SDC A+FS Network

Science for Food

A series of light & informal events on science in food systems



WELCOME !

04.11.2026

What's on the menu ?

1. Opening address
2. **Harnessing AI for healthier diets and more effective food systems programmes** – Stella Nordhagen, Director of Research at GAIN
3. News & events
4. **Beyond the farm gate: AI that makes smallholder farmers individually lendable** – Alexander Zanders, Founder and CEO of UfarmX

SDC A+FS Network
Science for Food
A series of light & informal events on science in food systems



SDC A+FS Network

Science for Food

A series of light & informal events on science in food systems



Harnessing AI for healthier diets and more effective food systems programmes

Stella Nordhagen, Director of Research at GAIN

gain
Global Alliance for Improved Nutrition

ARTIFICIAL INTELLIGENCE: WHAT ROLE IN FOOD & NUTRITION PROGRAMMES?

Stella Nordhagen

Science for Food webinar ~ November 2026



OPPORTUNITIES FOR AI IN FOOD SYSTEMS AND NUTRITION PROGRAMMES

Doing more, faster	**Increasing efficiency of existing activities with high quality** • Computer vision for testing LSFF products
Reaching wider & deeper	**Reaching more, more often, & better** • Identifying highest-need areas or time periods through predictive analytics
Tailoring content	**Meeting individual needs better** • Dietary advice for different audiences
Better understanding the present & potential future	**Real-time data and forecasting** • Input supply forecasts for food entrepreneurs or school meal programmes
Knowing more & sharing it better	**Enhancing knowledge generation, retrieval, synthesis, & translation** • Integrating food data from diverse sources

Example: GAIN programme targeting in Kenya

Need

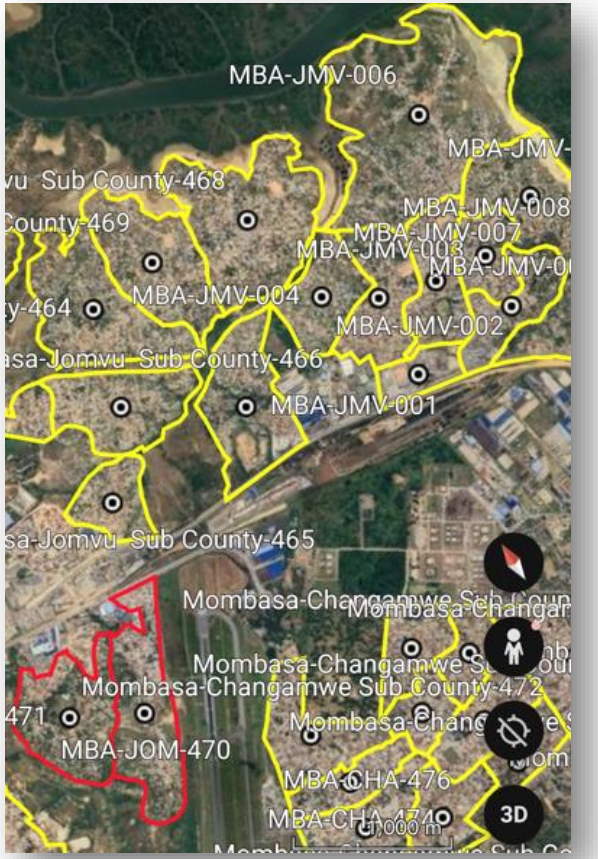
Getting vegetables to low-income urban consumers requires knowing where they are + reaching informal vendors

Challenges

- National statistics stop at ward level (up to 100,000 people): cannot pinpoint the low-income neighborhoods most in need
- Informal, last-mile vendors are largely unmapped

Solution

- GAIN + Atlas AI used machine learning, predictive analytics, and satellite imagery to fill gaps in national statistics, flag low-income neighborhoods
- Using the AI-built map, field teams geotagged 14,000 last-mile vendors
- These were used to make ‘zones’, each with at least 15 vendors and 5,000 people, for intervention delivery and evaluation



