

AGRITECH ACCELERATOR

Lessons From Scaling
Digital Agriculture Services

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Contents

Executive summary	06
Introduction	13
01 Overview of the Accelerator and context	17
02 Performance of the Accelerator	24
Market engagement support	25
UX research and design	27
Investment readiness	29
Insights and capacity building	31
MEL and business intelligence data	34
03 Business models and lessons from scaling agritech services	35
User-centred product design	37
Access to capital	42
Revenue generation	46
Marketing and sales	50
Partnerships and ecosystem integration	52
Internal and external enablers of scale	54
04 Impact of agritech services on smallholder farmers	56
Framework and high-level impact	58
Digital advisory	62
Market linkages	65
Agri DFS	67
Digital payments	67
Insurance	70
Loans	72
Conclusion	74
Key takeaways for agritechs	76
Recommendations for donors, investors and technical assistance providers	77
Annexes	78
Definitions	79
Development stages framework	81
Cohort member profiles	82

Figure list

Figure 1	Digital agriculture use cases and potential impacts on smallholder farmers	15
Figure 2	GSMA AgriTech Accelerator cohort members and implementation countries	18
Figure 3	GSMA AgriTech Accelerator impact framework	19
Figure 4	Development stages of the Accelerator's cohort members	22
Figure 5	The Accelerator's technical assistance package	23
Figure 6	Key achievements of the Accelerator under the UX workstream	28
Figure 7	Investment readiness support provided by the Accelerator	29
Figure 8	Gender inclusivity workshop	31
Figure 9	Gender inclusivity workshop outcomes	32
Figure 10	MEL and BI data technical assistance	34
Figure 11	Key pillars of an agritech's journey to scale	36
Figure 12	Iterative product development	40
Figure 13	Key stages on an agritech's investment journey	44
Figure 14	Revenue models of Accelerator cohort members	46
Figure 15	GSMA AgriTech Accelerator Theory of Change	57
Figure 16	Framework for assessing impact of the agritech services	58
Figure 17	Number of new farmers who accessed agritech services, per use case	59
Figure 18	Digital agriculture services and climate resilience	60
Figure 19	Perceived aggregated impact of cohort services on farmers' climate resilience	60
Figure 20	Perceived impact of cohort member services on farmer incomes	61
Figure 21	Perceived benefits of accessing digital advisory services in Ghana and Senegal	62
Figure 22	Perceived benefits of accessing market linkage services in Ghana and Nigeria	65
Figure 23	Winich Farms debit cardholders' usage and access	67
Figure 24	Perceived benefits of digital payments for farmers in Ghana, Kenya and Nigeria	68

Table list

Table 1	Overview of cohort members	20
Table 2	GSMA AgriTech Accelerator technical assistance partners	23
Table 3	Development stages framework definitions	81

Acronyms and abbreviations

API	Application programming interface	IVR	Interactive voice response
BI	Business intelligence	LMIC	Low- and middle-income country
B2B	Business-to-business	MEL	Monitoring, evaluation and learning
B2B2C	Business-to-business-to-consumer	MEM	Market engagement manager
B2C	Business-to-consumer	MFI	Microfinance institution
CAC	Customer acquisition costs	MNO	Mobile network operator
DFS	Digital financial services	MVP	Minimum viable product
EUDR	European Union Deforestation-free Regulation	PIW	Product iteration workshop
FFS	Field focus session	RFS	Rapid feedback survey
FGD	Focus group discussion	SaaS	Software as a service
FSP	Financial services provider	SMS	Short message service
GIW	Gender inclusivity workshop	TA	Technical assistance
ICS	Impact case study	ToC	Theory of change
IDI	In-depth interview	USSD	Unstructured supplementary service data
IR	Investment readiness	UX	User experience
IRL	Investment readiness level	UI	User interface
		VC	Venture capital

Executive summary



The GSMA AgriTech Accelerator (the “Accelerator”), which ran from June 2023 to October 2025, supported the growth of innovative, revenue-generating digital agriculture solutions to improve farmers’ livelihoods, financial inclusion and climate resilience through digital innovation. The cohort of agritechs in the Accelerator offered services and solutions including digital advisory, agri digital financial services (DFS), smart farming, digital procurement and market linkages.

Through tailored technical assistance, the Accelerator helped agritechs address the challenges they face in finding the right product-market fit, streamlining the user experience and securing external funding to support their growth objectives.

This report draws on insights and data from the Accelerator, examining the key achievements and business models of cohort members, and providing strategies and recommendations for overcoming common challenges faced by agritech startups on their journeys to scale.

Key achievements of the Accelerator



Key lessons on business models

This report outlines common challenges faced by growing agritech startups and showcases the strategies, lessons and best practices that have enabled some agritechs to overcome them. The findings are organised around the following core pillars of an agritech's journey to scale:



User-centric product design

User experience (UX) research and design are key to achieving product-market fit. A UX research and design approach enabled cohort members to better understand their users' needs, values and challenges. By uncovering critical issues in product design and customer journeys, UX research and design ultimately increased adoption and engagement.

Simplicity and accessibility drive adoption: Many smallholder farmers have low levels of digital literacy and limited internet access. Simplifying product design and the onboarding process, enabling offline functionality and reducing feature overload all helped make solutions more accessible. Local languages and inclusive design are also key to driving adoption.

An iterative approach helps build trust: It is important to first build trust in the app's core functions before introducing advanced features, especially for less tech-savvy users. Focusing on a minimum viable product (MVP) that addresses users' primary needs, and gradually adding new features based on research and feedback, ensures a smoother experience that does not overwhelm users.

Proactive user guidance enhances user engagement: Agritechs need to be "friendly helpers" that actively assist users with onboarding, rather than expecting them to explore solutions on their own. Notifications can be an effective way to enhance engagement and promote underutilised features.



Access to capital

Agritechs struggle to scale due to limited funding, which affects hiring, product development and market expansion. Many rely on bootstrapping, which limits their growth.

Many founders not only underestimated the effort involved in investor engagement, but also lacked a clear understanding of what effective fundraising entails. Across the cohort, there were significant gaps in preparation and knowledge, from robust financial planning and well-organised data rooms to targeted investor outreach. Without these essential building blocks, fundraising efforts often fell short.

Agritechs that were successful in fundraising had strong **financial models** that showed the commercial viability of their solutions and a pathway to profitability. They spent time building a **strong network**, engaging with mentors, industry experts and sector-focused investors to enhance their fundraising prospects. They also ensured their pitches were tailored to **investors' priorities** and clearly conveyed a compelling **value proposition**.



Revenue generation

Agritechs need to be strategic in developing revenue models that allow them to be both financially sustainable and affordable for their target customers. This often means diversifying revenue streams or blending business models to reduce customer concentration risks and create more stable income sources.

Business-to-consumer (B2C) models: Earning direct revenue from farmers has proven difficult for the cohort, due to a low willingness to pay and the limited financial capacity of farmers, especially when competing with free or subsidised services.

Donor-funded models: While donor funding provides critical early-stage support, long-term sustainability can be a challenge if users are unwilling or unable to pay after it ends.

Business-to-business (B2B) models offer more stable revenue potential. While commercial agribusinesses may have greater ability to pay for digital agriculture solutions than smallholder farmers, pricing must be carefully structured for different business sizes.

Whether selling to farmers or agribusinesses, demonstrating a **strong value proposition** and **addressing user needs** are essential to convert them into paying customers. Some of the strategies explored by the Accelerator cohort include:

- **Freemium models** in which agritechs provide basic services for free and charge for premium features.
- **Subsidising services** in early stages, with agritechs covering costs to drive adoption and create stickiness before monetising services later.
- **Introducing a tier-based approach or instalments** to make services accessible.



Marketing and sales

Agritechs struggle to **acquire customers** due to low awareness, limited marketing budgets and high customer acquisition costs (CAC). **Customer retention** has also been an issue across the cohort, driven by factors such as low digital literacy, inconsistent internet access and the perceived relevance of the service offering.

Agent-led models have proven effective in onboarding, educating and building trust with smallholder farmers. However, sustaining agent networks is costly and optimising their performance

remains a challenge. Strategies such as commission-based incentives and multifunctional agent roles have helped improve the efficiency of these agent-led models.

While some agritechs rely on in-person agent networks, others are turning to **digital marketing** to drive awareness and adoption. Despite budget constraints, strategic investments in social media and targeted campaigns have helped agritechs refine their outreach and engagement strategies.



Partnerships and ecosystem integration

For agritechs in the Accelerator, **strategic partnerships have played a crucial role in gaining access to farmers**, including women farmers, while also helping to establish their brand and services in their respective markets. In some cases, collaborations have also enabled cohort members to expand their service offerings, strengthen their value proposition and unlock new revenue streams.

However, **building partnerships as an early-stage agritech is challenging**, as their limited traction often make them unattractive partners for large organisations, including government.

Experience from the cohort shows that building a successful partnership involves finding a **win-win business case** and/or leveraging **warm introductions** from their network to establish credibility.



Internal and external enablers of scale

Strong leadership: Behind every successful agritech is a strong leadership team that drives progress and ensures its journey to scale is on track. This team must excel operationally while demonstrating resilience and adaptability.

Technological expertise: Being surrounded with the right talent, including a strong tech and product team, is crucial for product development and growth.

The ecosystem in which an agritech operates has a major influence on its ability to scale. Factors such as market potential – including market size, digital readiness and competitiveness – as well as enabling regulatory and legislative frameworks and the broader macroeconomic and policy context, all play a crucial role in an agritech's ability to scale.

Impact of agritech services on smallholder farmers

This report assesses the impact of agritech services on farmers, examining how digital advisory, market linkages and agri DFS (including digital payments, insurance and loans) have influenced their livelihoods. The assessment focuses on five areas from the Accelerator Theory of Change (ToC): access, climate resilience, financial inclusion, productivity and income and livelihoods. It draws on the RFS and ICS conducted throughout the Accelerator.



Digital advisory

Access

96% of farmers surveyed perceived that using digital advisory services through channels such as IVR, SMS and call centres have enabled higher quality, cost-effective, timely and safe access to information, **improving their agricultural knowledge and practices.**

Climate resilience

92% of farmers reported that digital advisory had a positive impact on their ability to **anticipate and adapt** to climate events. These services enabled farmers to effectively apply advice on agricultural practices and weather forecasts to plan, respond to and adjust to changing climate conditions.

Productivity and income

93% of farmers reported that digital advisory helped improve crop productivity. The frequency and timing of messages play a crucial role in farmers' ability to implement guidance, although affordability and skill gaps are persistent barriers. 87% of farmers believe their incomes have improved due to better agricultural knowledge and decision-making.

Livelihoods

Digital advisory services enabled farmers to enhance their livelihoods, with **87%** of surveyed farmers, many of whom were subsistence farmers, reporting improved food security.



Market linkages

Access

Solutions that provided market linkages improved **market access** for **80%** of surveyed farmers. Farmers rated consistent buyers and the ability to sell more crops safely as the greatest benefits.

Productivity and income

Market linkage services **improved access to buyers and storage** for 90% of surveyed farmers. This, in turn, improved productivity by significantly reducing

crop losses. Consistent buyers and digital weighing systems meant 88% of farmers perceived they had better prices, greater financial stability and, therefore, **higher incomes**.

Livelihoods

The ability to earn more income through better **market access** enabled farmers to improve their livelihoods, including through **greater food security, the ability to fund their children's education, better access to health services and expanding their farming activities**.



Agri DFS

Access

Digital payments through mobile money and debit cards provided several benefits for **89%** of farmers, including faster and safer payments, a record of sales/transaction history and lower transport costs.

81% of farmers using digital weather index insurance reported that insurance would otherwise have been unaffordable.

Loans bundled with insurance reduce barriers to collateral, empowering farmers, especially women, to manage their finances and invest in farm productivity.

Climate resilience

Insurance enabled farmers to absorb climate shocks and recover effectively. **82% of farmers perceived that insurance mitigated their agricultural losses**. Long-term strategies, including affordable financing and climate-resilient inputs, are also crucial for strengthening resilience.

Financial inclusion

Digital payments have led to better money management practices and, in some cases, increased savings for farmers.

Insurance services, although complex, provide a crucial financial safety net, especially when provided with flexible premium payments to enhance adoption.

Loans bundled with insurance reduce barriers to collateral, empowering farmers, especially women, to manage finances and invest in farm productivity.

Productivity and income

Loans support farmers by providing access to productive inputs. 85% of farmers perceived a boost in their income.

Livelihoods

Insurance mitigates risk. Although it had less direct impact on farmers' incomes, it helped increase food security for **48%** of insured farmers.

Introduction



Resilient and efficient food systems are key to addressing global food insecurity. With the world's population projected to increase by nearly a billion over the next two decades, and with rising incomes driving higher food consumption, total food demand is expected to increase by more than 50%, potentially reaching 70% by 2050.¹ Meanwhile, approximately 10% of the global population (783 million people) experienced hunger in 2023.² Without a more efficient and sustainable food system, rising demand could exacerbate food insecurity, particularly among vulnerable populations.

Climate change makes food security an even more complex challenge, particularly in low- and middle-income countries (LMICs). Rising temperatures, shifting precipitation patterns and more frequent extreme weather events are disrupting traditional agricultural practices.³ Climate volatility not only reduces food production capacity, but can also lead to crop failures in severe cases.

Smallholder farmers, the backbone of agricultural food systems in LMICs, produce 30% of the world's food and 80% of the food consumed in Asia and Sub-Saharan Africa.⁴ These farmers are severely affected by climate change due to their reliance on rainfed agriculture and limited access to effective adaptation strategies. While climate is a major stressor on smallholder farmers' livelihoods, a range of other systemic and interconnected challenges hinder their productivity and resilience, reinforcing the cycle of poverty in which many remain trapped. An estimated 78% of the world's extreme poor live in rural areas and depend primarily on agriculture for their livelihoods.⁵

Smallholder farmers face challenges that include:

- **Limited access to information and agronomic advice.** Smallholder farmers often rely on traditional farming methods and have limited access to critical agricultural information, including best farming practices, pest and disease management, weather and climate data and market insights. This information gap makes it difficult for them to plan effectively, adopt more efficient and sustainable practices, reduce inefficiencies and optimise crop yields.
- **Limited access to markets and buyers.** Smallholder farmers often live in remote areas with high transport costs, poor infrastructure and weak market connections. This isolation limits their ability to engage directly with buyers or sellers, forcing them to rely on intermediaries and leaving them vulnerable to price fluctuations. This also exposes them to post-harvest losses.
- **Limited access to financial services.** Financial services providers (FSPs) are often reluctant to lend to smallholder farmers due to a lack of collateral or economic identities.⁶ As a result, farmers cannot formally access the capital they need to purchase quality inputs, such as seeds and fertilisers, to improve their yields and profits. Access to risk mitigation tools like agricultural insurance is another challenge. High-quality, affordable insurance is scarce and insurers perceive remote and small-scale farms as higher risk. This leaves farmers highly vulnerable to climate shocks, further threatening their resilience.

1 Pomeroy, J. et al. (2023). *The Future of Food: Can we meet the needs of 9bn people?* HSBC Global Research.

2 FAO, IFAD, UNICEF, WFP and WHO. (2024). *The State of Food Security and Nutrition in the World 2024*.

3 GSMA. (2022). *Data-driven Advisory Services for Climate-smart Smallholder Agriculture*.

4 Ricciardi, V. et al. (2018). "How much of the world's food do smallholders produce?" *Global Food Security*, Vol. 17, pp. 64–72.

5 Castañeda, A. et al. (2018). "A New Profile of the Global Poor". *World Development*, Vol. 1.

6 GSMA. (2021). *Agri DFS: Emerging Business Models to Support the Financial Inclusion of Smallholder Farmers*.

Women smallholder farmers, who make up 43% of the global agricultural workforce, are disproportionately affected by these challenges. Traditional gender norms in many LMICs restrict their access to resources, tools and markets that could improve their productivity, income and climate resilience.⁷

Traditional methods of delivering agricultural services, such as in-person advisory services, cash payments for crop procurement and paper-based supply-chain management, are time-consuming, costly and inefficient, and prevent agricultural ecosystems from thriving. Digitalising certain agricultural systems and processes has the potential to improve access and reach more smallholder farmers, while also making services more cost-effective for digital agriculture service providers. By streamlining value chains, reducing production costs and enabling fair crop prices, digital agriculture solutions can enhance the productivity and livelihoods of smallholder farmers.⁸ Digital agriculture services also provide access to crucial agronomic advice that can increase yields and improve access to financial services. For smallholder farmers, this means being able to invest in their farms and mitigate risk while also bolstering their climate resilience.

Leveraging the potential of digital agriculture services, the number of agritechs in LMICs supporting agricultural productivity and livelihoods has surged in recent years, from 713 in 2019 to 1,351 in 2022.⁹ However, many still struggle to reach scale. Only

2% of listed agritechs have achieved significant scale, serving more than 1 million smallholder users each, while most serve between 1,000 and 50,000 farmers.¹⁰ The challenges to scale include finding the right product-market fit and streamlining the user experience, particularly given farmers' low digital literacy and financial capacity. These challenges are even more pronounced for women farmers, who are typically less likely than men to own mobile phones or have decision-making power within their households.¹¹

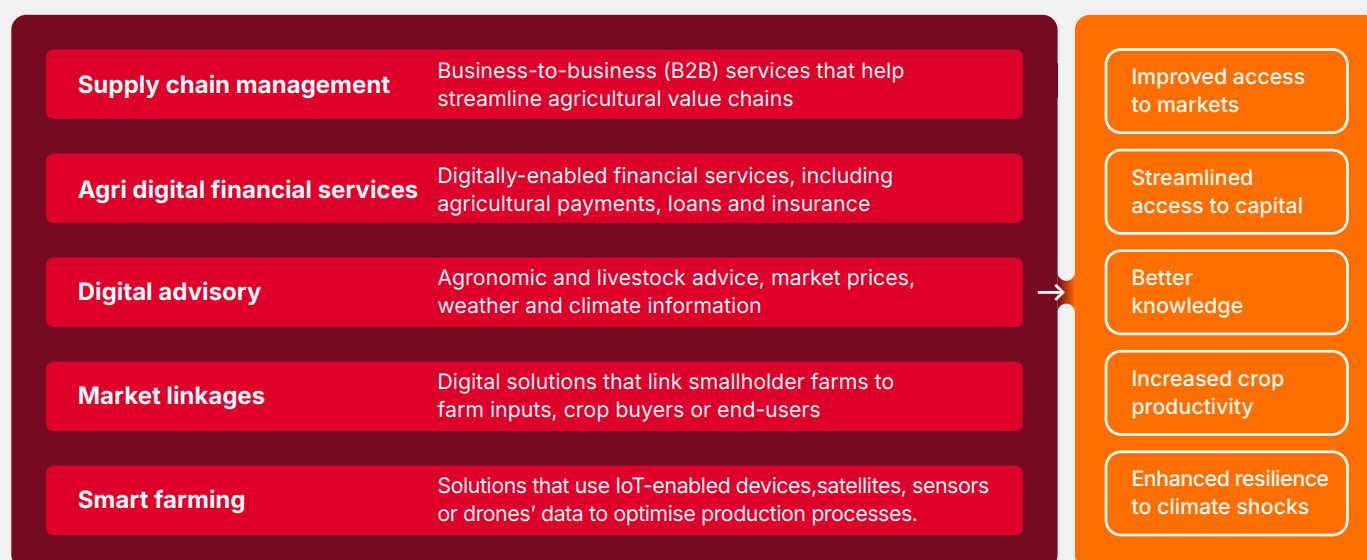
Service improvement and scale depend on business capital, which usually comes from external investment. Yet most agritechs, especially early-stage ones, often struggle to secure external funding.

To help agritechs address these challenges, in June 2023 the GSMA AgriTech programme launched the **GSMA AgriTech Accelerator ("the Accelerator")**, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The focus of the Accelerator was to enhance the livelihoods of smallholder farmers, promote financial inclusion and improve climate resilience through digital innovation.

During its two-year implementation period, the Accelerator provided targeted, farmer-centric technical assistance to 10 agritech innovators, supporting them to scale their digital agriculture solutions.

Figure 1

Digital agriculture use cases and potential impacts on smallholder farmers¹²



Source: GSMA

7 GSMA. (2022). *Reaching and Empowering Women with Digital Solutions in the Agricultural Last Mile*.

8 GSMA. (2023). *Improving Farmer Livelihoods Through Digitised Agricultural Value Chains*.

9 Beanstalk AgTech. (2023). *State of the Digital Agriculture Sector: Harnessing the Potential of Digital for Impact Across Agricultural Value Chains in Low- and Middle-Income Countries*.

10 Ibid.

11 GSMA. (2024). *The Mobile Gender Gap Report 2024*.

12 GSMA. (2020). *Digital Agriculture Maps: 2020 State of the Sector in Low- and Middle-Income Countries*.

Report overview

As the Accelerator will conclude in October 2025, the GSMA and its partners wanted to provide a comprehensive analysis of the impact of the initiative. This assessment examines both the commercial and social outcomes of the Accelerator, offering valuable insights on business models, implementation challenges and the overall effectiveness of the agritech solutions and the Accelerator's technical assistance (TA) package. The report draws on insights and data collected from the 10 cohort members between June 2023 and July 2025, and highlights strategies and recommendations for addressing common challenges faced by agritechs on their journeys to scale.

Methodology

The report findings rely on data triangulation of:

- User experience (UX) research and design and product iteration workshops (PIWs), which captured farmers' insights and guided the iteration process and improvements
- Monitoring, evaluation and learning (MEL) surveys and case studies, combining quantitative phone surveys and in-depth qualitative interviews to understand service adoption, usage patterns, user feedback and the impact of the cohort member services
- Quarterly business intelligence (BI) data submissions from cohort members, tracking service adoption and usage levels
- Observations and insights captured by the Accelerator team during the implementation period
- End-of-programme interviews with cohort members and technical assistance partners, providing comprehensive perspectives on implementation

These primary sources are complemented by desk research to contextualise findings where needed, drawing on publications by the GSMA, World Bank and Food and Agriculture Organization of the United Nations (FAO).

Audience

This report is aimed at donors and impact investors seeking to understand how agritech solutions can enhance farmers' livelihoods, the challenges and gaps that agritechs face and strategies for scaling digital agriculture solutions.

The report also aims to help agritechs identify best practices and strategies for designing farmer-centric digital agriculture services and access resources and funding to grow their operations, increase service adoption and scale their services.

Technical implementers and research organisations working in the areas of digital for development, financial inclusion and agritech will also gain insights from the Accelerator's approach.

1,351

1,351 agritechs in LMICs supporting agricultural productivity and livelihoods.

2%

Only 2% of listed agritechs have achieved significant scale.

01

Overview of the Accelerator and context



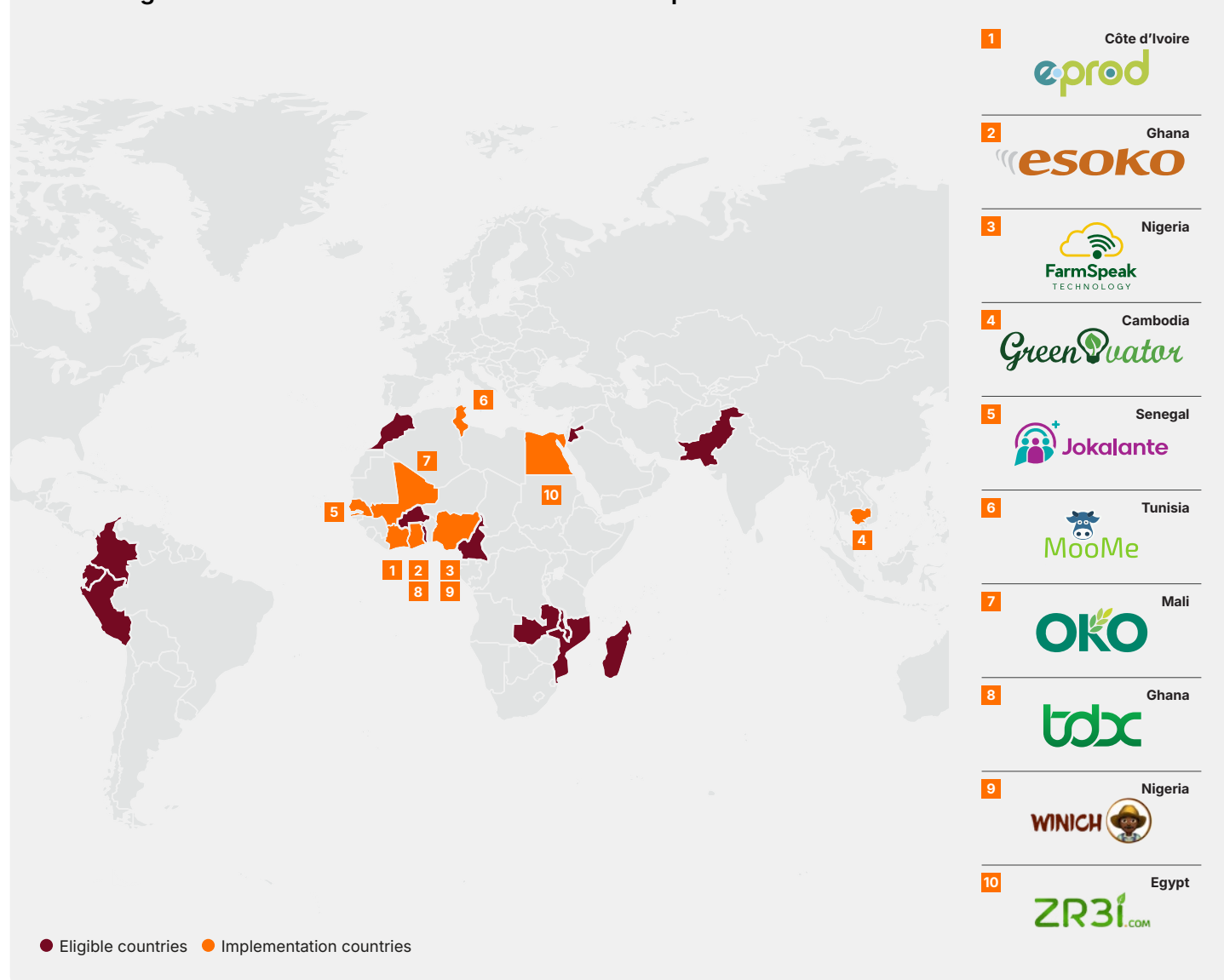
The GSMA AgriTech Accelerator aims to advance the growth of innovative, revenue-generating digital agriculture solutions that improve farmers' livelihoods, financial inclusion and climate resilience.

