volume)



Source: <https://www.tomorrow.io/blog/early-warning-systems-and-disaster-risk-reduction-a-comprehensive-guide/> (the vision of how our platform will look like - currently we have a demo)

Our Path Forward

3-mo

Market research and a complete market-ready MVP with full analytics

6-mo

Secure our first enterprise clients and reach \$250k+ ARR

1-Y

Look into expanding to three additional African countries (Kenya, Ethiopia, and Nigeria)

BEYOND BUSINESS: OUR IMPACT

Financial Inclusion

Creating access to financial services for millions of previously underserved farmers

High-Skilled Jobs

Creating technical roles in climate and ML technologies across Africa

Climate Resilience

Helping communities adapt to increasingly volatile weather patterns

Economic Growth

Developing critical infrastructure for Africa's future

TEAM



Jules Udahemuka

- Lead/Engineering
- Climate Science
- ML Engineer

Clarisse Isingizwe

- Data Science
- Engineering
- Software Developer



Floris Nzabakira

- ML Researcher
- Research/Development

Emmanuel Nsengiyumva

- Engineering
- Software Developer
- GIS Expert



THE ASK: \$40,000 INVESTMENT

\$25,000
TECHNICAL
DEVELOPMENT
AND PLATFORM
COMPLETION

\$10,000
EXPANDING
DATA
PARTNERSHIPS
BEYOND
RWANDA

\$5,000
CUSTOMER
DISCOVERY AND
MARKET
VALIDATION

*"We are not just forecasting the future—we are helping
Africa build Africa."*

THANKS

TerraSense Research