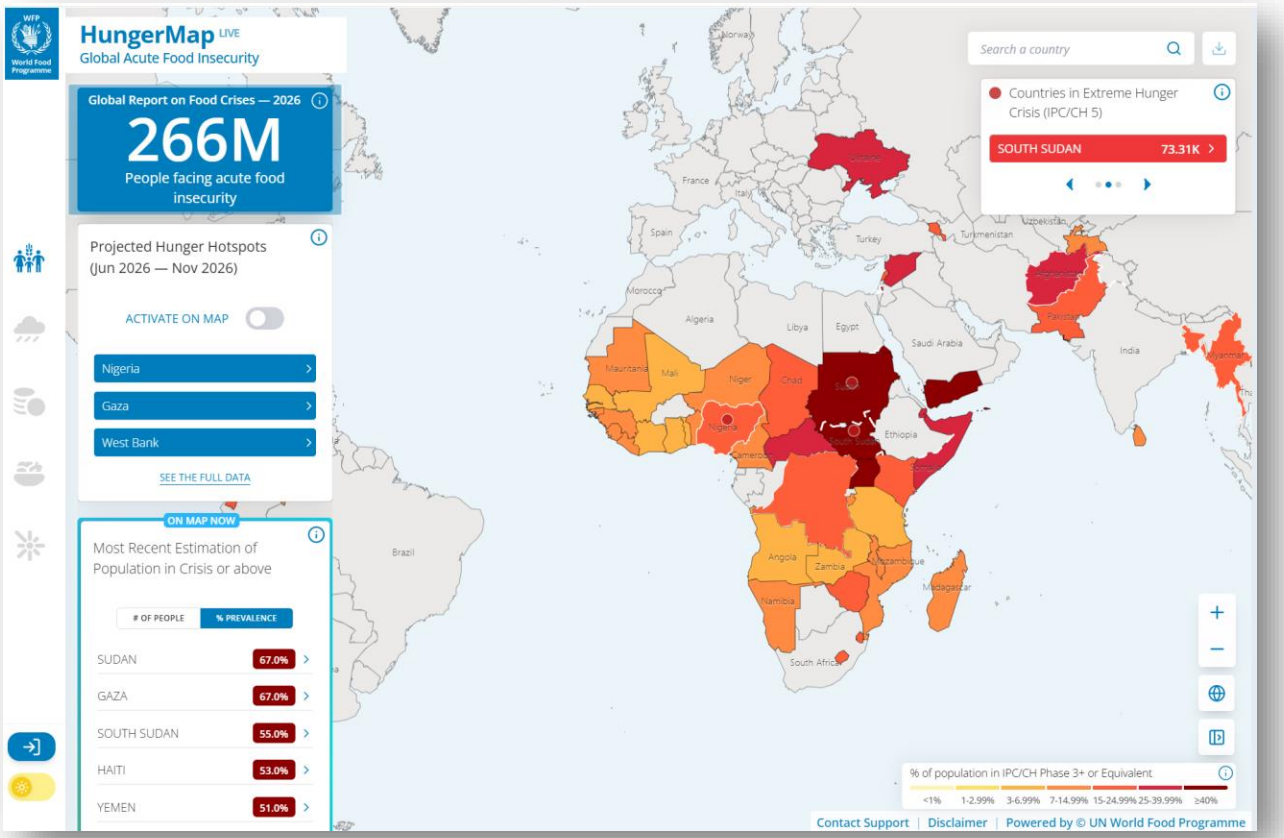
Example: WFP HungerMap Live

Need: Understanding who is most vulnerable to hunger and malnutrition to best to target humanitarian aid.

Challenges: Relevant data comes from many sources, in many forms; hard to get real-time data; need for advance, early warning.

Solution: HungerMap Live

- integrates diverse food security data and analysis with predictive modelling
- AI-assisted forecasting can project food needs 30-90 days in advance in 16 'Hunger Hotspots' (for WFP staff only)
- Resulting early warnings help prioritise and plan targeted interventions



Risks associated with AI use for food & nutrition

- Algorithmic bias
- Inaccurate outputs, including ‘hallucination’
- Privacy violations, data breaches
- Poor transparency, limited accountability

The Guardian

Supermarket AI meal planner app suggests recipe that would create chlorine gas

bot cheerfully created
n customers experimented with
ems



d supermarket that produces AI-generated recipes for
y ‘bleach-infused rice surprise’ among other things.
hy Ltd/Getty Images

experimenting with using AI to generate meal
ce some unusual dishes - recommending
chlorine gas, “poison bread sandwiches” and
tatoes.