Ten agritechs ("cohort members") were selected to receive technical assistance (TA) to scale their solutions. However, the full TA package was only delivered to nine companies, as one faced product development and funding issues shortly after the Accelerator began, requiring the Accelerator to scale back its support. As a result, the company was unable to fully benefit from the TA and ultimately ceased operations.

The Accelerator aimed to have a transformative impact where the need and opportunity for agritech development were greatest. Therefore, the focus was on countries where agritech ecosystems were in earlier stages of development and where factors such as mobile connectivity, restrictive regulations, smartphone adoption and start-up ecosystems may present greater challenges. The agritechs selected for the Accelerator were based in West Africa, North Africa and Southeast Asia, as shown in Figure 2.

Figure 2

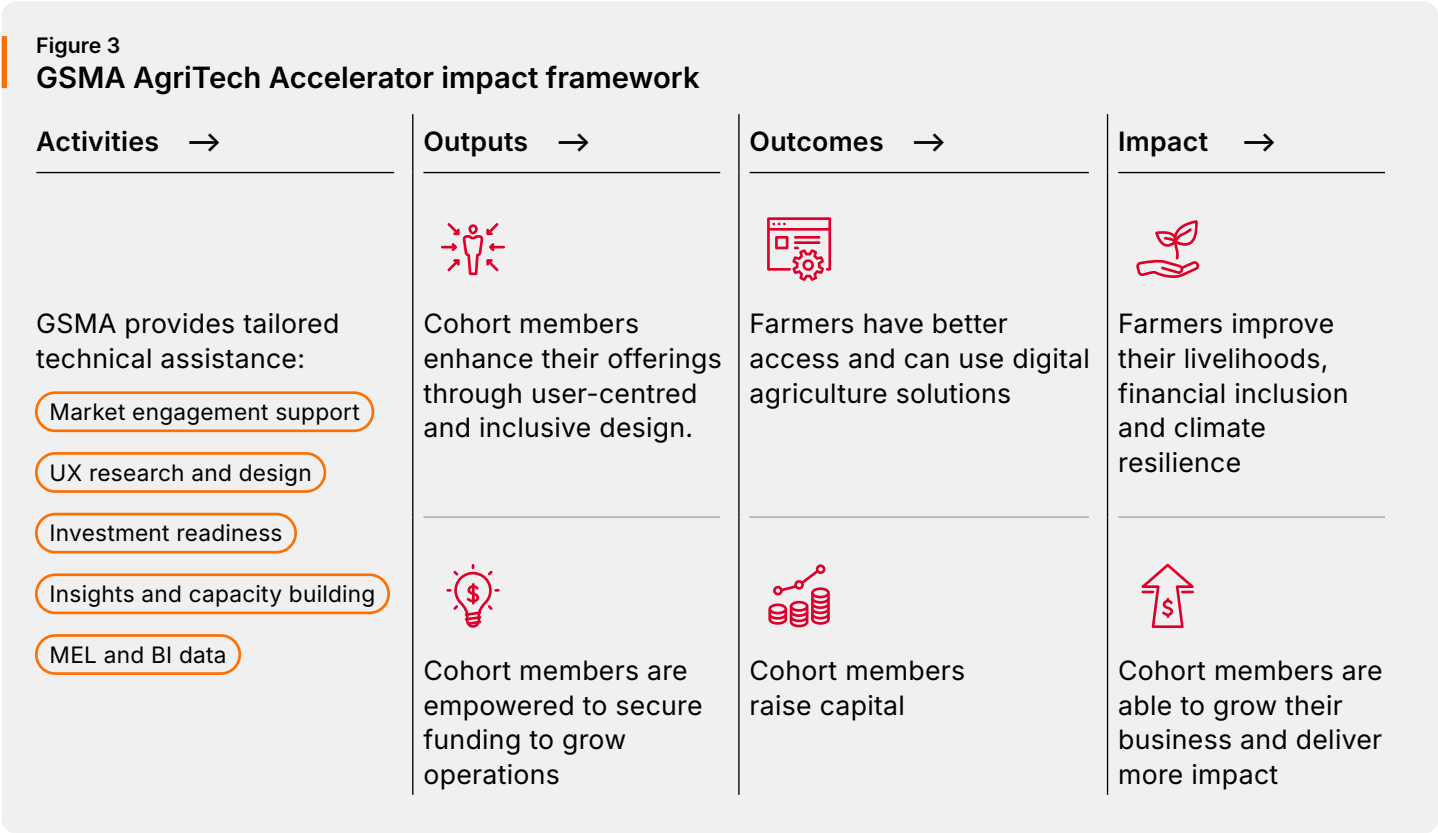
GSMA AgriTech Accelerator cohort members and implementation countries



Source: GSMA

The objectives of the Accelerator are outlined in the impact framework in Figure 3. By providing tailored TA, the Accelerator strengthens the technical capabilities of cohort members through user-centred design and enhances their investment readiness to secure funding to scale. For farmers, the anticipated impact is improved access to, and effective use of,

digital agriculture solutions. This will be the result of user-centred, inclusive service design that leads to better livelihoods, enhanced financial inclusion and greater climate resilience. The broader objective is to create a multiplier effect whereby agritech startups grow and have sustainable impact at scale across agricultural value chains.



Source: GSMA



Table 1

Overview of cohort members¹³

Company	Use case	Services	Business model	Summary profile
	– Supply chain management	– Enterprise resource platform (ERP) – Procurement – Traceability and certification – Farm management and record keeping	B2B	eProd is an agricultural supply chain management platform for agribusinesses. The company's ERP platform enables agribusinesses to manage daily operations, including farmer registration and profiling, farm administration, farmer surveys, produce collection, traceability, certification and loan monitoring. The platform also supports SMS advisory and yield forecasting, and integrates with third parties for mobile payments, credit scoring and inventory management.
	– Digital advisory – Market linkages – Agri DFS	– Farmer information services – Digital climate advisory – Macro agri-intelligence – E-marketplace	B2C and B2B	Esoko enables smallholder farmers to access markets and information. Esoko's Digimkt solution provides digital content including agricultural market prices, weather forecasts and agronomic advisory content. Its hyperlocal content in local languages is delivered to farmers' mobile phones using SMS, IVR, voice messaging and call centres.
	– Smart farming	– Smart livestock management	B2C	FarmSpeak provides data-driven solutions to enable poultry farmers to manage and monitor its farms. It uses Internet of Things (IoT) technology to deliver climate-smart solutions for poultry farmers through its Smart PenKeep monitoring device and AI-powered FS Manager app. Using sensors, weather data and machine learning, its platform captures insights on environmental factors in poultry pens, including temperature, air quality and humidity. The IoT technology also automatically adjusts pen conditions to pre-set parameters.
	– Digital advisory – Market linkages	– Farmer information services – Digital climate advisory – Farm management	B2C and B2B	Greenovator enables farmers to access technical agronomic advice and market linkage opportunities. Greenovator's Mekong Farm App provides farm advisory services, including weather information and forecasts, community interaction and cropping guidelines to optimise their farming operation. The company also offers a digital farm management platform called FarmSuite, which enables agribusiness clients to plan, track and optimise farm operations in real time.

¹³ The use case for each cohort member is the use case that we directly supported. However, some cohort members developed additional use cases as their services expanded. The service terminology is drawn from the [GSMA's Digital Agriculture Maps](#).

Company	Use case	Services	Business model	Summary profile
	Digital advisory	- Farmer information services - Digital climate advisory	B2B	Jokalante is a software-as-a-service (SaaS) platform that delivers localised climate and market data, along with tailored agricultural advisory services for smallholder farmers. Jokalante specialises in data gathering and connecting with rural populations through diverse channels including IVR, voice services, SMS and social media.
	Digital advisory	- Farmer information services - Livestock management - Precision agriculture	B2C and B2B	MooMe's herd management app combines data and actionable advice on livestock reproduction and health with climate alerts and localised advisory services for farmers. Agribusinesses use the app to ensure their extension officers connect with farmers and streamline data collection on herd productivity, sustainability and environmental footprint.
	- Agri DFS - Digital advisory	- Weather index insurance - Access to loans - Digital payments	B2C and B2B	OKO designs and distributes weather insurance to protect smallholder farmers against adverse weather events. OKO's insurance product offers farmers financial protection against drought and floods to prevent potential revenue losses, adapt to a changing climate and mitigate risks. OKO bundles its insurance products with access to loans through partnerships with FSPs.
	- Market linkages - Agri DFS - Supply chain management	- E-marketplaces - Logistics - Digital payments - Value chain integration	B2B2C	TDX provides agricultural commodity trading and brokerage services to connect smallholder farmers in Africa to markets. TDX sources, stores and delivers agricultural commodities from smallholder farmers, connecting them to larger domestic and international markets to boost their incomes and improve livelihoods. The company promotes financial inclusion through digital payments.
	- Market linkages - Agri DFS - Supply chain management	- E-marketplaces - Logistics - Digital payments - Access to loans - Value chain integration	B2B	Winich Farms' platform connects smallholder farmers and buyers in Nigeria while enabling crop offtakers to manage their inventory supply. Winich Farms provides access to markets, easing logistics with consistent buyers and fulfilment centres. It facilitates digital bank payments to farmers via bank accounts, and its platform facilitates access to credit by leveraging transaction data from the sale of crops and produce as collateral.
	Digital advisory	Precision agriculture	B2C	ZR3i is a precision agriculture platform for crop monitoring and management using satellite data. ZR3i helps farmers optimise their cultivation process and efficiently use their resources by providing climate-smart advice based on local farm conditions. ¹⁴

14 Support and technical assistance for ZR3i have been scaled down due to delays in maintaining and updating a stable platform after the launch of the Accelerator. As a result, the company has not fully benefitted from the TA activities originally scheduled for all cohort members.

Figure 4
Development stages of the Accelerator's cohort members¹⁵



Source: GSMA

Cohort members were at different stages of development. While some had already gained traction in their markets, others were still in the early stages of market validation. This is reflected in the diversity of the cohort members' UX/UI¹⁶ and investment readiness level (IRL), as seen in Figure 4.

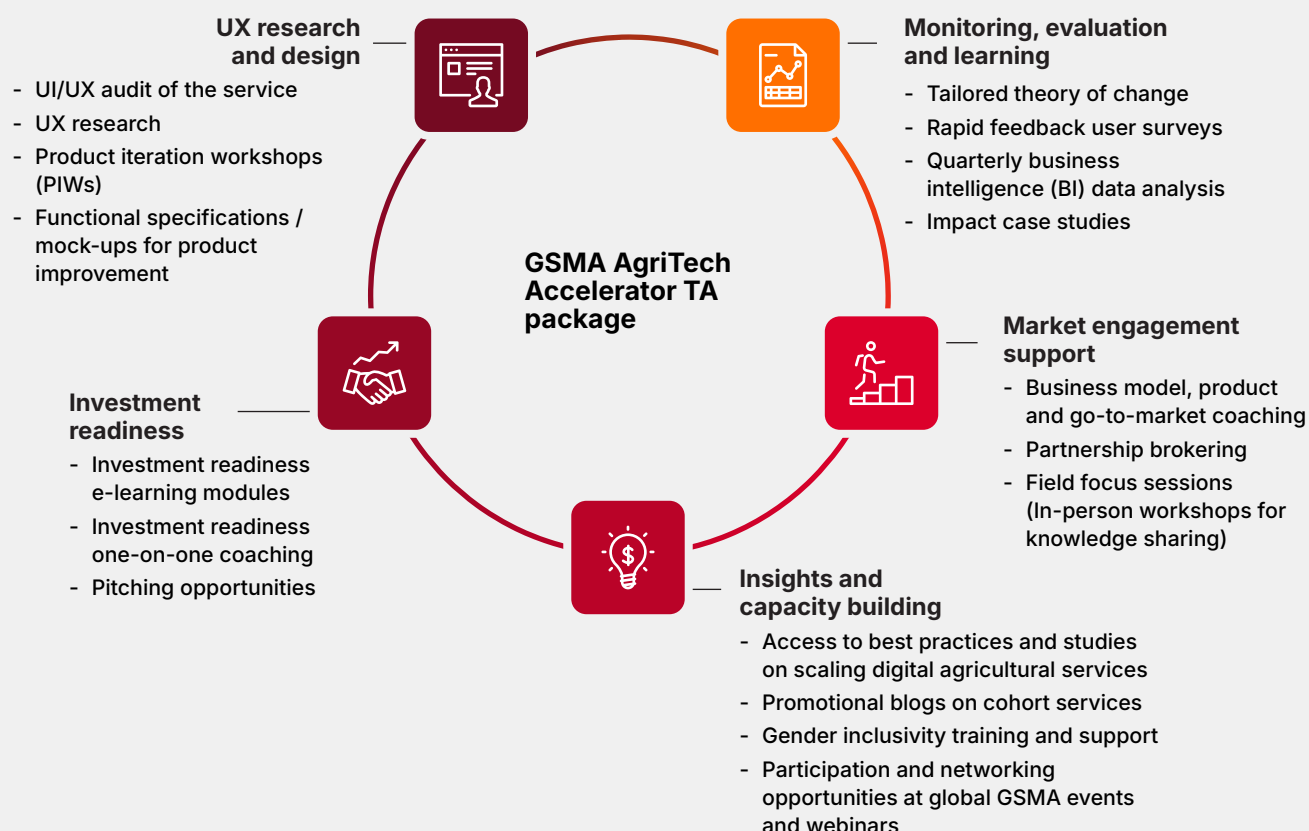
Although the 10 agritechs faced common challenges in designing their services, building their business models and securing financial resources to grow their operations, each required bespoke technical assistance to address their specific needs and scale their services.

The Accelerator developed a tailored TA package with a range of services, including market engagement support, UX research and design, investment readiness (IR), insights and capacity building, as well as monitoring, evaluation and learning (MEL) (see Figure 5). The TA package was designed to help the agritechs enhance their services and value proposition through more user-centric and gender-sensitive design, putting them in a stronger position to attract investment, learn from best practices and identify opportunities for further growth and impact. While agritechs did not receive direct support with operational issues like human resources and marketing, these can influence their ability to apply the lessons from the Accelerator effectively.

¹⁵ See Annex 3 (cohort member profiles) for more information.

¹⁶ User interface (UI) is the point of interaction between a user and a digital system, device or application. It encompasses all the visual, auditory and tactile elements that allow people to communicate with and control technology.

Figure 5
The Accelerator's technical assistance package



Source: GSMA

Three consulting companies (see Table 2) were selected to support the GSMA in preparing the cohort to meet the desired objectives of the Accelerator.

Table 2
GSMA AgriTech Accelerator technical assistance partners

Company	Role	Description
	MEL partner	Altai Consulting offers strategy, research, monitoring and evaluation services in emerging countries. In the Accelerator, Altai provided MEL advisory support, leading on data collection in countries where cohort members operated, conducting the telephone surveys, focus group discussions (FGDs) and in-depth interviews (IDIs) with users to provide feedback and insights as part of the rapid feedback surveys (RFS) and impact case studies (ICS).
BEANSTALK	IR partner	Beanstalk is a food and agriculture innovation advisory company and venture builder. In the Accelerator, Beanstalk provided IR support to the cohort members. Beanstalk led an initial IR assessment to understand its level of understanding and experience in raising investment. It provided a series of e-learning modules that cohort members completed before engaging with the agritechs one-on-one to offer bespoke IR support.
	UX partner	Bopinc supports companies to bring quality products and services to low-income consumers. In the Accelerator, Bopinc provided UX support to the cohort members. Bopinc led various PIWs that involved bespoke user research, product iteration and prototyping based on the digital agriculture services offered by the cohort.

02

Performance of the Accelerator



Market engagement support

This chapter examines the performance of the Accelerator, focusing on five areas of technical assistance (TA) provided, what worked for cohort members and what did not.

Business model, product and go-to-market coaching

The GSMA AgriTech team has extensive experience in agriculture, technology and telecommunications across Africa and Asia. The market engagement managers (MEMs) were the primary sources of support for the cohort members, providing direct assistance through weekly one-on-one calls and coordinating with TA partners.

The market engagement support helped founders make informed strategic decisions about their business and revenue models, customer acquisition strategies and product development processes. For example, the team supported **Esoko** to validate its

new agent model and understand how that connected to user acquisition, and **Jokalante** developed funding proposals that were supported by the team. The market engagement support also tied into the TA support for building partnerships and UX iterations, as explained in the following sections.

Cohort members were generally satisfied with the business model, product and go-to-market coaching support, as having a dedicated market engagement manager (MEM) meant that the founders had an active coach who understood their company inside and out.

Partnership brokering

Brokering partnerships involved facilitating introductions to organisations aligned with the cohort members' strategies for growth and scale. With the Accelerator's support, seven partnerships were developed with agribusinesses, FSPs and MNOs. For example, in Cambodia, **Greenovator** received support to secure a partnership with Smart Axiata, the country's leading MNO, to develop and share advisory content with Smart Axiata's subscriber base, such as crop guidelines on the Mekong Farm app.

Brokering a partnership does not necessarily mean a partnership will be established. There were misconceptions about the types of partnerships that could be brokered by the Accelerator, as cohort members expected introductions to MNOs due to many being part of the GSMA. However, partnerships depend on offering a clear value proposition and business case for partners, the time and resources MNOs have to develop the partnerships and the capacity of agritechs to work on a larger scale. Structured guidance on partnership building would have helped cohort members assess how potential partnerships align with both their goals and those of potential partners.

Field focus sessions

The Accelerator organised four field focus sessions (FFS) in different countries – week-long, in-person workshops and field visits that bring together cohort members, TA partners, the GSMA team and agritech stakeholders. The FFS were designed to support learning, collaboration and peer exchange in the agritech sector. Cohort members valued the FFS as they were able to connect with their fellow cohort members and learn about other agritech ecosystems.

For example, **OKO** shared its investment-raising journey and experience with other cohort members seeking to raise funds, which led to a discussion on how to negotiate with investors to understanding the terms of a deal. This experience showed that FFS can create an open and collaborative environment that encourages learning through engagement and conversation.

During an FFS in Côte d'Ivoire, **Winich Farms** was inspired by a field visit to fintech, Push, which offers an all-in-one mobile account linked to a virtual or physical debit card to simplify financial management for its users.¹⁷ This influenced Winich Farm's decision to partner with a bank to roll out bank accounts and debit cards to its users, enabling them to make digital payments.

However, each FFS had different team members from the agritechs in attendance, which meant a lot of time was spent re-introducing the services. Despite the clear benefits of participating in the FFS, dedicating a full week to the activities required stepping away from day-to-day responsibilities – a significant challenge for founders and senior leaders. As a result, some cohort members found their focus divided, which reduced engagement.



¹⁷ Push Côte d'Ivoire.

UX research and design

UX research and design helped cohort members better understand their target users and iterate their services to drive adoption, use and scale.

Bopinc was selected to lead UX research and design support to cohort members. This TA package involved a needs assessment of the cohort members' services, which found that services were at different stages of product development. For example, **TDX** needed to develop a new digital app while **Winich Farms** had a functional app but needed to tweak the user onboarding experience. Following the service assessment, each cohort member participated in at least two PIWs¹⁸ that involved field-based qualitative user research in which Bopinc and cohort members investigated farmers' needs and use of the service. Following the user research, collaborative workshops were conducted to turn insights into actionable service improvements.¹⁹

Figure 6 highlights the three new digital agriculture services that were developed and the seven existing services that underwent iteration. The UX work resulted in an improved user interface (UI) for six cohort members, which iterated their platform and app design and features.

Many cohort members felt they had a good understanding of their users, but the UX support revealed significant gaps. For example, **Greenovator** discovered that many Cambodian farmers were reluctant to type on their keyboards and preferred voice interactions – an insight that shifted how they approached product design.

Cohort members valued the UX research and design support, which helped them better understand both their user journey and user needs and behaviours. Field research allowed them to test and refine their services to be more user-centred, and they particularly appreciated the dedicated UX support, which can be costly for agritech.

Beyond user insights, the UX/UI process itself introduced the cohort to valuable tools and frameworks. **OKO** and **TDX**, for example, were introduced to wireframing and design thinking, which they have since integrated in their internal workflows. **TDX** even established a UI/UX function and hired a dedicated lead as a direct outcome of the engagement.

While cohort members valued the insights gained from UX research, some encountered challenges when it came to implementing them. Limited time, budget and capacity made it difficult to execute the UX insights and prototypes. For example, without an in-house software developer, product development would cease. Delays in implementing the recommendations from the first PIW had a knock-on effect on the additional UX support that could be provided. In another instance, cohort members felt the UX recommendations were not feasible for them to implement, as they would require an overhaul of their entire product.

Agritechs often operate within seasonal cycles; therefore, the timing of the UX support had to be planned accordingly as there tends to be only one or two learning sessions per year. Dedicating budget not just to UX work but also to product iteration (e.g. UI design, software development) in future programmes could help mitigate delays in implementing recommendations.

¹⁸ 20 PIWs were delivered to cohort members in total. Cohort members had to have an MVP to receive their first PIW, and had to have made UX/UI changes to participate in the second PIW.

¹⁹ Users include smallholder farmers, agents, agribusinesses and other partners depending on the scope and needs of the agritech.

Figure 6

Key achievements of the Accelerator under the UX workstream



Three digital agriculture services were newly designed and launched during the accelerator

COMPANY	CHANGE	→ RESULT
	Created an agent app, web management and marketplace platform and farmer USSD feature	Improved field agent onboarding, real-time task allocation, activity monitoring and reporting visibility
	Launched Farmsuite – a B2B advisory and market linkages platform	Signed first commercial client via Farmsuite platform
	Developed an agent and aggregator app, and a buyer web platform	Registered 4,500+ farmers and reduced registration process by 45%. Reduced sourcing processing time by 40% and processed 1,700+ transactions



Seven existing services underwent transformative iterations to improve user registration, platform design and feature sets

COMPANY	CHANGE	→ RESULT
	Integrated mobile money payment features for clients and farmers	Farmers receive immediate or faster digital payments for aggregated produce
	Improved user experience - the registration process and details required	More users onboarded seamlessly to use the app
	Improved registration process and introduced a text-to-speech feature	A 29% increase in users and text-to-speech made the app inclusive to support older, visually impaired and low literacy farmers
	Redesigned and launched platform to make it easier for users to access features	In Q1 2025, 4,000+ new users were acquired, and a partnership with Free Mobile established
	Simplified app by refining data inputs to focus on dairy milk volume, feed consumption and reproduction parameters	Users have easier-to-understand dashboard on their livestock performance and specific recommendations on improving productivity, heat detection and feed management
	Improved its agent app, including bulk registration and gamified features	Less time taken by agents to sign up new farmers
	Improved its app design registration processes	Led to an 83% reduction in drop-off rates, a 71% rise in sign-ups and 52% increase in orders

Source: GSMA

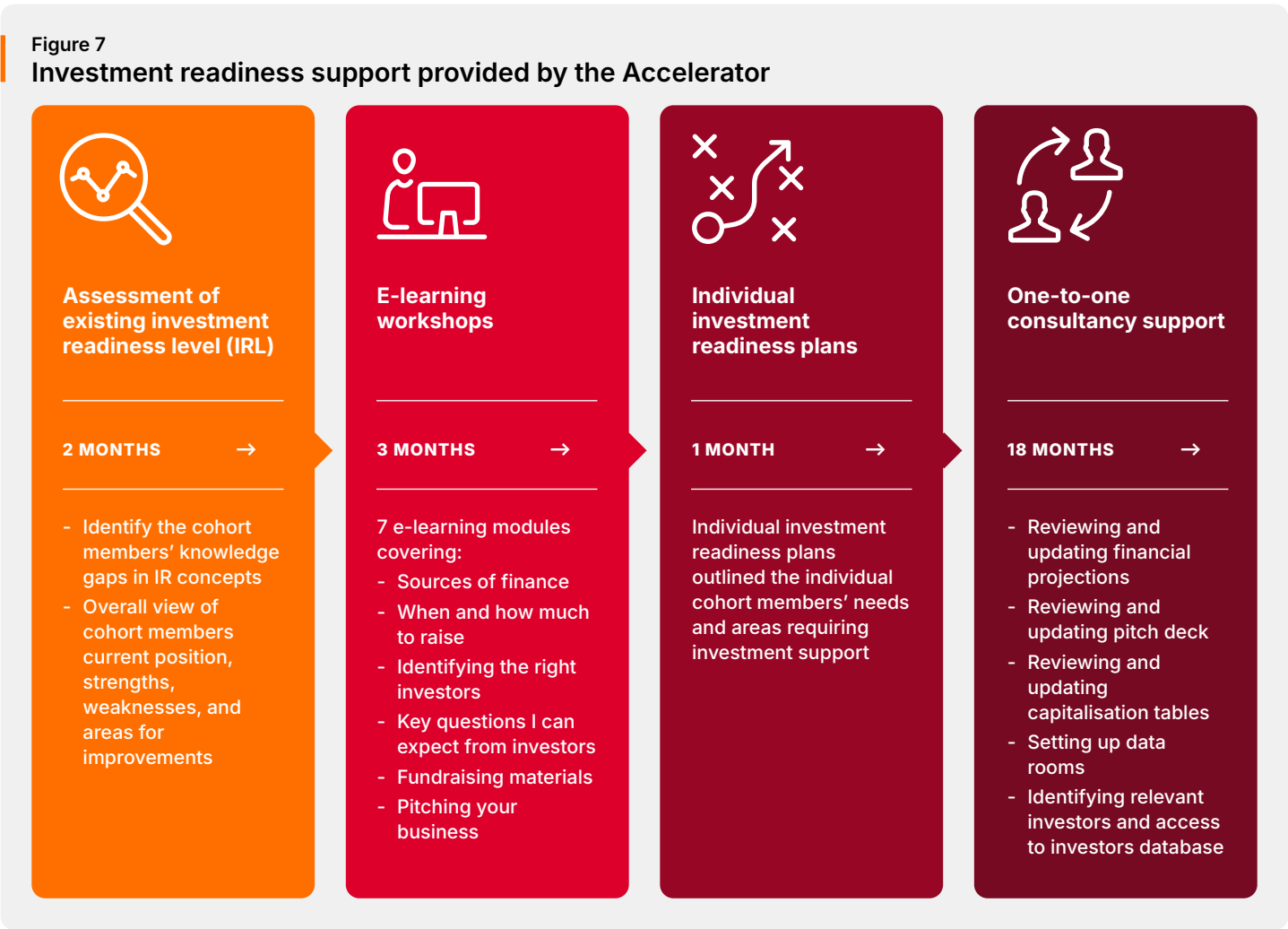
Investment readiness

The Accelerator provided tailored investment readiness (IR) support to help agritechs attract funding and scale their digital agriculture solutions. It is challenging to raise investment in the tech sector in LMICs, but for agritechs this is compounded by agriculture's high-risk profile, which includes exposure to price volatility and climate-related risks.

Figure 7 highlights the IR support provided by the Accelerator. IR partner Beanstalk assessed the IRL of cohort members, revealing that three had no prior fundraising experience, while a few had raised equity and most had secured grants or donor funding before.²⁰ Seven e-learning modules were provided to

help cohort members understand the fundamentals of investment readiness. These were followed by matching each member with a dedicated IR consultant to receive one-on-one bespoke support.

By the end of the Accelerator, six cohort members had improved their IRL, with developments and improvements in their pitch decks, data rooms, capitalisation tables and financial models (see Annex 2 for more information). For **Jokalante**, which was at the beginning of its IR journey, the support provided a foundational understanding. Others that had already raised equity investment, such as **OKO**, still benefitted from improvements to their capitalisation table.



Source: GSMA

20 GSMA (2023). Investment readiness survey



Four cohort members at the early stages of their IR journey benefitted from the support, but the IR workstream received mixed feedback. The support was considered too light-touch to meet all the cohort members' needs. In part, this was due to the limited budget and scope allocated to fundraising. In future initiatives, a more centralised and structured approach to investment readiness, supported by in-depth mentoring and coaching, will be essential.

The Accelerator and its partners are connected to various investor networks, which they leveraged through investor pitch sessions and networking for cohort members. Some cohort members had advance discussions with investors, including Sahel Capital, which provided additional investment to **Winich Farms** after being involved in an investor panel. However, there was also a misalignment between the Accelerator's ability to provide warm introductions to investors. Expectations should be set in terms of what can realistically be achieved with investor introductions, as not every agritech will be the right fit for an investor and vice versa. This could be due to factors such as user traction, revenue, business model and founder experience. The Accelerator would have benefitted from having an investor network that could be engaged throughout the programme to assess the investment potential of the cohort members' services and provide constructive feedback more consistently.

As of August 2025, six cohort members have collectively raised USD 1,379,000 in external funding from a mix of venture capital, angel investments, grants and competitions, to which the Accelerator contributed directly. Notably, **Winich Farms** raised a pre-Series A round of USD 3.1 million to scale its operations through technology enhancements, fulfilment centres and digital payments adoption.

\$1,379,000

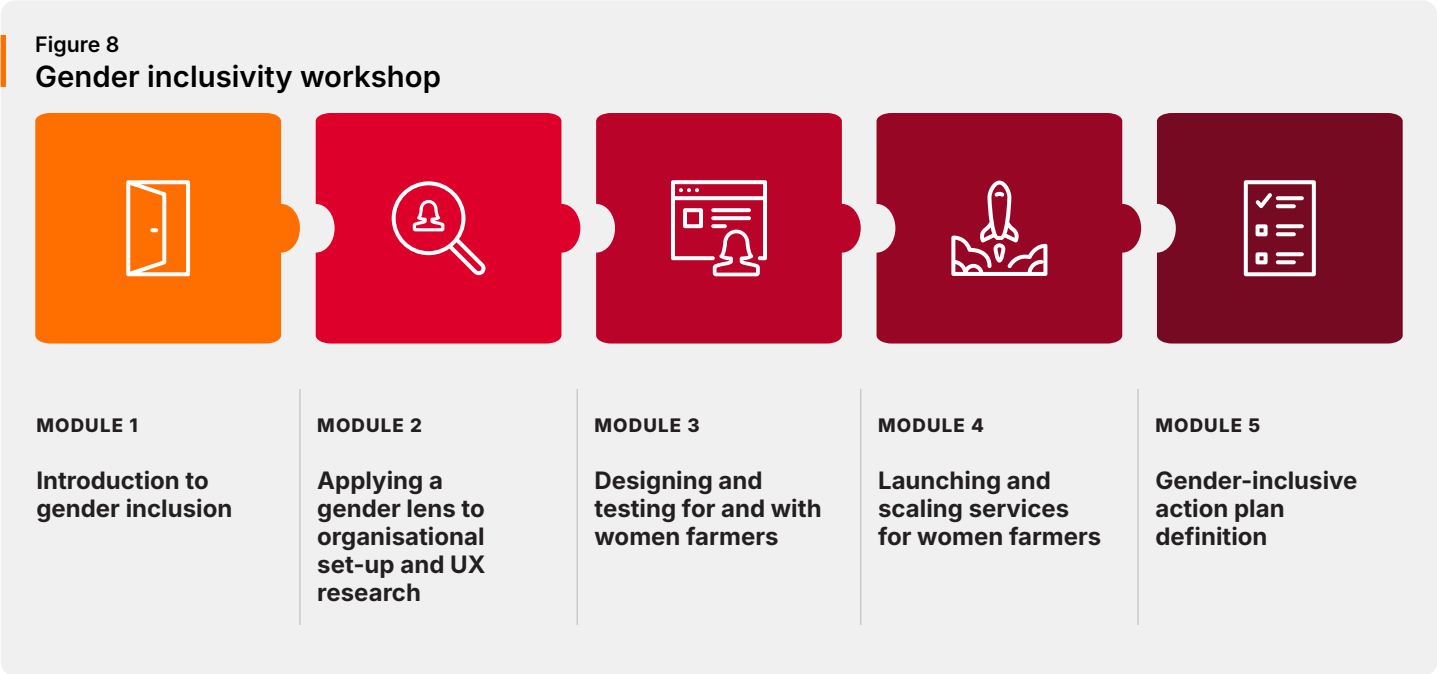
in external funding raised by
six cohort members

Insights and capacity building

Gender inclusivity

The Accelerator’s TA package on gender inclusivity was designed to make digital agritech services more inclusive for underserved or excluded women farmers, whose contribution is often limited to low-value and labour-intensive tasks.

At the start of the Accelerator, only three agritechs had a gender strategy or prior training on the topic, and even those required support to implement their plans. The GSMA delivered gender inclusivity workshops (GIWs) to all cohort members. The five workshop modules (see Figure 8) aimed to produce tangible outcomes for the agritechs.



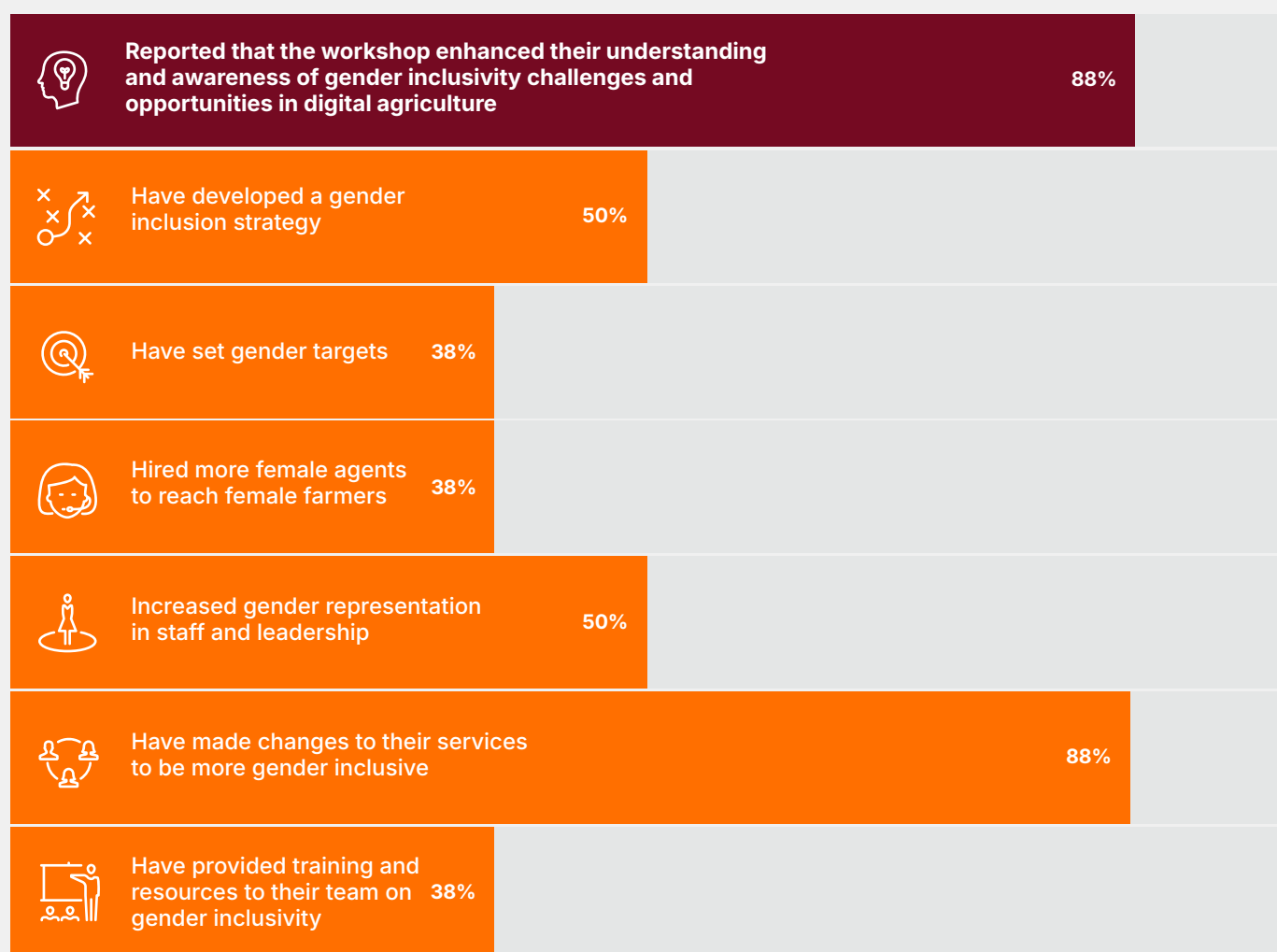
Source: GSMA

Figure 9 highlights the key outcomes of the GIWs, which include, but are not limited to, setting gender inclusion targets and improving gender representation in staff and leadership. **OKO** made an explicit effort to hire more female agents, leading to an increase in female users who now represent 35% of its user base. **TDX** developed a gender inclusion strategy to increase the number of women farmers, establishing a partnership with an NGO that works with women farming groups in the Upper West region of Ghana.

Despite some progress, not all cohort members were able to translate their plans into action, as limited bandwidth often led to gender considerations being deprioritised amid competing business demands. The GSMA team strove to ensure that gender inclusion remained a core consideration throughout product iteration and decision-making. However, cohort members indicated they would have benefitted from more bespoke and dedicated support, which would have led to stronger, more gender-inclusive outcomes for their services and users.

Figure 9

Gender inclusivity workshop outcomes



Source: GSMA

Insights

Insights support from the Accelerator involved the development of, and regular updates to, a systematic plan for identifying and addressing the critical learning priorities and knowledge gaps of cohort members. This TA package had two objectives: 1) to leverage data and insights from the Accelerator, such as BI data, user surveys, in-depth interviews with farmers and cohort members to extract relevant lessons and inform the broader community; and 2) to conduct independent research involving global digital agriculture stakeholders to answer questions faced by cohort members as well as other global actors. It resulted in the release of the AgriTech Investment Readiness Toolkit,²¹ designed to provide practical guidance to agritech on navigating the fundraising

journey and enhancing investment readiness. The Accelerator also released a series of blogs on cohort members' services, while blogs on other digital innovations provided insights and lessons from global agritech solutions.

Cohort members found these resources valuable as they offered a broader perspective on the agritech ecosystem. However, the demands of day-to-day operations limited awareness and engagement, making it difficult for cohort members to stay informed about sector trends and innovations. As a result, there was a disconnect between the insights provided and their practical application. A more structured approach to integrating these insights in the cohort members' work could have had a greater impact.

Events

The Accelerator offered cohort members the opportunity to participate in global events, including the GSMA's flagship events, Mobile World Congress (MWC) Barcelona and Kigali, as well as virtual events such as the launch of the AgriTech Investment Readiness Toolkit.

Cohort members who attended MWC events had the opportunity to engage with the mobile technology ecosystem, understand current and emerging technology trends in various sectors and explore

potential partnership opportunities. However, not all cohort members were able to take advantage of the opportunity to attend, as the costs associated with MWC, beyond the event ticket, remain prohibitive.

On the other hand, virtual events provided participating cohort members with broader exposure to the GSMA Mobile for Development (M4D) network by offering a platform to share their experiences and lessons with the broader ecosystem.



²¹ GSMA (2024). *Investment readiness: A toolkit for agritech innovators*.

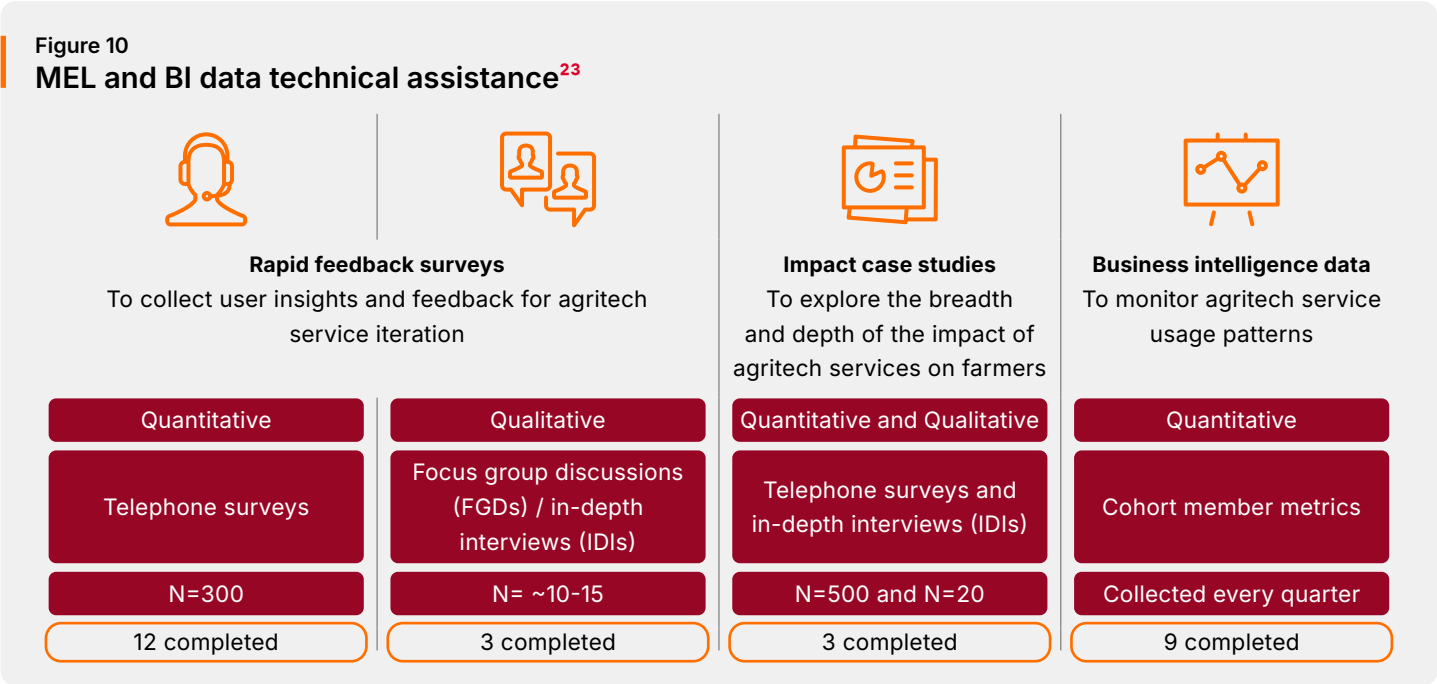
MEL and business intelligence data

Monitoring, evaluation and learning (MEL) and business intelligence (BI) data support focused on helping cohort members improve their services based on real user feedback and generate impactful insights on inclusive, climate-resilient digital agriculture solutions. Figure 10 illustrates the Accelerator’s MEL and BI data technical assistance.

RFS results were critical in helping cohort members assess whether their service was effective. For example, **Jokalante** found that farmers who used its agronomic and weather advisory service were implementing the advice, which allowed it to validate the impact to its partners. **Winich Farms** was able to learn how farmers use its debit cards, from the frequency of use to the items purchased. RFS also enabled cohort members to gauge interest in and demand for other services. For example, **OKO** was able to determine whether its users had relatives abroad who would pay for insurance premiums and initiated a diaspora payment feature.

However, competing demands between the cohort members and the objectives of the Accelerator needed to be balanced in the RFS, which at times made it challenging to gain a deeper understanding of service feedback and its impact on users. Additionally, while surveys can reach more users, they cannot provide detailed insights into the “how and why” of farmers’ experiences.

The BI data required agritechs to provide quarterly adoption and usage data, including user acquisition, demographics, sales, volume and more,²² to enable ongoing tracking of service performance. While this data has potential to influence UI/UX iteration and strategic decisions, its value was limited by incomplete or inconsistent reporting. Despite one-on-one support and capacity-building sessions, these gaps made comprehensive analysis difficult. Inconsistent data made it challenging for the Accelerator to provide meaningful insights on the performance of cohort members. For BI to be truly actionable, the data needs to be standardised and consistent.



Source: GSMA

22 Each cohort member provided metrics related to measuring its business on a quarterly basis. This was in line with data protection and privacy requirements, such as the EU General Data Protection Regulation (GDPR).

23 All cohort members received an RFS except ZR3i, as its product was not ready. In instances where cohort members did not have enough users, qualitative in-depth interviews (IDIs) and focus group discussions (FGDs) were conducted instead. IDIs were conducted with Greenovator and MooMe, and an FGD was conducted with TDX. Additional RFS were offered to those cohort members who had met certain requirements, including improved user base, product iterations and new services.

03

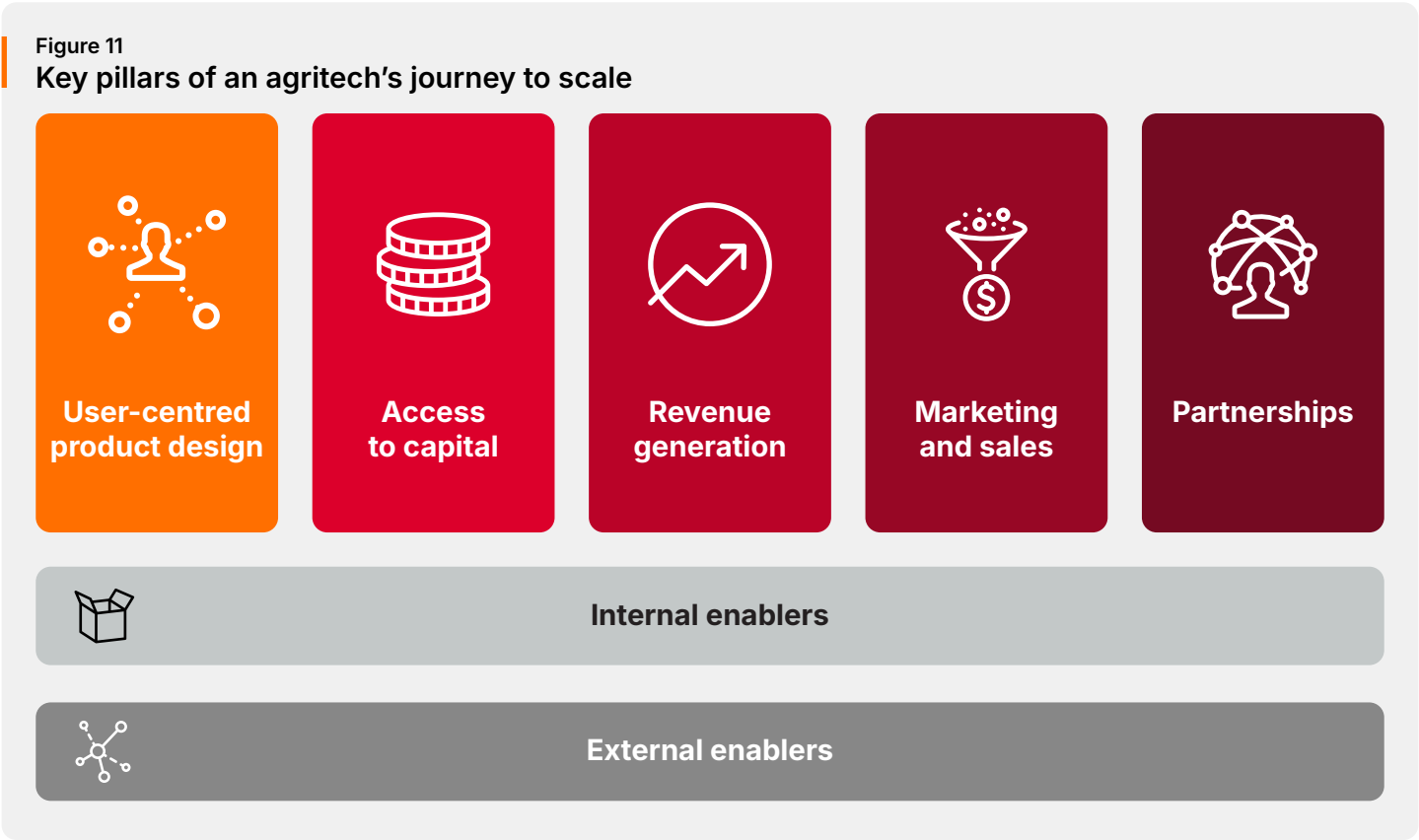
Business models and lessons from scaling agritech services



Scaling an agritech service is fraught with challenges, and not all agritechs make it. A significant barrier is the scarcity of capital, with agritechs often struggling to secure the necessary funding to develop and scale their solutions. Beyond funding, the journey to scale is shaped by structural realities unique to the sector. Agritechs often operate on seasonal cycles with just one or two learning and revenue-generating opportunities per year, which slow iteration and growth.

There are also persistent connectivity challenges in rural areas – not due to a lack of coverage, but rather a usage gap – with many smallholder farmers not yet engaging meaningfully with digital services. Additionally, the limited ability of smallholders to pay for services, poor product-market fit and inadequate marketing and sales strategies are other barriers to scale.

Drawing on insights from the cohort, this chapter outlines the key pillars of an agritech's journey to scale (see Figure 11). It provides an overview of the challenges agritechs face as they grow and highlights the strategies, lessons and best practices that have helped some agritechs overcome these barriers.



Source: GSMA

User-centred product design

At the start of the Accelerator, most cohort members had little to no experience with UX research and user-centred design. Their limited direct interaction with end users meant they lacked critical insights into the needs and behaviours of farmers. As a result, they focused primarily on designing products based on assumptions rather than on real user needs and pain points – an approach that led to low user adoption and engagement.