Flaws in Kenya’s AI-driven health reforms driving up costs for the poorest

Exclusive: amid unrest, President William Ruto promised to give all Kenyans access to healthcare. But the algorithm favours the rich, an investigation has found



ting at Kuoyo sub-county hospital in Kisumu, Kenya. The new ‘AI-powered’
em appears to penalise the poorest. Photograph: Michel Lunanga/Getty Images

m used to predict how much Kenyans can afford to pay for access
re, has systemically driven up costs for the poor, an investigation

Latest · Local News · Live · Shows · ···

CBS NEWS

Local News

Johns Hopkins Bayview warns patients of data breach involving more than 3,100 people

By Adam Thompson

Updated on: October 26, 2026 / 5:48 PM EDT / CBS Baltimore

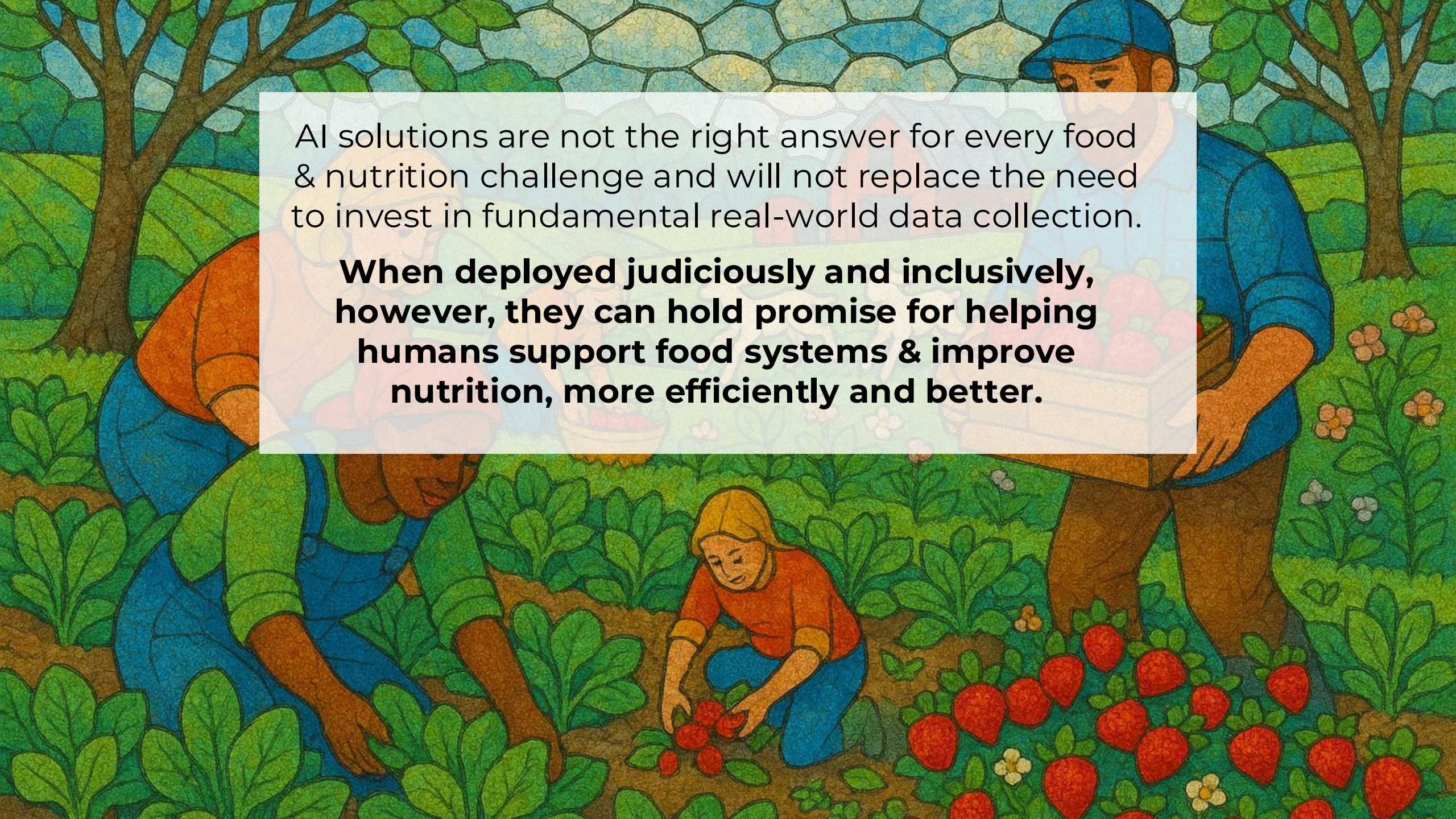
Add CBS News on Google

Johns Hopkins Bayview Medical Center is notifying patients of a data breach that may have exposed the personal and medical information of more than 3,100 people after an employee uploaded a spreadsheet containing patient data to an unauthorized artificial intelligence tool.