UX research repeatedly revealed a disconnect between product development and user behaviour, with farmers rarely using the full suite of features. This highlighted the need to design with rather than for end users, and to take a more targeted, problem-

driven approach to ensure solutions meet the practical needs of smallholder farmers.

In an effort to offer comprehensive solutions to farmers, many of the cohort members' solutions were complex and overwhelmed users with too many features and excessive information. This made it difficult for smallholder farmers to navigate and adopt the technology. Service registration processes were especially cumbersome, involving too many information fields and steps.

Applying UX best practices has enabled the agritechs to improve their services, making them better suited to their respective markets.

01 Building user understanding through UX research improves the design of agritech products to align contexts, needs and values

Designing effective agritech solutions starts with deeply understanding farmers' behaviours, contexts, needs and values. UX research and design enables a shift from a business-oriented and technical mindset to one that's user-driven and grounded in local contexts and behaviours. It includes conducting research with diverse users to ensure solutions cater to all types of farmers, including women and farmers with disabilities.

For example, **TDX** co-founder Benjamin Asiedu shared that deeply understanding their users' needs, behaviours and pain points led them to rethink their entire approach – shifting from building a mobile app for farmers to one focused on agents and crop aggregators instead. *"Don't pick something that works in the West, and design it the same way,"* he said. *"African farmers don't exist anywhere else in the world, they need to be involved in the design."*

Observing how users interact with a service is just as important as listening to what they say. Users may claim to use an app daily, but struggle when asked to demonstrate it, revealing critical usability gaps. This is especially important for farm management advisory apps, where users are asked to enter daily farm data on farm or herd size, feed consumption and inventory. For example, **MooMe** found that daily data entry was burdensome for farmers, and many struggled to understand the

farm management dashboard. These insights enabled the team to reduce the number of data inputs to better suit farmers' routines and to simplify the dashboard, highlighting only the most relevant information.

UX research is not a one-time fix but an ongoing process. Customer needs and behaviours change, making ongoing research essential to keep solutions relevant and user-friendly. However, agritechs must recognise that behaviour change takes time and requires careful implementation. The most effective way to scale a digital solution is to gradually adapt solutions that build on farmers' existing workflows rather than introducing new changes that disrupt established practices.

It is also essential to continuously test and refine any UX changes. For example, **Greenovator** leveraged its findings from the first PIW to introduce a translation feature for community interaction, which enabled farmers in different countries to communicate with one another about their agricultural challenges. However, follow-up research found that farmers were unable to determine where other users were from and could not contextualise the advice that was shared. In response, the team added country flags and names to farmer profiles, demonstrating that iteration can create the intended impact.

Designing for simplicity and accessibility drives adoption and engagement

Low digital literacy and inconsistent internet access are common issues that hinder the adoption and effective use of digital solutions and, therefore, need to be considered when designing for smallholder farmers. By simplifying product design, enabling offline functionalities and reducing feature overload, agritechs can improve user journeys, enhance user engagement and ensure their solutions are more accessible and better aligned with the needs of farmers in low-connectivity settings.

Design for low (digital) literacy

UX research conducted in cohort member markets highlighted that most smallholder farmers have low digital literacy and often rely on external, in-person help from family members and agents to navigate service features. Few users emerged as confident, tech-savvy adopters.

During UX research, **Greenovator** discovered that only 20% to 30% of its users were literate. As such, most farmers were hesitant to type on a keyboard and preferred to use voice commands for searches and voice messages for communication. Greenovator's farmers also preferred to listen to messages rather than read them. These insights led to an app redesign that incorporated voice-to-text and text-to-voice features throughout, allowing farmers to ask questions using voice input and listen to responses, thereby improving accessibility. An unintended but positive outcome was improved usability for visually impaired users, which further expanded the reach of the app.

Use local languages

Reaching smallholder farmers, especially in remote areas, requires delivering services in local languages, as many farmers do not understand English or their country's official language(s). In the African continent, there are more than 1,500 languages are spoken,²⁴ relying on official languages creates major barriers to adoption and leaves large segments of the farming population behind.

Delivering agricultural advice, market information and other digital services in local languages makes the information more actionable and trustworthy. In a case study conducted with **Winich Farms** in Nigeria, a farmer noted that *"text messages should be sent in Hausa, (otherwise), it is useless."*²⁵ Similarly, an RFS in Senegal found that 98% of **Jokalante** users viewed the use of local languages as a key strength of the service.²⁶ These insights show that local language use is not just nice to have, but an essential feature that supports accessibility and guarantees a bigger impact.

Prioritise gender inclusion in design

Inclusive design of digital agriculture services often takes a backseat as agritechs are constantly faced with competing priorities. Despite the commercial opportunity they represent, women remain significantly underrepresented users because many solutions fail to address their unique challenges and needs. However, when agritechs design with women's needs in mind, they not only empower female farmers but also unlock new markets and revenue streams.

Some cohort members have tackled this issue head on. **Greenovator** included women farmers in its user research sample, uncovering key barriers and opportunities for women. For example, women often make household financial decisions in Cambodia, so Greenovator introduced financial management tools and home economics guides, tailored agricultural content to value chains where women are more active and created women-only groups to encourage the use of its service.

²⁴ UNESCO. (27 February 2025). "UNESCO and the promotion of languages in Africa: cultural diversity and multilingualism".

²⁵ GSMA AgriTech Accelerator. (February 2025). MEL Impact Case Study: Winich Farms, Nigeria.

²⁶ GSMA AgriTech Accelerator. (February 2025). MEL Rapid Feedback Survey 2: Jokalante, Senegal.

Revise and simplify onboarding to reduce barriers to sign-up

Many of the farmer registration processes used by cohort members were quite long and required several data inputs – creating a major barrier to use. Revising the onboarding process by streamlining the upfront data input needs led to impressive results and boosted usage.

For example, **Winich Farms** faced high dropout rates when onboarding offtakers to its market linkages app. The primary issue was that crop offtakers were being asked to enter too much information before being able to view the available produce. To address this, Winich Farms introduced a “continue as guest” feature, allowing offtakers to explore the platform and browse products before signing up. Registration was only required at checkout once users had a clear intent to purchase. According to Winich Farms, this change led to an 83% reduction in drop-off rates, a 71% rise in sign-ups and a 52% increase in orders.

Design for low connectivity

Smallholder farmers typically live in remote rural areas where connectivity issues are common. An app that requires constant internet access for farmers or agents to use it can be a major barrier to adoption and use. To overcome connectivity challenges, several cohort members have integrated offline functionality in their apps.

For example, **OKO** developed an offline functionality that enables agents to register farmers without the need for an internet connection, and the ability to synchronise the data later. This helped eliminate the duplication of effort of capturing farmers’ data on paper and then entering it on the app once they have access to the internet. Adding this offline feature allowed more farmers to be signed up, faster.

Winich Farms offered an offline mode for its aggregator app so its agents can still input data when they do not have an internet connection. **TDX** also added an offline feature to its aggregator app to allow its agents to verify farmer data during registration and profiling without an internet connection, which helped increase user numbers.

Focus on core features

To provide end-to-end solutions, many cohort members overloaded their services with features, investing time and resources in functionalities that farmers rarely used. This often overwhelmed users, especially those with low digital literacy. Prioritising core features that deliver clear value helps reduce cognitive load and makes the service more intuitive and accessible.

FarmSpeak experienced this firsthand. Initially, the team developed a comprehensive set of features and a registration process designed to gather as much farmer data as possible. However, after engaging with users, many of whom had below-average digital skills, it realised that the extensive features made the solution overly complex and difficult to use. In response, FarmSpeak redesigned the app to focus on core features and intuitiveness. As co-founder Peter Okonmah put it, *“In an attempt to build the perfect app, we made things too complicated for users. We had to consider user capabilities and comfort with technology first. Listening to farmers helped us achieve product-market fit with a solution they actively use.”*

Similarly, **eProd’s** ERP platform, designed to help agribusinesses manage their daily operations, offers a wide range of features which, although robust, create a steep learning curve for users. Many users reported using only half of the available features. While a full redesign was not feasible due to budget constraints, the team is exploring ways to improve navigation and usability without sacrificing robustness. The new approach involves standardising icons across the platform, simplifying the collections and payments process to eliminate repetitive steps and incorporating short tutorial videos to support easier onboarding.

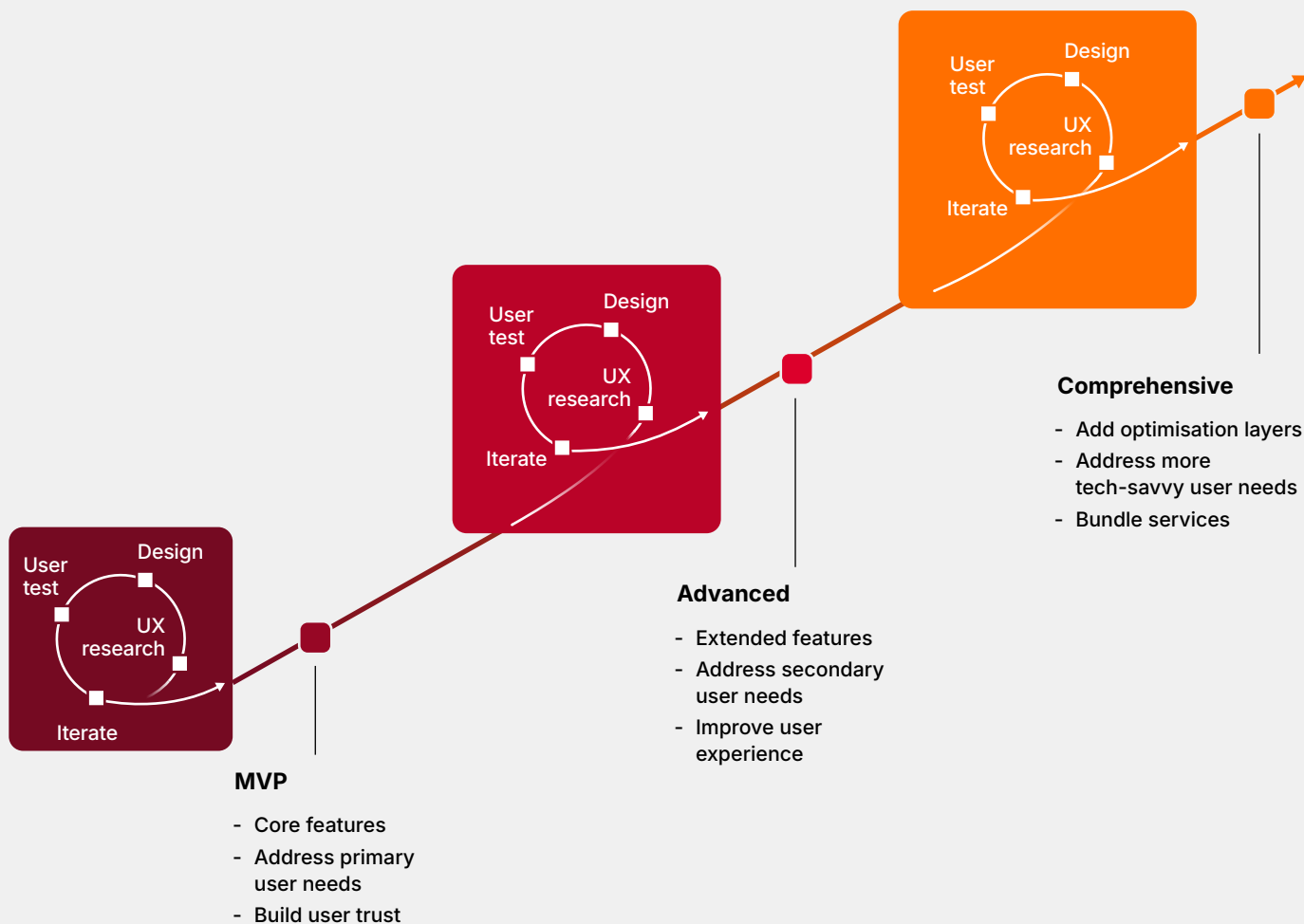
Adopt an iterative approach to service development

Focusing on a minimum viable product (MVP) with core features that address primary user needs does not mean sacrificing comprehensiveness. However, it is crucial to first build trust in an app's functionality before introducing optimisations or advanced features, especially for less tech-savvy users. New features should be added gradually based on UX research and feedback. Once a solid

foundation is established, optimisation layers – such as improved notifications, educational prompts and bundled services – can be introduced to enhance the experience without overwhelming users. As Peter Okonmah, co-founder of FarmSpeak, explained, “We understood we needed to start with core features that farmers can effectively use before adding complexity.”

Figure 12

Iterative product development



Source: GSMA

Including proactive user guidance

Because of low digital literacy, many users hesitate to explore digital agriculture services by themselves. Agritech features must act as “friendly helpers”, actively assisting users rather than expecting them to discover features on their own.

Push notifications or pop-ups are useful for prompting action, such as data entry, feeding schedules or administrative deadlines, and highlighting app updates or underutilised features. For example, **Greenovator’s** crop guidebooks, although filled with valuable information, were often missed because they were hidden in menus that were not easily discoverable. Proactive prompts helped to surface this content. Notifications about new app versions and features also helped keep users informed and engaged following updates.

However, notifications must be timely and relevant. Too many can overwhelm users and intrude on the user experience. A centralised notification hub can help users review past alerts, ensuring they do not miss important information while maintaining control over their notifications.

Box 1

Recommendations for UX design

The GSMA AgriTech programme, in partnership with Bopinc, has released a comprehensive toolkit designed to help agritechs create more accessible and user-friendly services. Key design principles highlighted in the toolkit include:

- Implementing intuitive navigation through clear, straightforward user flows. Developers should map out the complete screen progression to ensure logical and seamless user journeys.
- Limiting information density and choices per screen. When interfaces present too many options simultaneously, users struggle to navigate effectively and make decisions.
- Recognising that while visual enhancements such as larger buttons and icons improve accessibility, truly user-centred design requires a more holistic approach that considers the entire user experience.



Access to capital

Securing funding, whether through grants, equity or debt, was identified by all agritechs in the Accelerator as the main challenge to scale. Capital is the **lifeblood of growth**, affecting operational expansion, technical talent acquisition, customer education, product development and other areas. Capital also has a direct impact on product innovation timelines.

At the start of the Accelerator, most cohort members relied on bootstrapping to finance their operations. While demonstrating capital discipline, this approach severely limits growth potential. For example, **TDX** faced liquidity issues because farmers require immediate payment, while buyers typically request payment terms of several days. Limited access to capital means TDX cannot fill this liquidity gap, limiting its growth. For **FarmSpeak**, limited access to capital delayed the hiring of developers to design its livestock management app. It also affected its capacity to procure hardware components and make software improvements. Similarly, lack of funds left **MooMe** unable to act on product design recommendations. For other cohort members, funding shortages led to staff layoffs, while in an extreme case, **Z3ri** was forced to shut down operations entirely.

Agritechs face both external and internal challenges to raising funds. The agriculture sector is perceived as high-risk by investors due to the impacts of climate change and seasonality, which extend product life cycles. This can make it more challenging to meet investor expectations on financial return and underscores the need for patient capital. The ongoing “funding winter” has slowed equity investments,²⁷ while USAID reductions in development aid have disrupted anticipated grant funding opportunities for several agritechs in the Accelerator cohort.

Internally, limited IR within the cohort also made it hard to raise capital. **Many founders underestimated the preparation required to engage with investors**, and often rushed into investor outreach without having the basic requirements in place. Gaps in financial planning were common, with many individuals lacking realistic financial planning and return-on-investment (ROI) projections. Some struggled to determine funding needs while others lacked well-organised data rooms or a compelling value proposition.

Over the past two years, the cohort has worked with IR experts to implement actions and strategies that have positioned them more favourably for fundraising.

01

Laying the groundwork for fundraising

Mindset

Fundraising is a marathon not a sprint. It requires focus, preparation and persistence from founders to get their “house in order”, build relationships with the right people and ultimately close a deal. Rather than treating it as a side task, founders should **prioritise fundraising as a core internal function and allocate sufficient resources** to ensure investment readiness.

Many cohort members, early in their fundraising journey, underestimated the time and effort required. However, by sharing experiences with peers and seeking guidance from experts, they realised that securing investment often takes longer than expected. As Amy Ndeye of Jokalante put it, *“Fundraising demands extra hours – reaching out to investors, following up and managing due diligence – often stretching into late evenings or nights.”*

²⁷ The “funding winter” reflects a widespread decline in venture capital (VC) activity in the post-pandemic investment landscape, with investors becoming increasingly risk averse.

Financial model

All agritechs in the cohort that have raised money successfully had one thing in common: **a strong financial plan showing a clear path to recurring revenue and growth**. They had clear projections of operating costs over the next few years and understood available funding options and how to use them strategically. Founders were also able to tell compelling stories of where the company is now and where it wants to go.

For example, in its recent pre-series A raise, **Winich Farms** clearly outlined the intended allocation of funds, from enhancing engineering processes to establishing fulfilment centres and covering debit card costs,²⁸ which helped convince investors. However, the company admitted that building a strong financial model took time and several rounds of customisation. *“Due to the unique nature of our business and multiple product lines, we understand that we needed to build a model that was tailor-made for our business. Financial models should also go beyond monthly income*

projections, as we realised investors want to know how their money will drive business growth”, Riches Attai, co-founder of **Winich Farms**, explained.

Some founders also noted investors' preference for prioritising capital expenditures (CAPEX) over operational expenses (OPEX) in funding requests, with more resources allocated to adding value to the company than running the business. This highlights the need for funding requests to focus on activities that **contribute to long-term value creation**.

Data room

Another crucial aspect of fundraising identified by cohort members is having a well-organised data room, which offers investors complete transparency and easy access to key company information.²⁹ Riches Attai of Winich Farms recalled that despite securing funds from an investor, the closing process was significantly delayed because there was not a readily available data room.

02

Building a strong network

Building a strong and diverse professional network is essential for effective fundraising, as it connects entrepreneurs to investors, mentors and strategic partners, who can offer both funding and valuable guidance. Networking also provides insights into industry trends and investor expectations, helping to refine business and fundraising strategies. However, early-stage founders often struggle to find the time and resources to build these relationships while also managing their company.

For **Jokalante**, engaging with other entrepreneurs has been invaluable. Learning from peers and experienced founders provided essential guidance in navigating challenges like fundraising. However,

it noted that developing these networks requires consistent effort, making it challenging to juggle day-to-day business operations with actively seeking out and nurturing investor relationships.

Similarly, Yin Yin Phyu, co-founder of **Greenovator**, highlighted the importance of establishing regional connections and a strong network when expanding into new markets across Asia. Attending industry events, engaging with potential partners and working with non-governmental organisations (NGOs), donors and trade associations helped Greenovator gain visibility and build trust among key stakeholders, ultimately supporting both business growth and fundraising efforts.

²⁸ Winich Farms provides debit cards and bank accounts to registered users to process digital payments in partnership with banks.

²⁹ Key elements of a data room for agritechs include: legal documents (business licences, permits and other legal documents); financial documents (business plan, financial projections, audited financial statements and cap table); a pitch deck; team profile and board composition. It is also nice to have a demand study and impact reports, a competition analysis, KPI dashboard, as well as strategy and business model documents.

Identifying the right investors and adapting your pitch to resonate with their strategic priorities

To be successful in fundraising, agritechs need to understand the priorities, prior agritech sector investments and capacities of the funders with which they are engaging. While equity investors focus on revenue growth and profitability, donors are more interested in the potential impact and replicability of the solution. It is also crucial to align with the funders' area of interest, such as climate impact for climate-focused investors.

Geographic focus is another critical factor. Targeting investors who understand the agriculture sector in LMICs – and, ideally, already have market exposure – can make fundraising more efficient. However, if an investor has recently backed a similar agritech in the same market, they may no longer be interested.

Understanding an investor's portfolio strategy helps founders focus on the most relevant opportunities.

Several cohort members emphasised the importance of this alignment. Riches Attai of **Winich Farms** noted they lost time engaging non-Africa-focused investors who, despite offering insights, lacked local context. Educating investors on regional realities – like rain-fed seasonality and the need for patient capital – is essential. As **MooMe's** CEO Ahmed Ben Achballah put it, *"The problem is not that investors don't want to invest – they simply don't understand us."*

By aligning with investors who understand their market, share their vision and are genuinely interested in agritech, founders can fundraise more strategically and improve their chances of success.

Box 2

The GSMA Investment Readiness Toolkit

Investment readiness is crucial as more agritechs compete for limited resources in a tightening funding environment. The GSMA Investment Readiness Toolkit provides a high-level overview of the venture

capital investment landscape and insights on investor criteria and their decision-making process. It also provides agritech founders with practical guidance and tools to navigate their fundraising journeys.

Figure 13

Key stages on an agritech's investment journey



Source: GSMA. (2024). *Investment Readiness: A Toolkit for Agritech Innovators*.

Setting yourself apart

Early-stage investors often emphasise backing the person behind the business – investing in a founder’s experience, passion and ability to execute. It is not just about the idea, but the person who will bring it to life. Beyond that, investors seek businesses that offer a distinct and compelling value proposition. They want to understand what sets the

agritech apart from competitors to ensure long-term success. For agritechs, it is critical to clearly define what differentiates the company, whether it is a technological edge, an innovative approach or targeting an underserved market. Investors need to feel confident that the company will not only grow but sustain its competitive advantage over time.

Box 3

Raising funds as a female founder

Unconscious biases and systemic barriers make it more difficult for female founders to secure funding. For example, in 2024, solo or all-female founders accounted for just 2% of all investment raised across Africa, while gender-diverse founding teams raised 5.5%.³⁰ As a result, female-led agritechs often rely more heavily on the company’s revenues or their personal savings to fuel their company’s growth. In Africa and Asia Pacific, funding received by female-led agritechs is notably lower than that secured by businesses with male leadership.³¹ This trend was evident among women leaders in the Accelerator cohort.

Amy Kebe, co-founder of **Jokalante** in Senegal, shared the difficulties she faces in balancing responsibilities in her professional and personal life. Networking events are key for building investor relationships, but they most often

happen after working hours, making consistent participation difficult. *“The reality is that investor relationships are often built through networking events, after-hours meetings and dinners. I know I should prioritise these opportunities more, but my responsibilities as a mother and spouse make that nearly impossible, so that’s very challenging.”*

Yin Yin Phyu, co-founder of **Greenovator**, highlights the gender biases she faces when engaging with investors. Despite having similar qualifications and experience as her male co-founder, she often finds herself not taken seriously and must repeatedly affirm her leadership role.

These examples show how gendered expectations and bias place additional burdens on female founders, making it harder for them to access the same opportunities as their male counterparts.

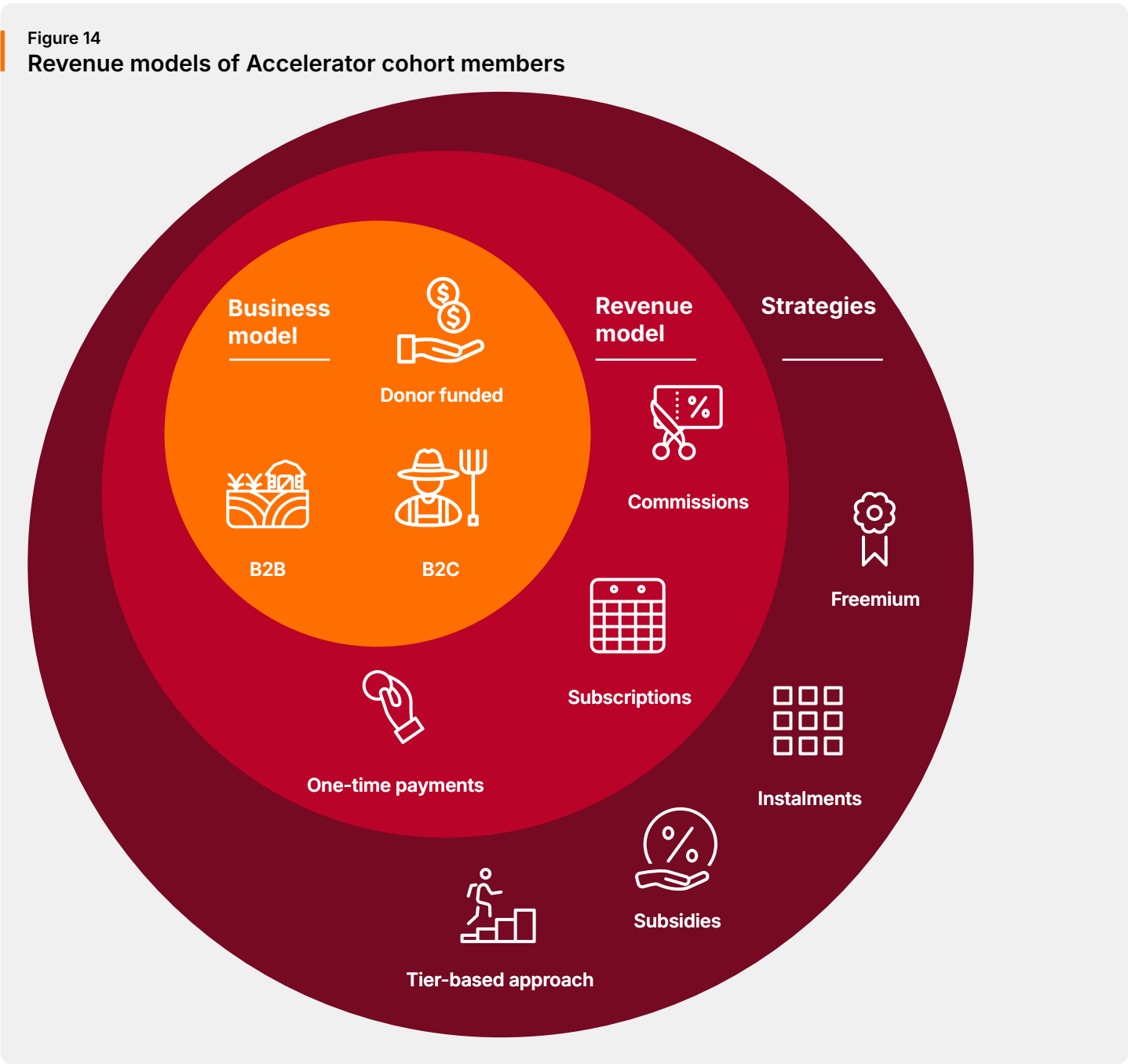
³⁰ Cuvellier Giacomelli, M. (14 January 2025). “2024: It’s a Man’s Man’s Man’s World”. The Africa Big Deal.

³¹ GSMA. (2024). *Investment Readiness: A Toolkit for Agritech Innovators*.

Revenue generation

Designing revenue models that balance financial sustainability with the financial constraints of smallholder farmers and agribusinesses is another challenge faced by agritechs in the cohort. Although all cohort members in the Accelerator generate revenue, their approaches vary significantly based on their target customers, services and markets.

The revenue models explored by the Accelerator cohort provide valuable lessons for agritechs navigating similar landscapes.



Source: GSMA

B2C farmer-funded models

Generating direct revenue from smallholder farmers has proven difficult for the cohort, due to farmers' low willingness and ability to pay, especially when competing with free or subsidised services. Several approaches have been tested to address this challenge:

Freemium models in which agritechs provide basic services for free and charge for premium features.

FarmSpeak used to leverage a yearly subscription model for its FS Manager app. Due to low adoption and willingness to pay, the company has been trialling free access to the service for six months to demonstrate value to users before introducing a subscription fee. Although user numbers are still low, this approach nearly doubled user registration numbers in the last two quarters of 2024.

Subsidising services in early stages, with agritechs covering costs to drive adoption and create stickiness before focusing on monetisation.

Winich Farms took a strategic approach to incentivise digital payment adoption by providing bank accounts and debit cards to farmers for free. As a result, the uptake of debit cards in Nigeria has increased.³² An RFS survey found that 93% of Winich Farm users have their own debit cards associated with various bank accounts.^{33,34}

The \$4 cost per card (₦6,000)³⁵ is covered by the agritech and its bank partners. The card is valid for five years and the goal is for farmers to cover the cost of renewal once digital payments become the norm.

While some Winich Farms users still prefer cash (45%),³⁶ using freemium and subsidy models can help build trust and adoption in the early stage, and agritechs need to have a clear, long-term monetisation strategy. Offering services for free allows farmers to see the value before committing financially, but transitioning from free to paid services can be difficult.

Introducing a tier-based approach or instalments to make services accessible

Large upfront costs to pay for equipment or insurance premiums can deter smallholder farmers, making flexible payment structures (instalment plans or tiered pricing) more viable and accessible. However, these strategies still need to be linked to customer education, which helps users understand paying for services in instalments or tiers and leads to more successful adoption and monetisation.

FarmSpeak charges a one-time fee for its IoT-enabled poultry monitoring solution. As the cost has been deemed too high for poultry farmers in Nigeria, the company has considered different pricing models, including instalment options and tiered pricing based on the number of birds. The company also explored pay-as-you-use models, but since adoption rates are still low, FarmSpeak has found it challenging to secure financing partnerships with FSPs. These partnerships are crucial, as they contribute to better working capital and cash flow, help mitigate risk and give farmers access to more services provided by FSPs.

OKO has flexible payment options for its weather-based insurance policy, giving farmers the option to either pay in full or in instalments using mobile money. OKO introduced a formal process for agents to collect cash and more easily schedule the next tranche of payments via the agent app. Despite this flexibility, nearly a third of farmers do not pay their insurance premiums after registering for the service,³⁷ revealing issues with farmer-funded models. Insurance is a particularly difficult concept for many smallholder farmers, who perceive it as a financial loss if they do not receive any payouts. OKO is now focusing on better communication to explain the benefits of insurance, along with improved agent training and illustrated educational materials to convey the value of its offer.

32 Paul, E. (5 May 2024). "Inside the business of card payments in Nigeria". Techpoint.

33 GSMA AgriTech Accelerator. (February 2024). MEL Rapid Feedback Survey: Winich Farms, Nigeria. N=1059

34 In Nigeria, 36% of the population over 15 years of age hold a debit card. TechCabal Insights. (2024). *Nigerian Payments Report 2024: Online Transfers Dominate, ATM Transactions Decline*.

35 Currency conversion, January 2025.

36 GSMA AgriTech Accelerator. (February 2025). MEL Rapid Feedback Survey: Winich Farms, Nigeria. N=1059.

37 OKO BI data.

Complementing revenues with B2B services

Given the revenue generation challenges of B2C models, some agritechs have introduced complementary business-to-business (B2B) services, leveraging agribusinesses as paying customers to sustain operations instead of relying solely on smallholder farmers.

MooMe initially offered its dairy management app to farmers under a freemium model, allowing those with up to 10 animals to access the service for free while charging a subscription fee to farmers with larger herds. However, the limited number of farmers with more than 10 cows led the company to re-evaluate its approach. To make its services more sustainable,

MooMe is now integrating a B2B model in which agribusinesses cover the app subscription costs for farmers, ensuring broader adoption and a more stable revenue stream. As an added benefit, agribusinesses with extension agents can assist with service onboarding and user support.

Greenovator currently offers all Mekong Farm app features for free, due to the competitive landscape of digital advisory services in Cambodia where there are numerous free apps. While the company intends to maintain complementary core advisory services for farmers, they are actively developing revenue-generating services, specifically a market linkages service designed to earn a commission from input sales.

02

Donor-funded services

Donor funding can help agritechs enter new markets, develop new features or support early-stage growth,³⁸ but donor-dependent models present sustainability challenges in the long run. The primary risk is that when donor support ends – typically after two years – agribusinesses and farmers often cannot continue to pay for the service and willingness to pay is low as they are used to getting the service for free. Establishing a long-term financial model that includes alternative revenue streams has proven essential to sustain these services.

Jokalante initially relied on donor funding to sustain more than 90% of its project portfolio. However, when donor funding ended, the company discovered that business customers were reluctant to pay after receiving services for free. To build a more commercially viable model, the company is testing a freemium model to attract paying customers.

eProd has encountered similar challenges as the cost of its ERP solution was financed by donor-led projects in various markets, including Côte d'Ivoire. However, when these projects concluded, small-scale agribusinesses and farmer producer organisations could not afford to renew licences. The company is now actively seeking to diversify its revenue streams through complementary services, such as training on crop certification and EU Deforestation-Free Regulation (EUDR) compliance.³⁹

Esoko has historically operated a B2B2C model, charging NGOs and development agencies for farmer messaging services. While this allowed it to reach many farmers, heavy reliance on external funding posed a challenge to long-term sustainability. Recognising the limitations of its model, the company is now considering a strategic shift towards a farmer-funded model.

³⁸ Donor-funded services can be B2B, B2C and B2B2C.

³⁹ EUDR compliance introduces obligations to operators and traders related to the placing or making available on the Union market, and exporting from the Union of deforestation-related commodities and associated products. (EU, 2025)

B2B models targeting larger value chain actors (buyers, processors, aggregators) often provide more stable and substantial revenue streams than direct farmer payments. However, fixed subscription fees that must be paid regardless of economic outcomes tend to encounter more resistance than transaction-based revenue models that align costs with tangible economic activities (crop purchase).

Introducing a tier-based approach or freemium model to subscription-based SaaS

AgriTechs that charge agribusinesses annual licensing fees for enterprise solutions are encountering affordability challenges, particularly among small-scale agribusinesses. Introducing tier-based and freemium models could reduce upfront costs for customers and potentially make the revenue models more sustainable.

eProd's feature-rich ERP software comes at significant costs for agribusiness clients. To address affordability barriers, the company uses a tiered subscription model in which pricing varies based on the number of farmers supplying to the agribusiness. Despite this tiered approach, the company still faces challenges with smaller agribusinesses.

Jokalante offers its B2B data platform and B2B2C advisory services through a subscription-based model. While this approach has been successful with larger clients, such as agricultural insurance providers, the company has faced resistance from smaller agribusinesses and MFIs, which are hesitant to pay full subscription fees. To address this challenge and encourage adoption, Jokalante has been testing a freemium model that provides limited access to the service, such as caps on data and messaging, to demonstrate value before users commit to a full subscription.

Commission-based models in which agriTechs earn a percentage from transactions

Earning a percentage from transactions on their platforms ensures agriTechs only generate revenue when value is created, but this requires high transaction volumes.

TDX charges its buyers commission on commodity transactions, including transport fees and applicable taxes. These costs are included in the final commodity price. Similarly, **Winich Farms** generates revenue by taking a commission from sales made to offtakers on its digital platform. The company also intends to earn commissions on the value-added services provided through the platform, including loans and digital payment transactions.

Effective customer acquisition and retention are critical for agritechs to scale, yet these remain major challenges for cohort members. Low awareness of services, limited marketing budgets and high customer acquisition costs hinder growth. This section examines two key strategies used by

agritechs to raise awareness and acquire and retain users: agent-led models and marketing-driven approaches. The benefits and challenges of each are analysed, as well as the solutions that have been implemented to make them more effective.

01 Leveraging agents to onboard, educate and engage farmers

Reaching smallholder farmers in rural areas has been a persistent challenge for the adoption and use of digital agriculture services. Agents are often considered a bridge between an agritech and farmers – promoting services, onboarding, educating and engaging farmers and value chain actors. Market linkages platforms also use agents to aggregate produce from smallholders.

As agents are often trusted local individuals in the communities they serve, they can help mitigate issues like lack of trust and low digital literacy. RFS across markets confirmed that farmers still prefer in-person interactions to a purely digital approach. For example, in Mali, 89% of **OKO** farmers preferred to be registered through an agent who can answer their questions and explain the product over registering on their own through digital channels.⁴⁰ Similarly, in Ghana, **TDX** agents were still the main channel through which 57% farmers accessed market prices, compared to 30% of farmers who used their mobile phone.⁴¹

However, maintaining an agent network is often costly. Agents who require training often need to be equipped with mobile devices. They may also incur transportation costs in addition to their commissions or salaries. Simon Schwall, co-founder of **OKO**, points out that *“one of the main challenges has been leveraging agents in a cost-effective manner.”* Agent performance tracking has been another key issue faced by the cohort. Only a small percentage of agents are known to contribute to revenue generation. In many cases, only a small percentage of agents are actively generating revenue.

For example, **TDX** reports that just 20% of its agents are responsible for driving sales.

During the Accelerator, several strategies were tested to improve the cost-efficiency, performance and monitoring of agents.

Cost-efficiency strategies

Using commission-based models rather than fixed salaries to pay agents based on actual revenue generated

OKO's main sales channel is its agent network, but the original salary-based model was not profitable as it came with more fixed costs. To reduce customer acquisition costs (CAC), **OKO** introduced a new commission-based system in Mali to link agent earnings to company revenue. The new model provides an incentive by allowing high-performing agents to earn more. **OKO** implemented the new model through a tiered approach, ensuring buy-in from agents by initially offering a fixed amount in the first few months (transportation allowances), then gradually decreasing it while increasing variable remuneration (commissions). The model reduced **OKO**'s fixed costs and, in the short-term, the performance of freelance **OKO** agents declined as the initial investment for the agents compared to revenue earned was higher. For agents who were already part of an organisation and meeting farmers for different reasons, such as extension agents or loan officers, performance improved. As a result, this model led to a decrease in CAC.

40 GSMA AgriTech Accelerator. (March 2024). MEL Rapid Feedback Survey: **OKO**, Mali.

41 GSMA AgriTech Accelerator. (March 2025) MEL Rapid Feedback Survey: **TDX**, Ghana.

Adopting a multi-functional agent model

Several cohort members have adopted multi-functional agent models to enhance efficiency and maximise impact. Instead of limiting agents to a single role, such as farmer registration, they are now tasked with multiple responsibilities, including onboarding, data collection, payment facilitation, sales and extension services.

For instance, **Esoko** has expanded the scope of its agent network beyond onboarding. Agents now serve as extension officers, providing advisory services, technical guidance and market insights to farmers through the platform. Esoko's agents also aggregate input demands from farmers, facilitating better access to agricultural supplies. Additionally, Esoko is exploring opportunities to transition agents into crop aggregators, enabling them to play a more active role in the agricultural value chain. This shift not only increases cost efficiency but also strengthens farmer relationships, making the model more sustainable in the long run.

Performance improvement strategies

Enhancing agent apps with dashboards and monitoring tools

Esoko faced challenges in managing its vast agent network, including tracking farmer interactions, real-time monitoring and fragmented communication. To address these issues, Esoko developed an agent app

for its agent network that is connected to an internal agent management dashboard with support from the Accelerator. The new app tracks agent locations in real time to assign tasks more effectively, allows agents to submit reports digitally even when offline, stores all information in the cloud for easy access and simplifies the training and onboarding of new agents. This information is displayed on the management dashboard, which also tracks the number of registered farmers, the services they use and their geographical locations. This new app makes it easier to bring new agents on board, see what is happening in the field and assign tasks quickly, making Esoko's operations much more efficient.

Similarly, to make its agent network more efficient, **OKO** iterated its agent app with support from the Accelerator, integrating gamification features to make the app more interactive for agents to use. For example, agents can track premium collection in real time through a comprehensive dashboard showing payments due and required follow-ups. The dashboard also provides agents with visibility into commission earnings – a powerful incentive to increase their productivity. The dashboard displays a progress bar that allows agents to advance through different levels via a gamified competition mechanism. As a result, the productivity of agent performance (paying customer per day per agent) improved between September 2024 and January 2025.

02

Marketing drives service adoption and use of services

Another way to drive service adoption without relying on agents is by creating impactful marketing campaigns. However, limited budgets and marketing expertise in agritech teams have made it difficult for cohort members to execute these campaigns effectively. Despite these challenges, some cohort members have found creative ways to succeed.

Through the UX research conducted in the Accelerator, **Jokalante** recognised the need to invest in marketing after identifying gaps in how it communicates the value of its product to existing and potential customers. Jokalante's team dedicated time and resources to developing a marketing strategy and allocated a marketing budget. This allowed it to run targeted campaigns, including on LinkedIn for commercial agribusiness clients and TikTok, and community radio for smallholder farmers. It also used Google analytics to track and assess its marketing impact, and hired a sales team to follow up with potential clients and

customers. This supported user adoption, with nearly 13,000 new users registered in Q1 and Q2 2025.

To increase brand recognition in the newly entered Cambodian market, **Greenovator** decided to leverage social media platforms like Facebook and WhatsApp, which are popular due to higher smartphone penetration.⁴² However, the results have been lower than expected, with limited engagement from users – people are not reading social media ads or interacting with posts. Despite this, the company has successfully registered around 100 farmers per week over five weeks in Q4 2024 and acknowledges that this is part of the learning process. Greenovator is now exploring additional social media channels, such as TikTok, and has explored how farmers interact with social media in recent UX research conducted with the Accelerator. The goal is to leverage these insights to promote the app more efficiently. This year, the company is also allocating a marketing budget for the first time.

42 In Q1 2025, more than 23 million connections were considered broadband – 3G, 4G and 5G. Source: GSMA Intelligence, 2025.

Partnerships and ecosystem integration

Across industries, partnerships have been a powerful catalyst for early-stage agritechs, accelerating their growth and impact. For the Accelerator cohort, partnerships have played a crucial role in gaining access to farmers, including women farmers, while also helping to establish their brand and services in their respective markets. In some cases, collaborations have also enabled agritechs to expand their service offerings, strengthen their value proposition and unlock new revenue streams.

However, building partnerships as an early-stage agritech can be challenging as their limited traction often makes them unattractive partners for large organisations. Evidence from the Accelerator indicates that successful partnerships are built by developing mutually beneficial business cases and leveraging warm introductions from the agritech's network to build credibility.

Access to farmers and brand recognition

Partnering with well-known organisations such as MNOs, banks and NGOs has allowed some cohort members to tap into their established farmer networks and leverage the trust and credibility they have built over years. This is important as access to farmers has been one of the biggest hurdles faced by the cohort. It has also helped agritechs reach a much larger audience more efficiently, accelerating adoption and impact.

For example, **Greenovator** partnered with Cambodia's leading MNO, **Smart Axiata**, to enhance the promotion and advertising of its services. The two organisations launched a targeted SMS campaign, sending promotional messages to Smart Axiata users in key farming regions encouraging them to download the app. At least 16,000 users in rural Cambodia were reached, and the campaign helped Greenovator double its app downloads in just one quarter.

TDX's partnership with Mennonite Economic Development Associates (MEDA),⁴³ an NGO working to empower women in agriculture, is a strong example of how collaborating with a well-established local partner can help reach a specific user segment – in this case, women farmers. The partnership was formed to provide an offtake market – a market for selling crops produced by women's farming groups that had received support from MEDA to improve their crop yields. MEDA facilitated trusted peer-to-peer information exchange channels, which served as a powerful referral mechanism, accelerating the adoption of TDX's digital platform among women farmers. Through this collaboration, MEDA provided TDX access to 40,000 women farmers and, to date, more than 4,500 have been onboarded successfully. This collaboration is an example of a mutually beneficial business model. TDX is now in discussions with MEDA to expand the partnership and reach an additional 15,000 women in the coming year.

Expanding service offering and revenue streams

Partnerships can also be leveraged to offer additional services, enhancing an agritech's value proposition. Bundling enables a comprehensive service offering that agritechs often cannot provide alone due to capacity or regulatory constraints. Partnerships with FSPs are particularly valuable as access to finance is a major challenge for smallholder farmers. Their lack of collateral and economic identities make them appear risky to lenders, but by providing valuable data on farmers' livelihoods, agritech solutions can give FSPs greater visibility into farmers' revenue streams and creditworthiness, often unlocking new financing opportunities.

43 <https://www.meda.org>

Winich Farms has established several partnerships with FSPs to improve access to agri DFS for the producers it serves.⁴⁴ For example, a partnership with SeedFi, a Nigerian fintech, has enabled the roll-out of produce-collateralised loans. Farmers can use their crops – stored in Winich’s warehouses – as collateral, eliminating the need for traditional asset-based guarantees. The funds from these loans can be used at the farmers’ discretion. The agritech has developed an application programming interface (API) to share analysis of farmer transaction records and produce sales data with FSPs, which they use to assess farmers’ creditworthiness and inform their lending decisions in line with Nigerian data protection and privacy laws.

OKO has established formal agreements with several agricultural banks, cooperatives and MFIs to bundle its insurance product with loan offerings. This not only helps reduce risk for FSPs, but also strengthens OKO’s value proposition by giving it cost-efficient access to a larger pool of farmers.

MooMe is leveraging partnerships to expand into new markets. Through a collaboration with Friesland Campina, a major multinational dairy cooperative, MooMe has entered two new markets: Indonesia and Pakistan. More recently, the company has formed a tripartite partnership with two other agritechs to expand operations into Kenya. Ahmed Ben Achballah, co-founder and CEO of MooMe describes it this way: *“We realised that by bundling our services together, we could offer a stronger value proposition and access funding more effectively. Going in alone as an*

agritech, especially in a new market, is challenging. Our proposal succeeded because it wasn’t just MooMe – we partnered with CowTribe for vaccines and Gene+ for genetics, while MooMe served as the data backbone. Together, we created an integrated platform, presenting a unified solution to farmers.”

Generating new revenue sources

To diversify its operations and generate new revenue streams, **eProd** has partnered with international donors and organisations to support capacity-building initiatives on contract farming, food processing and EUDR compliance for crop buyers and value chain actors – its target customers. For example, eProd has collaborated with DEG (the German Development Bank) and KfW (Kreditanstalt für Wiederaufbau) to train nearly 600 farmer organisations and anchor firms in food processing, contract farming and EUDR compliance. eProd has also been contracted to participate in a webinar with the International Trade Centre (ITC) on traceability and geotagging, showcasing the capabilities of its system. This capacity building not only generates additional revenue, but also provides a platform to introduce eProd’s solutions to potential new clients.

Greenovator’s partnership with MNO Smart Axiata goes beyond promotional campaigns, as it secured an additional \$10,000 sponsorship to develop advisory content and technical guidelines for other value chains, such as cashew nuts, cassava and dairy.

44 Chassin, L. and Genga, K. (27 March 2025). *“How Winich’s market aggregation platform is driving financial inclusion for Nigerian smallholder farmers”*. GSMA Mobile for Development Blog.

Internal and external enablers of scale

Internal enablers

While user-centred services, strong business models and market-driven value propositions are crucial to reach scale, the internal mechanisms that enable these elements are equally important. Behind every successful agritech is a team that drives progress and builds a foundation for agritechs to scale effectively.

At its core is a strong **leadership team**. Founders must not only manage operations, but also demonstrate traits like resilience and adaptability – vital in the unpredictable agriculture sector. As Ahmed Ben Achballah of **MooMe** puts it: *“As a founder, you need to be resilient – and in agriculture, you need to be doubly resilient.”*

Although leadership development was not a core focus of the Accelerator, it became clear that founders who successfully adapted to shifts in business models, priorities, market conditions or user needs progressed far more rapidly than those resistant to change. Resilience and adaptability are also qualities that investors actively seek in the startups they support.⁴⁵

Scaling also depends on having the right team to execute the vision. However, this can be particularly challenging given the budget constraints most agritechs face. As Benjamin Asiedu from **TDX** explains: *“Getting the right people to get the job done is difficult when you don’t necessarily have the budget.”* This is a particularly big challenge when it comes to technical talent. In the cohort, many agritech founders are agriculture or value chain experts, not developers, making it difficult to iterate their solutions quickly while maintaining high standards. Outsourcing talent has proven to be both costly and time consuming, often causing delays and inefficiencies.

To scale effectively, agritechs **need strong tech leadership** – ideally a chief technology officer (CTO) – to drive product development. As Winich Farms advises, *“As a tech company, you must have a tech person in-house. If you can’t afford high salaries, make this person a co-founder and offer equity.”*

External enablers

An agritech’s ability to scale is heavily influenced by its surrounding ecosystem, including market potential, digital readiness, policy environments and macroeconomic conditions. While many of these factors are outside a startup’s control, understanding and navigating them strategically can enhance its growth prospects.

Market potential and readiness for technology adoption

When entering or expanding into a new region, it is critical to understand the size of the market and its readiness for digital adoption. This involves estimating the total addressable market (TAM)⁴⁶ and serviceable obtainable market (SOM).⁴⁷

At the start of the Accelerator, the GSMA market engagement team led a series of workshops with each cohort member to assess market size, competition and ecosystem dynamics. This process helped agritechs identify barriers, opportunities and risk mitigation strategies. For example, **FarmSpeak** realised its SOM was limited to poultry farmers with a minimum flock size, prompting a strategic shift towards farmer retention rather than broad-scale acquisition. **Greenovator** recognised that Cambodia’s market for digital advisory was very competitive, which led them to focus on building strategic partnerships with MNOs to differentiate its value proposition and increase its impact.

Such market analyses should be revisited regularly to ensure agritechs base their decisions on the latest market data.

Beyond market size, understanding farmers’ digital capabilities through UX research helps align product complexity with user readiness for technology adoption. For example, **FarmSpeak** simplified its original solution after realising it was too advanced for its target users by reducing the amount of data inputs and features on FS Manager, its farm management platform.

45 GSMA. (2024). *Investment Readiness: A Toolkit for Agritech Innovators*.

46 TAM is the total demand for a product or a service across all market segments / the maximum number of people who could realistically buy from a business.

47 SOM is the portion of serviceable addressable market (SAM) that a company can capture / the number of customers it would realistically reach with its product/service given competition, capacity, etc. Represents the estimated market potential and position in a competitive landscape.



Policy and regulatory environment

Regulatory landscapes have a significant influence on an agritech's growth trajectory, creating both opportunities and challenges for its solutions. For instance, the EUDR, which requires companies to prove their products are deforestation-free, presents an opportunity for agritechs to offer traceability solutions. **eProd** is already adapting its platform to support EUDR compliance and leverage it for business expansion.

Conversely, restrictive financial sector regulations can hinder agritechs from scaling. For example, reserve requirements that limit the ability of agritechs to transition into agrifintechs. This posed a challenge for **Winich Farms**, which had to form complex partnerships to offer users access to finance.

To thrive in these contexts, agritechs must understand and navigate policy environments. Where frameworks are lacking, collective advocacy from agritechs, donors and investors can help influence government priorities and push for enabling digital agriculture policies.

Macroeconomic and political context

A challenging macroeconomic context such as political uncertainty, civil unrest and inflation can make it much harder for an agritech to scale.