How to collectively advance responsible AI use for nutrition data

- Data is the key that unlocks the usefulness of AI: improve access to high-quality, harmonised, open-source data for nutrition
- Support development and application of relevant regulatory and normative frameworks
- Use user-centric approaches
- Embed within existing systems and workflows
- Forge new partnerships across sectors





AI solutions are not the right answer for every food & nutrition challenge and will not replace the need to invest in fundamental real-world data collection.

When deployed judiciously and inclusively, however, they can hold promise for helping humans support food systems & improve nutrition, more efficiently and better.



Thank you

With thanks to collaborators at GAIN, Hornbill AgriTech, & WFP.

I used ChatGPT to generate images and Claude (Opus 5) to improve the quality of visualisations, but reviewed the output and take responsibility for the content.

gain
Global Alliance for Improved Nutrition

This presentation has been produced through the Nourishing Food Pathways programme jointly funded by:

In partnership with Canada

Co-funded by the European Union

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Irish Aid
An Roinn Gnóthaí Eachtracha
Department of Foreign Affairs

Ministry of Foreign Affairs

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

The findings, ideas, and conclusions presented are those of the authors and do not necessarily reflect positions or policies of any of the agencies mentioned above.

SDC A+FS Network

Science for Food

A series of light & informal events on science in food systems



WHAT'S NEW?



Recently launched report by Columbia University:

Enabling Smallholder Adoption of Agricultural AI in Sub-Saharan Africa

July 2026

→ More information

SDC A+FS Network
Science for Food
A series of light & informal events on science in food systems

Rwanda: National plan to reach 2.5 million farmers with improved advisory services

September 2026

→ More information

SDC A+FS Network
Science for Food
A series of light & informal events on science in food systems





Copyright: Unsplash

Kenya: Launch of the AI-based Forecast-to-Farmer pilot

September 2026

→ More information

SDC A+FS Network
Science for Food
A series of light & informal events on science in food systems

Thematic Integration Brief (TIB) by SDC's networks AFS and PGE

September 2026

→ More information

Governance...
and Food Systems



SDC A+FS Network
Science for Food
A series of light & informal events on science in food systems

SDC A+FS Network

Science for Food

A series of light & informal events on science in food systems



Beyond the farm gate: AI that makes smallholder farmers individually lendable

Alexander Zanders, Founder and CEO of UfarmX

ufarmx®

Alexander Zanders,
Founder & CEO

2015





ufarmx®

What kind of world am I building it for?

ufarmx®

100 ACRES

Baltimore → Nigerian soil.

COVID

First harvest

Something unexpected.



90%+

of African smalholder farmers — zero access to credit

70%

of the world's remaining farmable land - Africa

11x

ower yield per acre — not skil, not work ethic.

DENIED

ufarmx®

3x
Yields

2x
Revenues

15
farmers

1
harvest

1
hypothesis confirmed.