For example, Accelerator cohort members in Nigeria faced major setbacks due to record inflation that topped 38% in 2024 – the highest since 1996 – driven primarily by the depreciation of the Nigerian naira.⁴⁸ This led to rising fuel and operational costs. For example, increased input prices in the poultry sector led more than half of poultry farms to close in 2023, which reduced the market size for **FarmSpeak**.⁴⁹ A surge in electricity and gas tariffs of 100% and 900%, respectively, increased logistics costs for **Winich Farms**, forcing offtakers to reduce their orders or find partners to share the cost.

Compounding these economic challenges, civil unrest in regions of Mali and Nigeria disrupted essential operations. **OKO** and **Winich Farms** struggled to conduct user research and field promotions, hindering their ability to refine products and expand market reach. These intertwined economic and security challenges underscore the complex landscape that agritechs in these environments must navigate to achieve sustainable growth.

48 IMF. (8 May 2024). "IMF Executive Board Concludes 2024 Article IV Consultation with Nigeria".

49 Salako, P. (12 March 2024). "More than half of Nigeria's poultry farms close amid national crisis". The National.

04

Impact of agritech services on smallholder farmers



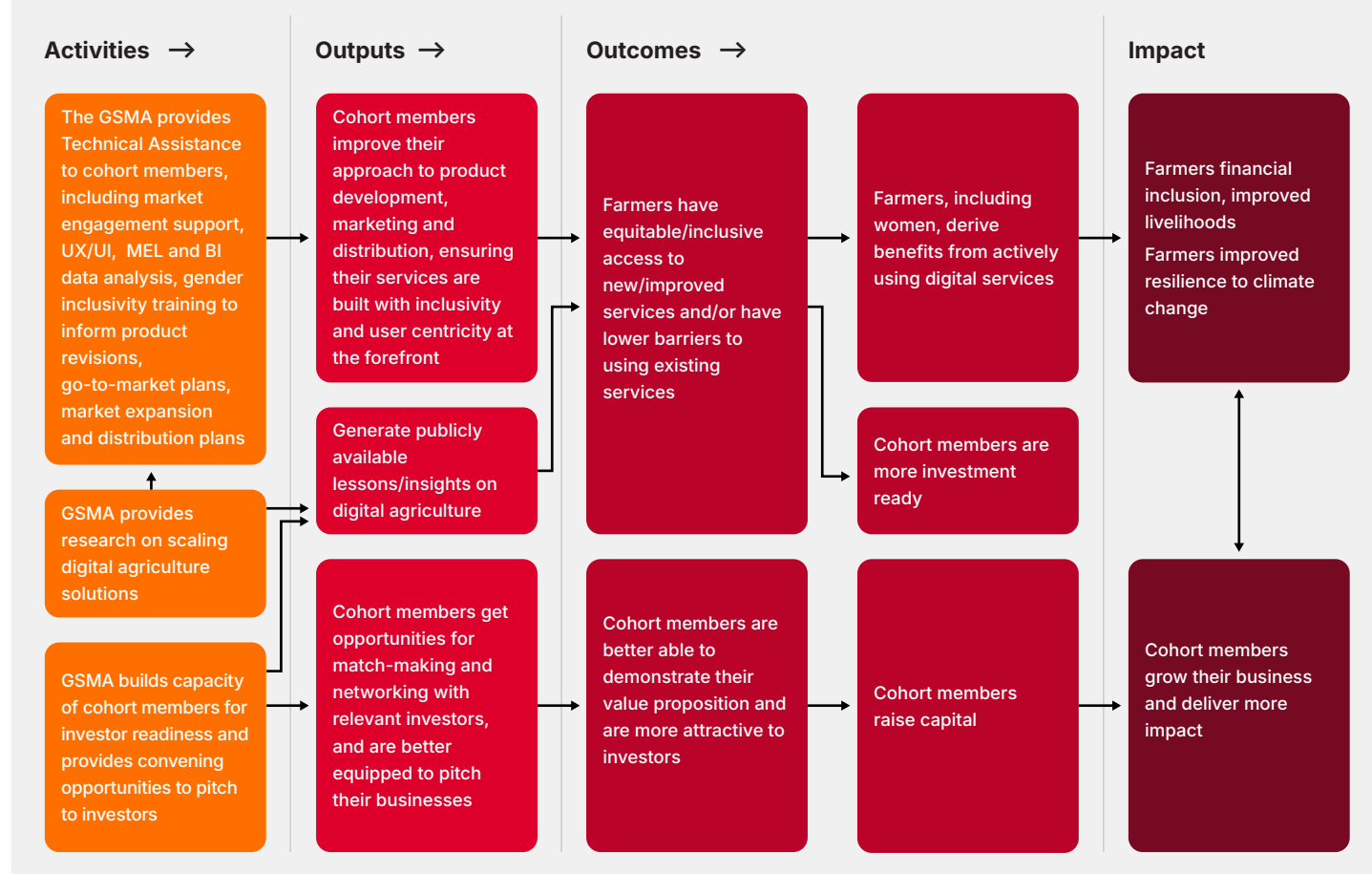
This chapter assesses the impact of cohort member services on farmers, aligned with the GSMA AgriTech Accelerator Theory of Change (ToC).

The intended impact of the Accelerator is to improve financial inclusion, climate resilience and farmers' livelihoods. The Accelerator's technical assistance (TA) package supports cohort members in developing stronger, user-centric and inclusive products, as well as effective marketing and distribution strategies to promote and increase adoption of their digital agriculture services. As a result, the services provide more equitable access by reducing barriers to using the solutions, and lead to sustained use and benefits for farmers. Simultaneously, by strengthening the investment readiness of cohort members (and acquiring investment), the agritechs are in a stronger position to scale. All these efforts unlock the ability to improve farmers' lives.

The impact assessment is based on farmers' perceptions, which are influenced by a range of factors including, but not limited to, digital literacy and past access to services. A mix of quantitative and qualitative data inform the assessment, including data from the RFS, ICS and BI analysis alongside feedback from cohort members, TA partners and MEMs. However, not all the cohort members' services could be featured, as there were not enough users to develop a representative sample for an RFS. In these cases, qualitative insights were drawn from IDIs and FGDs.⁵⁰ At the start of each use case section, there are icons noting which cohort members and types of data will be used. Please note that all charts display results in aggregate form.

Figure 15

GSMA AgriTech Accelerator Theory of Change



Source: GSMA

50 Both quantitative and qualitative data are available for Jokalante, OKO, TDX and Winich Farms. Quantitative data is available for eProd and Esoko. Qualitative data is available for FarmSpeak, Greenovator and MooMe.

Framework and high-level impact

This chapter takes a holistic view, examining how digital agriculture services, such as digital advisory, market linkages and agri DFS (including digital payments, insurance and access to loans), have had an impact on farmers' lives. Supply chain management has a limited direct impact on farmers, except for facilitating digital payments and loans.⁵¹ Smart farming was not included in the assessment, as not enough data could be collated to provide a comprehensive assessment of the solution.

The framework for assessing the impact on farmers is based on five key areas from the ToC: **access to services, climate resilience, financial inclusion, productivity and income and livelihoods**. Each of the following use cases has a section related to the key impact areas, where relevant (see Figure 16).⁵² At the start of each section, the cohort member's logo, as well as icons indicating the types of data used (quantitative and qualitative), are indicated.

Figure 16

Framework for assessing impact of the agritech services

○ Impact to use case ○ Shared impacts across use cases

		Access to services	Climate resilience	Financial inclusion	Productivity and income	Livelihoods
 Digital advisory    		Access to information	Anticipation Adaptation		Improved agricultural practices	Improved access to value-added services for farming households
 Market linkages  		Access to market Access to information		Digital payments	Improved prices and consistent buyers	More purchasing power and price stability
 Agri DFS 		Access to financial services	Absorption	Digital payments Insurance Access to loans		Better financial management and security
 Supply chain management 				Digital payments Access to loans		
 Smart farming 		The impact of smart farming is not included in this chapter as the scale of the service was too limited to derive meaningful results.				

Source: GSMA

⁵¹ Please note that since the only data from supply chain management relates to digital payments and access to loans, this will be included under agri DFS rather than as a separate section.

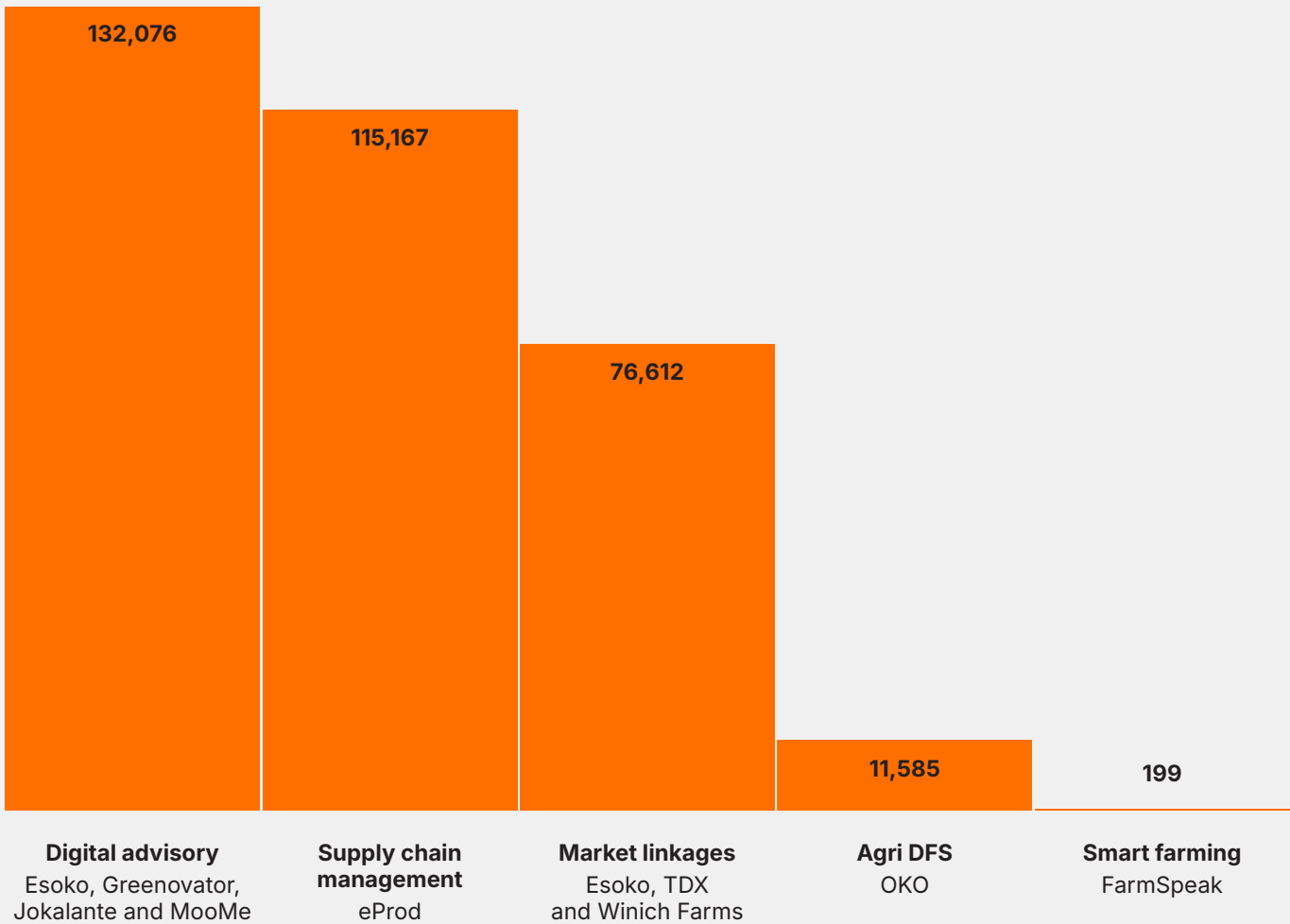
⁵² In the diagram where there is no box, the use case has not been assessed against that impact component, a **brown** box indicates the corresponding impact to the use case, and an **orange** box indicates there are shared impacts across use cases. For example, for market linkages, these services provide market access, which have an element of access to information through market prices – this is featured in the market linkages section. For agri DFS, market linkage and supply chain management services offer a form of financial inclusion via digital payments or access to loans – this is featured in the digital payments and loans section.

Access to services

Access refers to a farmer’s ability to reach, use and benefit from agritech services – such as digital advisory services, market linkages and agri DFS solutions – that help them understand good agricultural practices, access weather forecasts and market prices, receive and spend money digitally, secure fair prices, afford agricultural inputs and mitigate climate risks.

In total, **335,639** new smallholder farmers accessed the agritech services supported by the Accelerator across multiple geographies. Digital advisory services had the highest number of new users, as they can reach a wider audience through popular communication channels such as SMS and IVR. For a full breakdown of the use cases covered by cohort members’ services, see Table 1.

Figure 17
Number of new farmers who accessed agritech services, per use case



Source: GSMA

Climate resilience

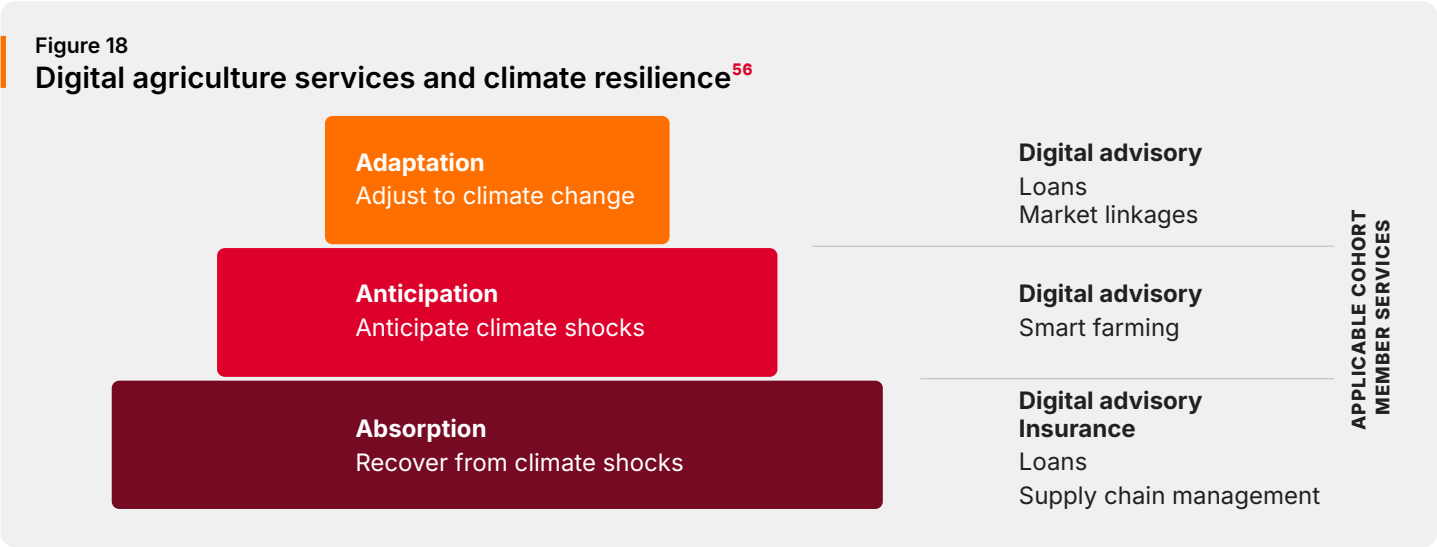
Climate resilience is the capacity of social, economic and environmental systems to cope with a hazardous climatic event, trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation.⁵³

The GSMA uses the “Three A’s” framework of climate resilience:

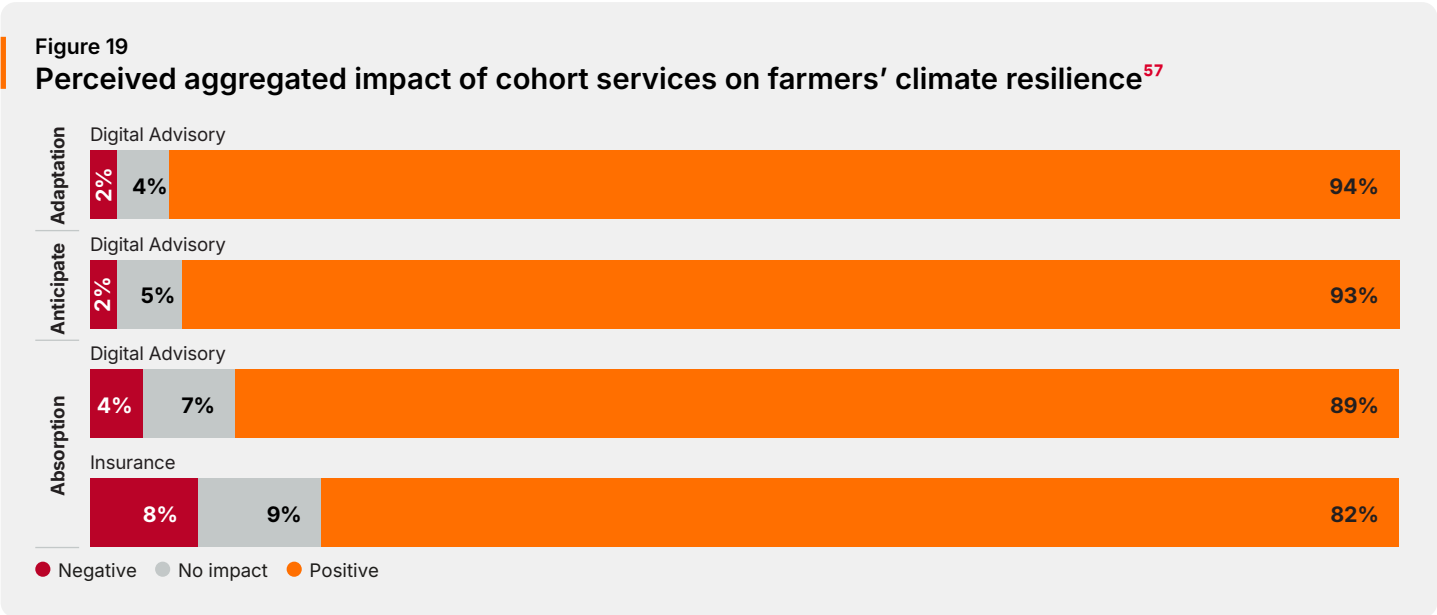
- **Adaptation:** actions that help to adjust to multiple, long-term and evolving climate risks

- **Anticipation:** actions that predict climate variability and risks from extreme climate events to support preparedness and planning
- **Absorption:** actions that help to reduce adverse conditions, emergencies or disasters

On average, **92%** of surveyed farmers reported that digital advisory services had a positive impact on their ability to absorb, anticipate and adapt to climate events.⁵⁴ **82%** reported that insurance had a positive impact on their ability to absorb adverse climate events.⁵⁵



Source: GSMA



Source: GSMA

53 GSMA. (2024). *ClimateTech Green Glossary*.
54 N=2,581
55 N=968
56 The services in bold are those that are discussed in the report. The services not bolded are not featured as we did not or were unable to assess climate resilience in these services.
57 N=591 ≤ N ≤ 1,463

Financial inclusion

Financial inclusion enhances farmers’ livelihoods by expanding access to affordable, responsible financial services, including insurance, digital payments and loans. These services enable better financial management, investment in inputs, income smoothing and faster recovery from shocks, ultimately helping farmers build long-term financial security.

Livelihoods

“Livelihoods” encompass the diverse strategies and activities of smallholder farmers to meet their basic needs and enhance their well-being, primarily through small-scale agricultural production, often supplemented by additional on- and off-farm income.

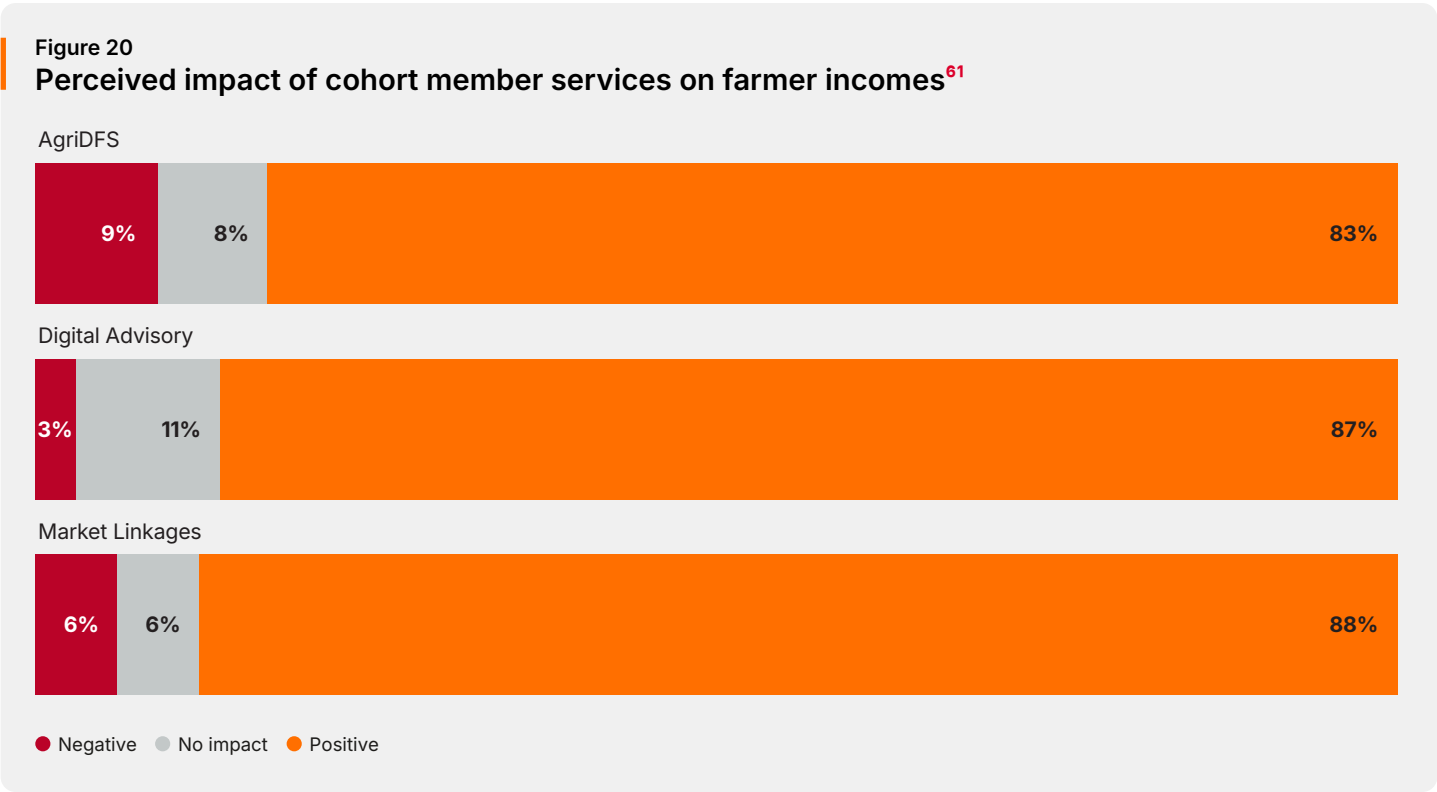
One key aspect of smallholders’ livelihoods is that for most, farming is both a key source of income and food security. On average, **74%** of farmers reported improved food security due to the agritech services supported by the Accelerator.⁵⁸

Productivity and income

Productivity is the ratio between the value of outputs (such as crops, livestock or other agricultural goods) and the value of inputs used to generate outputs (such as land, labour, seeds, fertiliser and water). Higher productivity means that farmers can produce more or better-quality crops or livestock from the same or fewer inputs.

Only digital advisory services measured improvement to productivity, as the market linkages and agri DFS services do not contribute to it. On average, 93% of surveyed farmers who use digital advisory services reported a positive impact on their productivity.⁵⁹

The increase in productivity translated to improved earnings as a result of digital advisory, agri DFS and market linkage services, with between **83% and 88%** of farmers stating that their annual income increased due to the agritech services supported by the Accelerator.⁶⁰ Digital advisory and market linkages appear to be more favourable as there was a direct correlation between the steps farmers took to implement advice or sell their crops at a certain price, and the increase in income, although the former takes longer to realise.



Source: GSMA

58 N=1,092
59 N=1,922 ≤ N ≤ 1,957. Please note that other use cases can support productivity, but in our RFS, we specifically asked about productivity in relation to the use of digital advisory services.
60 N=4,558, different questions were asked to the same sample.
61 N=2,894 ≤ N ≤ 2,938

Access

Esoko and Jokalante collectively acquired 96,180 new farmers⁶² who use their digital advisory services.⁶³ Farmers primarily access these services through basic mobile phones, channels such as IVR (55%), SMS (46%), incoming calls from a call centre or agritech agent (17%) and outgoing calls (5%).⁶⁴

IVR has proven effective in lowering barriers to access, as it suits farmers' preferences. Given low literacy levels among smallholders, voice-based channels are often more accessible than text. Malick, a farmer in Senegal, shared: *"I receive Jokalante's advice via phone calls from an agent as I cannot read. Once a week during the rainy season and once a month during the dry season. I always listen to it fully and then share it with my family and community."*

While SMS is a commonly used channel, its effectiveness can be limited. Farmers report that network issues cause messages to arrive late or not at all, making the advice outdated or unusable. For example, since the sowing period is quite short, if a farmer receives a message a week late, the advice will be outdated and untimely. Or, if advice to spray with pesticides during optimal weather conditions is received when rain has started, the application will be less effective. Additionally, low (digital) literacy make it difficult for farmers to understand and implement advice on their own. Advisory content must therefore prioritise clear, timely and relevant communication while avoiding information overload.

Figure 21
Perceived benefits of accessing digital advisory services in Ghana and Senegal⁶⁵



Source: GSMA

62 Esoko and Jokalante BI data.
63 Greenovator and MooMe are not included in this section, as they did not have enough users from the surveys to provide meaningful results.
64 N=1,041, multiple options selected.
65 N=853 ≤ N ≤ 1,156

96% of surveyed farmers in Ghana and Senegal reported clear benefits from using digital advisory services, including access to weather and market information.⁶⁶ These included quick, safe and cheap access to better and higher quality information,⁶⁷ which helped them acquire new agricultural knowledge to improve their agricultural practice.

Women also benefitted greatly, with **98% of female farmers** reporting improved access to agricultural information through these services.⁶⁸ However, disparities persist in Ghana, where 18% of female farmers perceived a gender gap in access to digital advisory services.⁶⁹ The main reasons cited were higher mobile phone ownership among men, men being better able to afford mobile devices and services and the male dominance of farming activities, which can restrict women's access.⁷⁰

Climate resilience

Climate adaptation

Digital advisory services in Ghana and Senegal have enhanced **the ability of 94% of farmers to prepare for climate-related events**. Access to relevant, timely and localised information has helped farmers better understand and respond to climate risks. However, the capacity to implement the recommendations is often an issue. Monique, a female farmer in Senegal, explained: *"I was warned about strong winds that could damage my millet. Jokalante advised me to cover my crops with tarpaulin, but given the size of my farm, I couldn't afford them."* While short and medium-term adaptation is crucial, there is a growing need to equip farmers with long-term, cost-effective strategies to reduce the impact of climate events. This includes access to affordable inputs and financing to better manage climate threats.

Climate anticipation

93% of farmers stated that weather forecasts and alerts had a positive impact on their ability to anticipate climate risks. This information helped them make proactive and informed decisions, such as when to plant, which crops are best suited for the season and how to allocate their limited resources more effectively. Djibril, a male Senegalese farmer, shared: *"I always rely on the weather alerts. They're especially useful for preparing for strong winds and thunderstorms, keeping me and my farm safe."*

66 N=853 ≤ N ≤ 1,156

67 Higher quality and more accurate information enable farmers to receive better information than they currently do, which is more likely to improve their productivity and income. Quick access to information enables farmers to instantly receive and act on the advice, as compared to other methods, which may require an agent to visit and advise in person – saving them time. Cheaper access to information enables farmers to access the service for free, subsidised or at a lower price, and avoids them having to travel to receive advice – saving them money. Safer access to information enables farmers to receive verified and validated information that enables them to make informed decisions.

68 N=975

69 N=300

70 N=48, multiple options selected

Productivity and income

Esoko's and Jokalante's digital advisory services had a positive impact on the productivity of 93% of surveyed farmers in Ghana and Senegal, by enabling them to adopt improved agricultural practices such as fertiliser use, climate-smart planting schedules and better crop management.

As a result of accessing digital advisory services, **84% of surveyed farmers were able to make more informed decisions**, particularly around weather-related planning.⁷¹ Serire, a male farmer from Senegal, shared: *"I use Jokalante's weather alerts to manage risks. On my millet field, I used to yield a maximum of 3 tons per hectare. Since using Jokalante, I often exceed 4 tons per hectare by timing my fertiliser with rainfall predictions."*

Meanwhile, **80% of surveyed farmers reported that their crop quality improved**,⁷² and 61% experienced lower post-harvest losses,⁷³ ultimately contributing to increased productivity.

These changes led to a rise in farmer incomes, with **86% of surveyed farmers reporting a perceived positive impact**.⁷⁴ Of these farmers, most (75%) consistently implemented the advice received.⁷⁵ However, some faced barriers to implementation, such as high cost of input, labour or equipment costs (57%), lack of technical skills to apply more advanced practices (40%), delayed timing of messages that make it difficult to act on time (32%) and physical limitations, particularly among women and older farmers (28%).⁷⁶

Livelihoods

Increased income translated into tangible improvements in farmer livelihoods. **Improved food security (87% of surveyed farmers)**⁷⁷ was the most common outcome, highlighting the insecurity of smallholders who farm for subsistence. Other reported benefits included better access to healthcare and education. Niokhor, a male Senegalese farmer, explained: *"Following [Jokalante's] recommendations, I started using better-quality seeds and fertilisers. This helped me modernise my farming practices, improving yields and higher income. As a result, I was able to buy the medicines my family needed and improve our food security."*

84%

84% of farmers used digital advisory services to make more informed decisions.

71 N=455 ≤ N ≤ 491
72 N=455
73 N=455 ≤ N ≤ 491
74 N=1,469
75 N=1,296
76 N=520
77 N=694

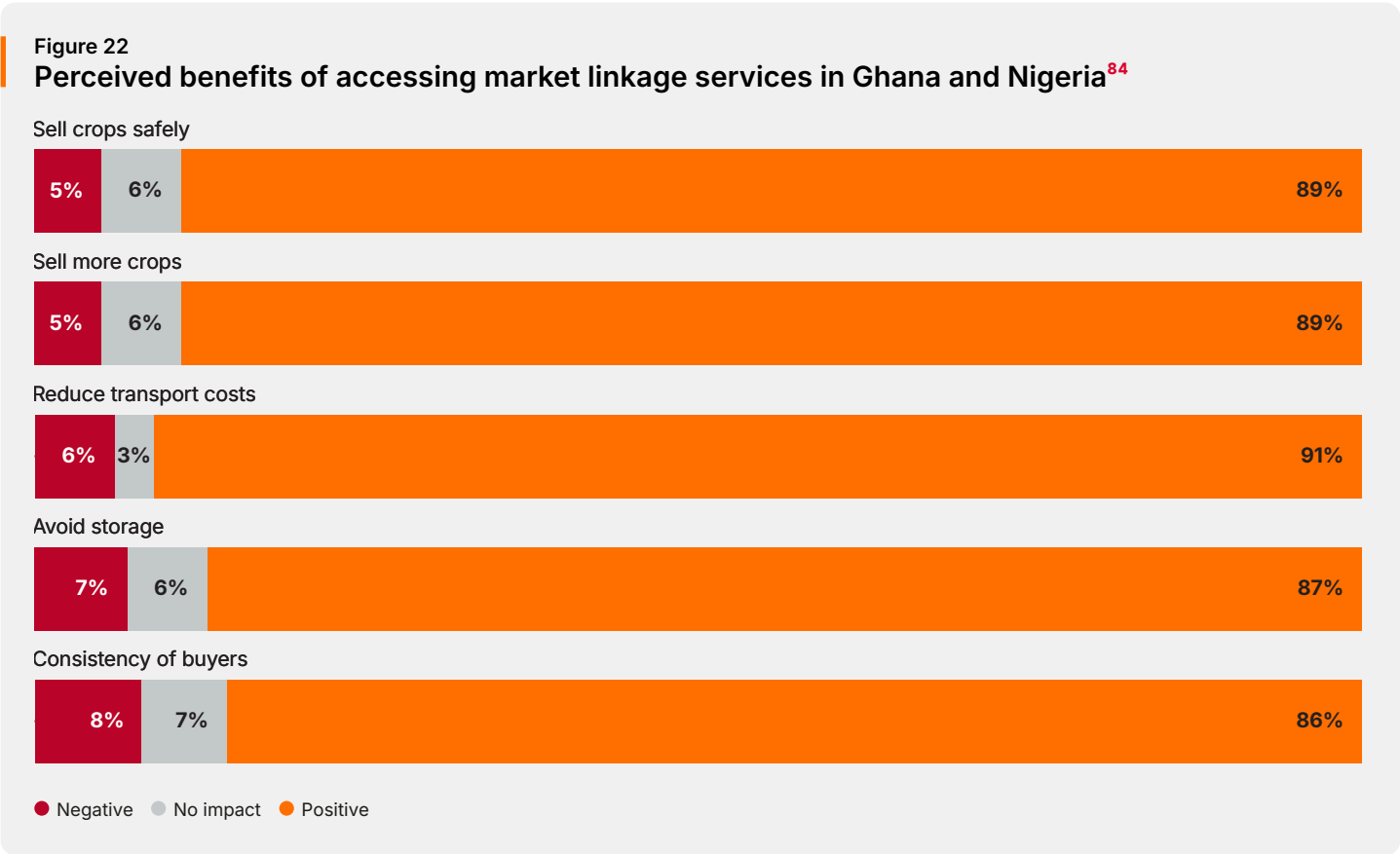
Access

Three agritechs in the cohort – Esoko, TDX and Winich Farms – aggregate crops from farmers and connect them to buyers.⁷⁸ In total, these companies acquired 40,174 new users during the Accelerator.⁷⁹

Market linkage platforms rely on agents to onboard and engage farmers, who then deliver produce to collection points or warehouses. Once registered, agritechs can use various methods to communicate with farmers about the service. For TDX, farmers contact agents, either in person, by phone or through

another farmer, to get the latest prices for their crops.⁸⁰ In contrast, Winich Farms sends SMS updates to inform farmers about market information and the locations of collection points, 80% of whom find the information useful,⁸¹ and 55% actively change their selling plans after receiving information about the nearest collection centre.⁸²

In total, **88% of Esoko, TDX and Winich Farms farmers shared that their market linkage services had a positive impact.**⁸³



Source: GSMA

78 At the time of the RFS, Esoko's market linkage service was still in early stages and did not have as many users. The data has been aggregated, but there are less meaningful insights.

79 Esoko, TDX and Winich Farms BI data.

80 N=339 (includes TDX FGD respondents).

81 N=284

82 N=284

83 N=1,331 ≤ N ≤ 1,590

84 N=960 ≤ N ≤ 988

Key benefits include access to consistent buyers, which reduces the need to find and sell to various buyers and intermediaries. Market linkage services also avoid the need to travel to sell crops, as farmers can sell directly at buyers' local collection centres, which reduces transport costs and lowers transaction costs by eliminating intermediary fees – saving farmers' time. Female farmers especially appreciated the ability to sell safely, avoid theft or losses, with 92% recognising a positive impact. Lawal, a female farmer with **Winich Farms**, noted: *"Without these services, my income would be lower. I would have had to spend more to sell my crops, [as] the cost of transportation is very high."*

90% of farmers reported a reduction in crop losses due to quicker access to buyers and local collection points, which improved crop aggregation and reduced post-harvest spoilage.⁸⁵ The presence of local agents also enables crops to be collected and sold more efficiently. Additionally, the storage solutions provided by TDX and Winich Farms allow farmers to store their produce while still receiving payment safely. A **TDX** female farmer noted: *"Without proper storage facilities, we lose a portion of our harvest to spoilage every year. This is why finding a buyer quickly is so important."*

Productivity and income

Market linkages also lead to price stability and fairer payments. **88% of farmers reported higher revenues** through these services, with digital weighing and fewer intermediaries ensuring better prices.⁸⁶ In Nigeria, 87% of **Winich Farms** farmers experienced income stability.⁸⁷ Farmer Abamu explained: *"With other channels, buyers may offer different prices for each bag, but Winich buys all at the same price."*

Livelihoods

The impact of market linkages extends beyond income. In Ghana, women farmers who sell to **Esoko** and **TDX** reported improvements in food security (88%), expanded farming activities (58%), the ability to fund their children's education (54%) and better access to health services (48%).⁸⁸



92%

92% of female farmers appreciated the ability to sell safely and avoid theft or losses.

85 N=1,244

86 N=942

87 N=582

88 N=553. This was a specific survey focused on the female farmers of each cohort member – Esoko and TDX.

Digital payments



Access

In Mali, mobile money penetration increased from 31% in 2017 to 66% in 2022,⁸⁹ with 94% of OKO's customers having a mobile money account.⁹⁰ However, women farmers are less likely to have an account than men (77% vs. 97% respectively).⁹¹ This is due to barriers such as women being more likely to use mobile money through someone else's account than in their own name,⁹² low (digital) literacy⁹³ and lower mobile ownership.

In Nigeria, due to lower mobile money penetration and regulatory constraints, bank accounts are a key channel

for digital payments.⁹⁴ Winich Farms established partnerships with banks to introduce new bank accounts and debit cards for its registered customers, facilitating more efficient digital payments for crops.

Figure 23 highlights how Winich Farm cardholders can access and use their debit cards, with proximity to point-of-sale (POS) agents being a key factor driving usage. In contrast, ATMs are scarce in rural areas and, when available, often lack sufficient cash for withdrawals and require regular maintenance. Yet, challenges remain with debit card use, such as lack of knowledge about usability, limited POS availability and connectivity issues.

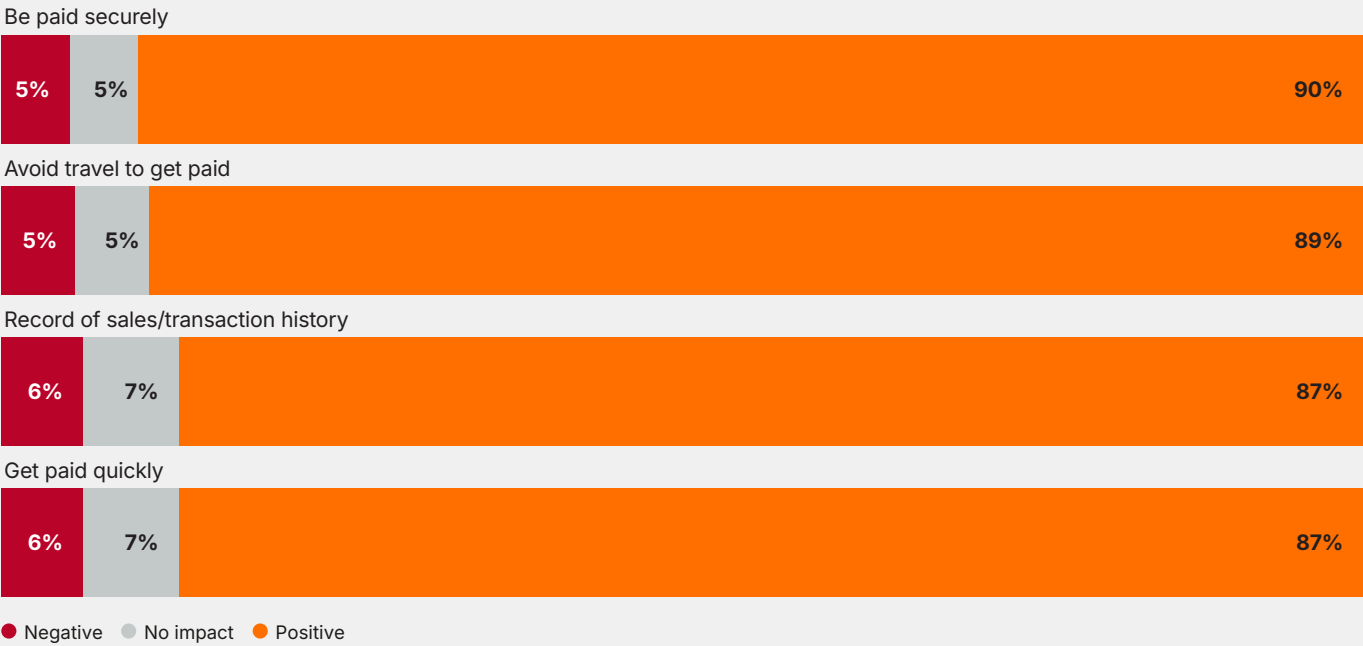
Figure 23
Winich Farms debit cardholders' usage and access^{95, 96, 97}



Source: GSMA

89 African Wireless Communications. (3 July 2024). "Mali's mobile money penetration expands to 66%".
90 N=597
91 N=104
92 GSMA. (2017). *Mapping the Mobile Money Gender Gap: Insights from Côte d'Ivoire and Mali*.
93 N=493. 49% of women vs. 29% of men have no formal education.
94 GSMA. (2024). *The State of the Industry Report on Mobile Money 2024*.
95 N=693. RFS1 did not ask what type of debit cards farmers had, as Winich Farms had not rolled out the service.
96 N=256
97 N=262. RFS respondents answered based on the means of transportation available to them.

Figure 24
Perceived benefits of digital payments for farmers in Ghana, Kenya and Nigeria⁹⁸



Souce: GSMA

88% of farmers agreed that digital payments offer several benefits, including faster and safer payments, a clear record of sales and the ability to receive payments without having to travel.⁹⁹ However, farmers still have concerns about the use of digital payments, including potential bank or mobile money fees and the reliability of financial institutions.

Women were more likely to value quick and secure payments (89%) compared to men (82%).¹⁰⁰ A TDX female farmer in Ghana shared: *“TDX changed the story of keeping cash under our pillows; we can now move with our cash safer in our phones without fear of [the money] being stolen or going missing.”*

98 N=1,211 ≤ N ≤ 1,257. Mali is not included, as the surveys did not specifically focus on the perceived digital payment benefits.
99 N=1,211 ≤ N ≤ 1,257
100 N=1,211 ≤ N ≤ 1,257 (N=605 ≤ N ≤ 635 female and N=606 ≤ N ≤ 622 men)



Financial inclusion

Digital payments make it easier for farmers to receive payment for their crops, purchase goods and services and build financial resilience by enabling safer, more convenient transactions and greater opportunities to save.

Savings are a linchpin of financial inclusion, allowing farmers to better plan for agricultural and household expenses. In Ghana, women farmers of **TDX** who are paid through mobile money reported being able to save money for upcoming expenses – something they struggled with if paid in cash.¹⁰¹ As one farmer explained: *"I have money in my mobile account, which can be used to pay for tractor services later. I could not do that before unless I borrowed from an outgrower scheme."*

In Kenya, 77% **eProd's** clients are farmers, who reported that they improved their total savings by being paid via mobile money.¹⁰² Additionally, 72% of farmers reported a positive impact on accessing other financial services as a result of their transaction history, including access to credit via an agribusiness.¹⁰³ However, men were more likely to claim this compared to women, as they typically have greater access to financial services.

In Nigeria, **Winich Farms** farmers use their debit cards for transactions that include money transfers, cash withdrawals, purchases and farm input payments.¹⁰⁴ More than half (53%) keep money in their account until needed, a sign of greater trust in banks. Surveys also showed that bank accounts provide pathways to broader financial inclusion. Farmers stated that owning a bank account can enable them to access other financial services, including savings accounts, bank loans, third-party loans and financial management advice.¹⁰⁵

However, a gender gap persists, with only 56% of female farmers being aware of credit options¹⁰⁶ compared to 77% of male farmers.¹⁰⁷ Male farmers were also more likely to reap the benefits of owning a bank account, which could signal low confidence among female farmers to use the debit cards and their limited mobility to travel to the nearest POS agent to withdraw cash due to domestic responsibilities.

101 Based on 30 female farmers in TDX FGDs.

102 N=108

103 N=108 (N=46 female and N=63 male.; 61% male farmers vs 45% female).

104 N=452, multiple answers.

105 N=446 ≤ N ≤ 461, multiple answers.

106 N=192

107 N=308

Access

OKO has registered more than 11,000 new users through insurance subscriptions since the Accelerator started, 98% of whom are smallholder farmers with landholdings under two hectares.¹⁰⁸

Farmers can register for OKO services either via USSD or an agent, but most (70%) do not feel confident accessing OKO insurance on their own on the USSD platform.¹⁰⁹ Insurance is typically viewed as a trust-based service,¹¹⁰ with 81% of farmers registering for OKO's service in-person with an agent.¹¹¹ Sidy, a male farmer, shared: *"Abdoul (an OKO sales agent) motivated me through his visits to my field. It is because of the trust I have in Abdoul that I joined OKO."* The importance of human interaction in insurance sales cannot be understated, as it requires farmers to recognise and understand agricultural risk management.

84% of OKO customers reported financial safety as a benefit of insurance,¹¹² explaining it gave them peace of mind that if anything happened, they would be protected. OKO is viewed as a trusted insurance provider that can provide compensation to mitigate farm losses and avoid the need for farmers to borrow informally to cover any losses. An additional benefit is that 76% of farmers have learned about the value of insurance¹¹³ and how it can benefit their agricultural operations and livelihoods. Typically a complex financial service, field agents help give farmers a deeper understanding of the product and make the concept of insurance more accessible.

Climate resilience

Being able to absorb the impacts of climate events requires having access to a variety of resources and financial services, such as insurance. **82% of farmers who subscribed to OKO insurance felt more capable of recovering from climate-related shocks**, such as droughts or floods, as payouts help mitigate potential income loss during the growing season.

However, insurance is just one of several risk-coping mechanisms farmers rely on. Having experienced climate events in the past, some OKO farmers have already adopted climate-smart strategies, such as planting drought- or flood-resistant crops or diversifying their incomes through off-farm work to establish a financial safety net.¹¹⁴

¹⁰⁸ N=10,808, OKO BI data.

¹⁰⁹ N=372

¹¹⁰ One Acre Fund. (2024). *Subsidizing Agricultural Insurance in Sub-Saharan Africa*.

¹¹¹ N=375, multiple answers. (RFS1 only asked farmers that received a payout, RFS2 asked all farmers subscribed to the service.)

¹¹² N=97

¹¹³ N=97

¹¹⁴ GSMA AgriTech Accelerator. (January 2025). MEL Impact Case Study – OKO, Mali.

Financial inclusion

Affordability is a key driver of financial inclusion. In OKO's case, 81% of farmers consider the insurance product affordable. To accommodate farmers with limited financial capacity, OKO allows premiums to be paid in instalments,¹¹⁵ a feature chosen by 91% of subscribers. This flexible payment model enables OKO to reach smallholder farmers more effectively.¹¹⁶

However, responsible insurance also requires that farmers clearly understand the terms and conditions – an area that has proven more difficult for OKO. The RFS indicate that 55% of farmers lack a clear understanding of the payout process and conditions (e.g. if the premium is not paid in full, any payout will be paid pro rata).¹¹⁷ Despite this knowledge gap, 91% of farmers still plan to renew their insurance next season.¹¹⁸ This suggests that while the technical details may be unclear, farmers grasp the fundamental value of insurance: protecting

themselves from potentially greater financial losses during climate events.

89% of farmers who received an insurance payout found it helpful,¹¹⁹ as they spent it primarily on basic needs for their family (56%), with a portion directed towards investment in their farm (33%) and debt repayments (18%).¹²⁰ This indicates that insurance was provided a sufficient financial safety net for farmers and helped to mitigate the loss of income.

52% of farmers who received a payout spent it within two days.¹²¹ Female farmers were more likely than male farmers to spend their entire payout, a reflection of the gendered financial pressures they face.¹²² Social norms often place greater responsibility on women to cover the basic needs of their household, leaving them with less flexibility and more immediate financial demands.

Livelihoods

48% of OKO farmers reported the insurance payout led to increased food security.¹²³ This means that smallholder farmers, who farm for subsistence and sell any surplus, can more easily support their households. Yet, 32% stated the payout had no significant impact on their livelihoods,¹²⁴ often because it was insufficient to cover the full extent of their losses. Some farmers reported improved and sustained access to education, health services and agricultural inputs, although to a lesser degree.

¹¹⁵ Instalment payments mean that, if eligible for a payout, users will receive pro rata payments.

¹¹⁶ N=10,808, OKO BI data.

¹¹⁷ N=300

¹¹⁸ N=600

¹¹⁹ N=172 (29% received an insurance payout – N=599)

¹²⁰ N=144, multiple options.

¹²¹ N=144

¹²² N=144 (N=18 women and N=126 men. 67% female farmers vs. 50% of male).

¹²³ N=144

¹²⁴ N=144

Access

Access to loans remains the most critical need for farmers as they enable them to invest in their farms. However, farmers often struggle to secure formal loans due to a lack of collateral and economic identities.

OKO facilitates access to loans through a bundled service with its MFI partner in Mali, Micro-Institution Income Growth (RMCR) Network. RMCR staff offer OKO's insurance policies to farmers applying for loans or OKO facilitates access to RMCR when farmers register for the insurance service.

The RFS revealed that although just 13% of OKO customers accessed loans via RMCR,¹²⁵ the bundled service helped overcome a critical barrier. By using insurance as a form of guarantee, farmers without traditional collateral, such as land titles, could still access insurance.¹²⁶ The assurance that the insurance payout can be used for loan repayment increased the confidence of RMCR that the risk associated with the loan was mitigated.

Lack of awareness is one of the main barriers to accessing loans, as **78% of farmers were unaware that OKO facilitates access to loans.**¹²⁷ This is due to a combination of factors, such as regional differences, as the loans were not available in all regions where OKO operated in Mali. Additionally, farmers with no education or only primary education (83%) were less likely to be aware of the bundle, as they are not RMCR's target customers. Raising awareness through a concerted campaign and promoting field agents could improve access to insurance bundled with loans. Additionally, making the loan application available via USSD could help improve access to loans for farmers.