ufarmx®

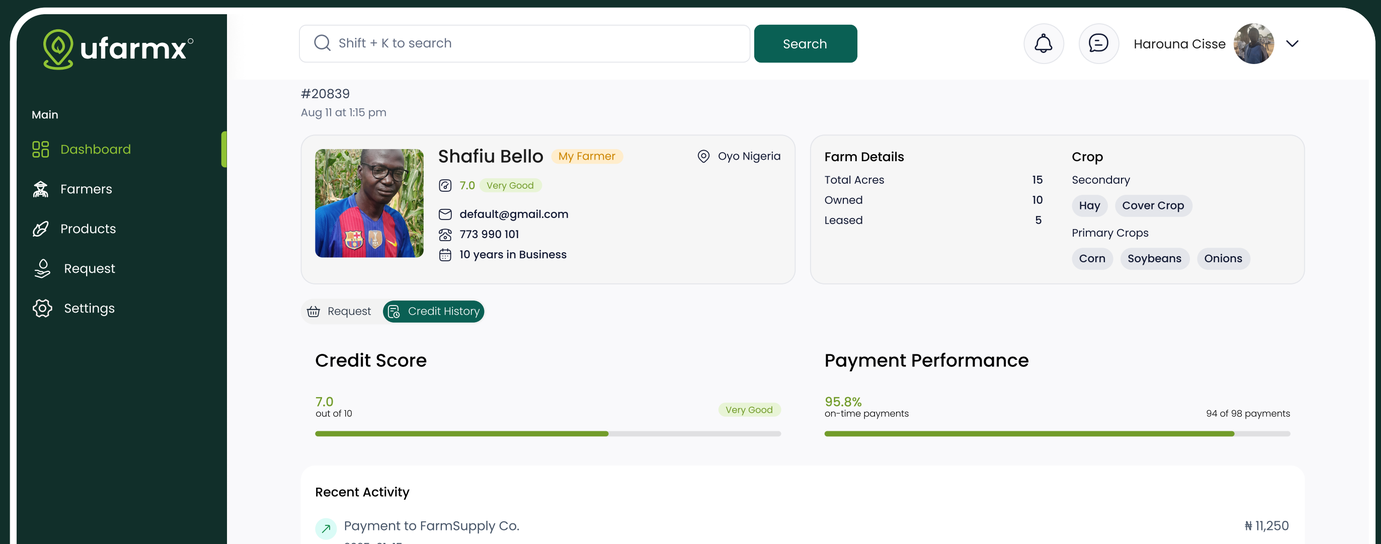


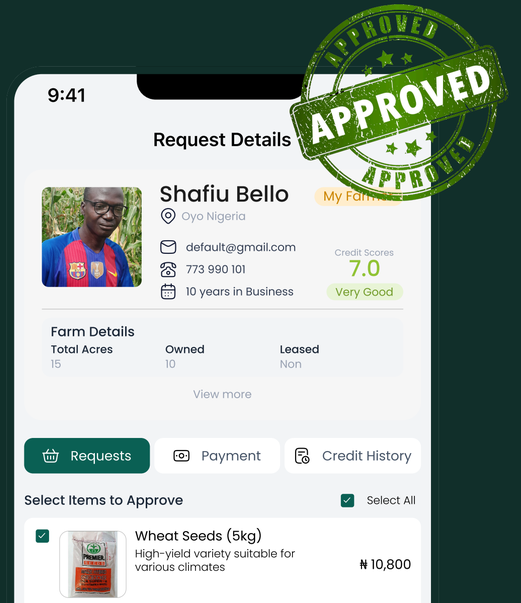
Think Equifax. Think Stripe.

Now think 600 million farmers.

Patented AI credit scoring ■ Real-time ■ Point of sale ■ No collateral required

ufarmx®





ufarmx®

Farmer → Retailer → UfarmX

Gets inputs on credit

Extends credit, grows sales

Earns SaaS + transaction fee + interest spread

Default rate: <10% · Collateral-free · 3–5× better than traditional banks

167,000+
Farmers

$6.8M+
Financed

<10%
Default Rate

149%
Farmer yield increase

100+
RetailPartners

141%
Revenue Growth YoY

3
Active markets

58%
Farmer income increase

Impact assessment conducted by Ricardo consultants and reviewed by Climate Policy Initiative

IFC International Finance Corporation WORLD BANK GROUP

JEDAR CAPITAL VENTURE CAPITAL | ADVISORS

techstars_

ORBIT STARTUPS

TEDCO LEADING INNOVATION TO MARKET

PHARRELL WILLIAMS

SKULL DIAMOND AND HEART CAPITAL

THE TEAM

The People Behind UfarmX

Alexander Zanders, CSM

CEO/Founder



- Temple University
- Lifelong entrepreneur
- Previously bootstrapped export company to $15M+ in sales (Nigeria, Dubai, Caribbean)
- Personal farming experience inspired UfarmX

Andrea Kamara-Dunbar

Co-Founder



- Forbes 30 Under 30 Fellow
- 2x Founder
- Harvard / London School of Business

Dean Iwuchukwu

CTO/Co-Founder



- University of Maryland
- Former NASA & Raytheon engineer
- Deep technical infrastructure experience

Segun Fagbami

Product Lead/Co-Founder



- 2x Founder (sold Vella fintech to Carbon Bank)
- Deep Nigeria market expertise

Dr. Uchenna Richard Amadi

CFO



- PhD, FCCA
- Adjunct Professor at Nottingham University
- Stanbic IBTC, Access Bank, FirstBank background

Kerrin Massarueh

COO



- B.S. University of Maryland
- 10+ yrs experience in AgTech and sustainable development


Africa feeds
the world

SDC A+FS Network

Science for Food

A series of light & informal events on science in food systems



Join our community →

ANNOUNCEMENTS

- Presentations soon available on our website : https://www.sdc-foodsystems.ch/en/thoughts-for-food
- Upcoming events :







Don’t hesitate to share news, topics and ideas with us!

SDC A+FS Network

Science for Food

A series of light & informal events on science in food systems



Thank you!
Stay well, and stay connected!