In Kenya, eProd's agribusiness clients offer access to loans for farmers, with eProd managing the loan process.¹²⁸ 36% of farmers had accessed loans from these agribusinesses,¹²⁹ and **96% found the ease of accessing and being approved for credit to be positive, with women more likely to report this positive impact.**¹³⁰ Women appreciated the ability to access loans, as they tend to be excluded from these financial services.¹³¹ Additionally, the eProd loan management system has helped to quickly facilitate access to loans through a farmer's transaction history and farmer profiling on behalf of their clients.

The benefits of accessing loans include the ability to invest in productivity-enhancing inputs immediately, such as fertilisers, agrochemicals, feed and seeds, rather than waiting to accumulate savings and missing planting windows. **83% of farmers used their loans to cover essential agricultural costs.**¹³² For many, this was the first time they had access to specific inputs. As Antou Fanta, a female farmer in Mali, explained: *"I didn't have access to fertiliser before, but now I can buy it thanks to the loan, and increase my yield."*

125 N=1,099

126 Chassin, L. (7 November 2024). "De-risking Smallholder Farmers Lending: How Weather Index Insurance can Improve Access to Credit". *GSMA Mobile for Development Blog*.

127 N=468

128 Winich Farms also introduced a produce-collateralised loan for its farmers in Q1 2025. However, it was too late in the Accelerator to conduct an RFS or ICS to assess the impact of this service.

129 N=108

130 N=108 (N=46 women, N=63 men). 91% women vs 82% men.

131 Varangis, P. et al. (2021). *Women in Agriculture Using Digital Financial Services: Lessons Learned from Technical Assistance Support to DigiFarm, Fenix, and myAgro*. World Bank Group.

132 N=165

Financial inclusion

Loan and insurance bundles are viewed as a pathway to better access to financial services, with **56% of farmers reporting that insurance played a key role in securing a loan**. Additionally, 97% reported that accessing a loan had improved their financial management, enabling them to cover their farm and day-to-day expenses.¹³³

Improved financial management was especially important for female farmers, with 100% of women loan recipients reporting stronger financial capabilities, compared to 74% of men.¹³⁴ This suggests that access to loans had a disproportionate impact on women and highlights the importance of reducing barriers for female farmers to empower them financially. Antou Fanta, a female farmer in Mali,

said: *"I can now avoid using my own funds to cover agricultural expenses. Instead, I use my savings to pay for my personal expenses and use the loan to carry out my agricultural activities, which generate revenues. In the end, I can manage my expenses and revenues much better."*

However, the terms of the loan-insurance bundle were not well understood. 72% of loan recipients were unaware that if they did not repay the loan, their insurance payouts would be used to repay a portion of the loan. Additionally, many perceived credit as a form of income rather than a tool for income generation, highlighting the need for more financial education.

Productivity and income

Farmers reported that loans improve their ability to purchase transformative inputs, supporting their productivity and leading to higher incomes.

In Kenya, **94% of farmers associated with eProd** perceived that access to loans improved productivity through the reduction of losses and an increase in yield, with 88% stating there was a positive impact on

their income. In Mali, **81% of OKO farmers believed that without a loan, their yields and incomes would be lower**.¹³⁵ Rahama, a female farmer in Mali, stated: *"I was able to purchase more land, increasing my cultivable area and enabling me to earn more. If I hadn't obtained this, it would have been more difficult to increase it."*

Livelihoods

Loans provided farmers with immediate financial leverage, enabling them to invest in their farms and improve their livelihoods. Farmers stated that the loans had improved their food security (78%), increased their ability to access inputs (56%) and provided education for their children (53%).¹³⁶ However, in Kenya, male farmers were more likely to claim that eProd's clients help them maintain their farming activities and income than female farmers, which can stem from men having more access to productive resources (inputs and equipment) and women having to use their loans for household needs rather than farm investment.¹³⁷

81%

OKO farmers believed without a loan, their yields and incomes would be lower.

133 N=57

134 N=57

135 N=32

136 N=57

137 N=108 (N=46 women and N=63 men. 82% of men vs 70% of women).

Conclusion



The Accelerator has shed light on both the complex realities of scaling agritech innovations and the transformative potential of digital agriculture solutions to improve the lives of smallholder farmers. The experiences of the cohort members across Sub-Saharan Africa and Asia paint a nuanced picture of what it takes to provide sustainable agritech services that have a lasting impact on farmers' livelihoods.

Over two years, the Accelerator provided tailored technical assistance to 10 agritechs, including UX research and design, investment readiness, market engagement, MEL, insights and capacity building. This support delivered tangible results: a total of 335,639 farmers were reached, significant product improvements were implemented and almost \$1,379,000 was raised in external funding.

Our findings consistently highlight that successful digital agriculture solutions are user-centric. Developing a deeper understanding of farmers' realities enables agritechs to provide services that meet their needs and fit with their existing agricultural behaviours and practices. Balancing innovation with UX principles and focusing on core features that deliver clear value are vital, particularly when designing for users with limited digital literacy in low-connectivity environments.

The impact of these solutions is evident in our data. Farmers who have used the services of Accelerator cohort members report enhanced climate resilience, increased productivity and higher incomes. Digital advisory services have enabled more informed decision-making, market linkage platforms have reduced post-harvest losses, while insurance has provided critical safety nets and digital payments have facilitated higher savings.

To amplify the socio-economic impact on farmers, there needs to be a collaborative effort across the entire agricultural ecosystem. Agritechs must continue refining their user-centric approaches. Donors and investors should develop financing instruments that are better aligned with agritechs' realities. Policymakers need to create enabling environments that balance innovation with farmer protection. All ecosystem actors should work together to ensure digital solutions remain accessible and beneficial to all farmers, including women and other marginalised groups.

As the global challenges of food security and climate change intensify, the importance of effective digital solutions for agriculture will only grow. The GSMA AgriTech Accelerator demonstrates that when these solutions are designed *with* farmers rather than simply *for* them, they can contribute significantly to more resilient, inclusive and productive food systems. By applying the lessons and insights from the Accelerator, the agritech ecosystem can work towards a future where technology improves the livelihoods of smallholder farmers – the backbone of global food security.

Key takeaways for agritechs

Design with users, not for them

Agritechs should prioritise UX research and design to understand their users' contexts, needs and digital capabilities. Services should be designed for simplicity with intuitive interfaces and clear user journeys. A focus on core features that deliver real, tangible value – rather than overwhelming users with functionalities – is critical for successful adoption.

Design for inclusion

Agritech services need to work for all users, including women farmers and farmers with disabilities. Conducting research with diverse and underrepresented groups helps uncover specific barriers and needs, and supports more equitable access, tailored content and features that reflect their roles across the agricultural value chain.

Make investment readiness a priority

Agritechs need funding to support their scaling ambitions, but raising investment is a resource-intensive process that extends well beyond pitching. From building robust business and financial models to navigating investor engagement, it demands significant time and focus. To succeed, investment readiness must be treated as a core business function – prioritised and embedded in the company's growth journey.

Balance digital and human touchpoints

Human interaction remains essential for building trust and supporting the adoption of digital services. Agritechs should consider investing in well-trained agent networks, particularly for complex services like insurance or market linkages. These agents can bridge technical knowledge gaps, provide in-person support and serve as trusted intermediaries who facilitate the transition to digital tools. While there are costs involved in maintaining these networks, they could prove essential for building the trust necessary for sustainable adoption.

Build strategic partnerships

Agritechs must leverage partnerships to support their growth and scale. Building partnerships with established organisations, including but not limited to MNOs, NGOs, agribusinesses and FSPs, can be an opportunity for agritechs to gain access to users, build their skills and knowledge and apply their services in other ways. These partnerships need to be cultivated based on clear mutual value.

Align business models with agricultural realities

Designing viable business and financial models remains a key challenge for many agritechs. Balancing affordability for smallholder farmers with long-term sustainability requires testing and iterating a range of approaches – from freemium and tiered pricing models to diversified revenue streams that blend B2C and B2B elements. Agritechs must build models with sustainability in mind from the outset, including clear plans to transition away from dependence on donors. The ability to adapt to market realities, such as economic shocks or shifting user behaviour, is also critical to ensuring adoption, usage and retention over time.

Cultivate resilience, adaptation and strong tech teams

Finally, talent remains a critical ingredient of agritech success. Companies led by resilient, adaptable teams that can navigate changing market conditions showed the greatest progress. Yet, many struggled to attract and retain key technical talent, particularly in software development and UX design. Building stronger pipelines of qualified professionals with both technical skills and an understanding of agriculture would benefit the entire sector.

Recommendations for donors, investors and technical assistance providers

Technical assistance needs de-risking funding for product development

There is a need to establish dedicated funding pools to support the implementation of technical assistance (TA) recommendations. Programmes must provide early-stage de-risking capital that enables agritechs to act swiftly on expert guidance without bearing the full implementation costs themselves. This funding should bridge the gap between receiving recommendations and achieving revenue-driven sustainability, as this will ensure TA delivers practical value rather than remaining theoretical.

Personalised market engagement support is crucial

Programmes should prioritise recruiting market engagement professionals who combine technical knowledge, strategic insight and strong interpersonal skills. Future initiatives must build multidisciplinary support teams capable of fostering relationships, identifying market opportunities and providing comprehensive mentoring to agritech founders and their teams.

Peer-to-peer learning complements expert technical assistance

Accelerator programmes should create opportunities for founders to learn from peers across different use cases, value chains and geographies. Programmes must establish connections with mature agritech ecosystems to inspire innovation and scaling approaches. An active community should be maintained both during and after programme completion, fostering ongoing ideation, collaborative problem solving and strategic partnerships.

Rigorous insights generation needs to be prioritised and funded

Future programmes must prioritise and adequately fund robust insights generation that extend beyond streamlined research packages. Programmes should build a strong evidence base, particularly in emerging areas such as AI, where critical knowledge gaps exist. This requires larger research investments to develop a comprehensive understanding of implementation pathways, market opportunities and associated risks.

Stronger MEL evidence and data are needed for product iteration

Programmes should invest in rigorous evaluation methodologies that include baseline and endline assessments with users and control groups, as well as longitudinal studies that capture behavioural change and impact over time. This evidence base must inform product iterations, strengthen investment cases and contribute to a broader understanding of effective digital agriculture interventions.

Investment should be aligned with agricultural realities through patient capital

The experience of agritechs in the Accelerator underscores the need for more patient capital that aligns with the realities of the agriculture sector. Investors, donors and development agencies should develop blended finance models that combine grants, equity and debt to provide long-term, flexible support across various stages of growth. These financing mechanisms must align with agricultural realities, including seasonal cycles and extended growth curves, which traditional venture capital timelines often fail to accommodate.¹³⁸

138 Marston, J. (7 October 2024). "The venture capital model is still suitable for agtech. Sort of". AgFunder Newsletter.

Annexes



Annex 1

Definitions

Agribusiness	Formal buyer, trader or exporter of agricultural produce, as well as an input supplier.
Agricultural loans	Lending products that target smallholders and address specific agricultural needs.
Agricultural productivity	A ratio of a volume measure of output to a volume measure of input use. ¹³⁹
Agricultural value chains	The actors and activities that bring basic agricultural produce from the field to final consumption, with value added to the produce at each stage. Agricultural value chains can involve processing, packaging, storage, transport and distribution. Value chains can be formal or informal depending on the strength of the relationship between farmers and buyers.
Agri tech	A company providing technology-based solutions to increase efficiency, transparency and profitability in agriculture.
Agri DFS	Digitally enabled financial services tailored to address farmer needs. This includes electronic payments and money transfers, savings, borrowing, insurance, investments and financial management solutions.
Business to business (B2B)	A business model in which an agritech provides products, services or technology solutions directly to other businesses rather than to individual farmers. These customers can include agribusinesses, cooperatives, input suppliers, food processors, commodity traders, financial institutions or even large-scale farm enterprises.
Business to consumer (B2C)	A business model in which a company sells their product and service directly to consumers who are the end users.
Climate resilience	The ability to mitigate and adapt to the impacts of climate change. This includes having the capacity to anticipate climate risks and hazards, absorb shocks and stresses and reshape and transform development pathways in the longer term.
Digital advisory	Agronomic and livestock advice to farmers on best practices, as well as market price and/or financial and digital literacy training. Digital advisory can also include advice specific to weather and climate information, including weather forecasts.
Digital literacy	Skills required to achieve digital competence, the confident and critical use of information and communications technology (ICT) for work, leisure, learning and communication. ¹⁴⁰
Digital payments	Digital payments through mobile money and e-wallets are money transfers using a mobile phone. They enable farmers to transact with various actors within the agriculture ecosystem, for instance, to make and receive payments like electronic vouchers to redeem agricultural inputs. Digital payments enhance the ability of farmers to save money and develop a transactional history, which can be used alongside other types of data to access additional financial services.

¹³⁹ Source: OECD

¹⁴⁰ Source: EU Commission

Digital procurement	Digital solutions in the agricultural last mile that enable a range of digital systems and processes to transition from paper to digital. These solutions help agribusinesses make their transactions with smallholders more transparent and improve efficiency and operational profitability. Farmers benefit from more transparent transactions, improved market access and the ability to create a digital footprint, which can be used to access financial services.
Digital profiles	Farmer and farm data that can be used by a service provider or multiple service providers to design and direct products or services. The ability to record digital profiles is included in the enterprise services offered to agribusiness and cooperative clients, which create records of their farmer base, digitise procurement transactions and payments and offer other value-added services to farmers, such as advisory and financial services.
Financial inclusion	Access and use of useful and affordable financial products and services, including transactions, payments, savings, credit and insurance, that meet farmers' needs and are delivered in a responsible and sustainable way.
Gender inclusion	The active practice of creating environments where people of all gender identities, especially women, can participate fully, safely and authentically without facing barriers or discrimination based on their gender identity or expression.
Insurance	Digitally enabled agricultural insurance services that help smallholder farmers mitigate the risks associated with external shocks, such as weather events and pest and disease outbreaks. Agricultural insurance includes weather index, area yield index, multi-peril, livestock and livestock index insurance products.
Investment readiness	Refers to the preparation state of a business or startup to engage with and attract investors. It involves having the necessary plans and documentation in place to demonstrate to potential investors that the business is viable, scalable and capable of delivering a return on investment.
Market linkages	Digitally enabled solutions that link smallholder farmers to farm inputs (e.g. seeds, fertilisers, herbicides/pesticides), to production and post-harvest mechanisation and other services (e.g. irrigation, tractors, cold storage) or to offtake markets, including agro dealers, wholesalers, retailers or even the end consumer.¹⁴¹
Smart farming	Solutions that use sensors, drones, satellites and other farm assets to generate and transmit data about a specific crop, animal or practice to support agricultural activities. Smart farming solutions rely on connectivity between IoT-enabled devices to optimise production processes and growth conditions while minimising costs and saving resources.
Supply chain management	The management of relationships between various stakeholders (farmers, cooperatives, traders and businesses) in the agricultural value chain from procurement to delivery.
Serviceable addressable market (SAM)	A segment of the total addressable market (TAM) targeted by a company's products and services within its geographical reach. Represents segment market potential or limited market demand for a product or service.
Serviceable obtainable market (SOM)	The portion of a SAM that a company can capture. The number of customers that can be realistically reached with its product/service given competition, capacity, etc. Represents the estimated market potential and position in a competitive landscape.
Total addressable market (TAM)	The total demand for a product or a service across all market segments. The maximum number of people who could realistically buy from a business.
User experience (UX)	User experience (UX) puts farmers and their experience at the centre of product and service design and is grounded in continuous and structured interaction with end users. This approach helps to translate user needs into a product value proposition and ensures that all aspects of the service, from the overall experience to the details of every feature, are verified with target users.

141 Source: Dalberg and CTA

Annex 2

Development stages framework

The development stages framework was designed to assess the readiness of cohort members on two components of technical assistance: investment and UX/UI. Table 3 provides a breakdown of each development stage.

Table 3
Development stages framework definitions¹⁴²

Stage	Investment readiness	UI/UX readiness
■ Early stage	– Source of funds: family and friends; personal credit – Investment strategy and experience: undefined funding strategy. Low awareness of investment terms and processes. Limited exposure to investors and pitching.	Digital product not yet developed; design from scratch
■ Developing	– Source of funds: crowdfunding, grants, incubators and accelerators, angels – mostly at the pre-seed stage – Investment strategy and experience: funding strategy somewhat defined. Limited awareness of investment terms and processes. Some exposure to investors and pitching.	Digital product designed by engineers, but with a very poor user experience; structural changes needed
■ Defined	– Source of funds: incubators and accelerators, commercial capital (banks, venture capital, private equity) – mostly at the pre-seed and seed stage. – Investment strategy and experience: funding strategy well defined. Reasonable awareness of investment terms and processes. Have significant exposure pitching to commercial investors but limited commercial fundraising.	Digital product designed but with poor user experience; working on redesigning its app
■ Mature	– Source of funds: commercial capital (banks, venture capital, private equity) – mostly at the pre-series A and series A stage. – Investment strategy and experience: funding strategy well defined and modelled. Strong understanding of investment terms and processes. Have significant exposure pitching to commercial investors with significant commercial funds raised.	Good user experience but low usage; working on adding innovative features
■ Advanced	– Source of funds: commercial capital (banks, venture capital, private equity) – series A and post-series A stage. – Investment strategy and experience: funding strategy well defined and modelled. Strong understanding of investment terms and processes. Have significant exposure pitching to commercial investors with significant commercial funds raised. Have a strong network of commercial investors with ongoing conversations.	Good user experience; few UX adjustments needed

¹⁴² GSMA AgriTech Accelerator definitions. (2025).

Annex 3

Cohort member profiles



**COUNTRY OF OPERATION**
Active in 21 African countries and Afghanistan

**USE CASES**
Supply chain management; agri DFS

**BUSINESS MODEL**
B2B

**SERVICES**
Enterprise resource planning (ERP), digital payments, loan monitoring

Summary of solution

eProd is an agricultural supply chain management platform for agribusinesses that supports smallholders by structuring informal markets. The company's end-to-end ERP platform enables agribusinesses, cooperatives, commodity traders and food processors to manage their daily operations. These include farmer registration and profiling, farm administration, farmer surveys, procurement transaction recording, traceability, certification and loan monitoring. The platform also supports SMS advisory and yield forecasting, and integrates with third-party services for mobile payments, credit scoring and inventory management. The software comes with a desktop application for agribusinesses and a mobile app for registering farmers and crop collections in the field. The solution is provided as an off-the-shelf service, available for an annual licence fee and can be tailored to specific value chains.

Key milestones

- Q1 2024:** Adapted the ERP software to support compliance with upcoming EUDR regulations (improved polygon mapping and traceability with bill of lading)¹⁴³
- Q2–Q4 2024:** Built API integrations with multiple MNOs (MTN, M-PESA) to enable its customers to make digital payments to farmers
- Q3 2024:** Partnerships with international NGOs to develop training sessions and webinars for agribusinesses in areas including contract farming, soil analysis and EUDR compliance
- Q1 2025:** Developed a partnership with I&M Bank for automated farmer loans

	At the beginning of the Accelerator	At the end of the Accelerator
Investment readiness	DEVELOPING ■ ■ ■ ■ ■ Have not previously raised commercial funding; bootstrapped through projects with clients and grants.	DEVELOPING ■ ■ ■ ■ ■ Investment readiness was improved by the development of financial models, which better prepared it financially and operationally to receive external funding.
UX readiness	DEVELOPING ■ ■ ■ ■ ■ The product faces accessibility and usability issues, making it difficult to navigate and master.	DEVELOPING ■ ■ ■ ■ ■ Suggested UX changes for onboarding and navigation are not fully implemented. Usage remains unchanged.

Impact

eProd registered more than 110,000 new farmers in Kenya and Uganda via its clients, 38% of whom are women.

Learn more in our blog: [‘How eProd is facilitating export standard compliance in Africa’](#)

143 Chassin, L. (18 April 2024). "Deforestation regulations: A boon for agritech innovation, but will it leave smallholders behind?" GSMA Mobile for Development Blog.



COUNTRY OF OPERATION
Ghana



USE CASES
Digital advisory, market linkages, agri DFS



BUSINESS MODEL
B2C and B2B



SERVICES
Farmer information, digital climate advisory, macro agri-intelligence

Summary of solution

Esoko was founded in 2008 to provide survey services to NGOs and businesses, as well as messaging content to farmers. Over time, the company evolved to offer a suite of digital services designed to empower rural agricultural communities. Its Digimkt platform provides digital content, including agricultural market prices for more than 50 commodities in Ghana, as well as weather forecasts and agronomic advisory content. Its hyperlocal content is delivered to farmers' mobile phones via SMS, voice message, videos, IVR, USSD, call centre and data collection applications in local languages. The company relies on 3,000 agents to deliver its service in the last mile, who are paid through commissions (transaction fees) and are responsible for onboarding farmers to the platform and aggregating their produce.

Key milestones

- **Q3/Q4 2024:** The business model was redesigned to expand from B2B to B2C (providing services to the farmers directly without going through business partners)
- **Q4 2024:** Introduced access to market services with agents as aggregators (buying produce from farmers with an electronic scale)
- **Q4 2024:** Integrated mobile money payments via a partnership with MTN
- **Q4 2024:** Partnership with MTN expanded to include disseminating agronomic advisory
- **Q2 2025:** Launch of digital agent management app, including a reporting dashboard, geolocalisation of agents and real-time task allocation and monitoring of agent activities

	At the beginning of the Accelerator	At the end of the Accelerator
Investment readiness	DEFINED ■■■■■ → Secured grant funding from the International Trade Centre in 2021 and raised \$1.5 million in equity from Acumen and Lundin Foundation in 2014. Had a valuation that required improvements.	DEFINED ■■■■■ Worked on developing its financial model, but Esoko was already receiving investment readiness support through another programme and reduced the support provided via the Accelerator.
UX readiness	MATURE ■■■■■ → Its existing digital platform was advanced in terms of UX, but an agent management app needed to be developed.	ADVANCED ■■■■■ Developed an agent management app that streamlined agent onboarding, reporting and task allocation.

Impact

Since Q3 2023, Esoko has registered more than 60,000 new farmers, 27% of whom are women.

Learn more in our blog: [Leveraging agent networks in Ghana to improve digital agriculture service delivery to farmers](#)



COUNTRY OF OPERATION
Nigeria



USE CASES
Smart farming



BUSINESS MODEL
B2C



SERVICES
Smart livestock management

Summary of solution

FarmSpeak Technology Limited is a Nigerian agritech that uses data-driven solutions to enable poultry farmers to manage and monitor their farms. FarmSpeak offers two key solutions to enhance poultry farming efficiency. PenKeep, an IoT device, monitors and controls poultry pen microclimates to reduce bird mortality. FS Manager, a farm management software, enables farmers to track bird inventory, feed intake, medication, mortality, expenses and sales. The FS Manager app analyses farm data to provide insights on feed conversion, bird growth, mortality trends and market prices, displayed on an intuitive dashboard. It integrates with PenKeep, sending real-time alerts for climate adjustments. The effectiveness of FS Manager's advisory services depends on the quality and consistency of data entered by farmers.

Key milestones

- **Q3 2024:** Redesigned the FS Manager with a focus on simplicity and user-friendliness, separating production-related data from farm financials to address privacy concerns
- Introduced strategic nudges and incentives to encourage farmers to record the required data consistently
- **Q4 2024:** Piloted alternative pricing models for its solutions
- **Q4 2024/Q1 2025:** Refined its website following an off-site PIW
- **Q2 2025:** Enhanced the FS Manager by adjusting user settings and adding sales and expenses tracking

	At the beginning of the Accelerator	At the end of the Accelerator
Investment readiness	EARLY STAGE ■ ■ ■ ■ ■ → Obtained grant funding of \$75,000 from USAID in 2021.	EARLY STAGE ■ ■ ■ ■ ■ Obtained other forms of grant funding and prizes, but mainly small scale, such as \$10,000 from the National Centre for Artificial Intelligence and Robotics (NCAIR)-Google AI Fund
UX readiness	DEVELOPING ■ ■ ■ ■ ■ → A web interface existed, but a mobile app developer was needed to build it	DEFINED ■ ■ ■ ■ ■ Designed the FS Manager app and redesigned it as several features caused user confusion. It simplified the process, including the number of user registration questions.

Impact

FarmSpeak users found the FS Manager app to be very easy to use, straightforward and more accessible than similar technologies they had used before.

Learn more in our blog: [Unlocking the productivity of smallholder poultry farming in Nigeria: The role of farm-level data in FarmSpeak's tailored advisory services](#)



COUNTRY OF OPERATION

Cambodia, Myanmar, Vietnam



USE CASES

Digital advisory



BUSINESS MODEL

B2C and B2B



SERVICES

Farmer information, digital climate advisory

Summary of solution

Originally operating in Myanmar, Greenovator is an agritech that uses technology to help farmers access technical support and market linkage opportunities, working to become a leading digital advisory platform in the entire Mekong region. It began operating in Cambodia in 2023 and its regional advisory app, Mekong Farm, is available in multiple Southeast Asian languages. It aims to connect farmers to experts and peers to solve their most pressing agricultural information needs, including weather information and forecasts, community interaction and cropping guidelines to optimise performance. The company also offers a digital farm management platform with traceable QR codes to agribusiness clients (FarmSuite).

Key milestones

- **Q3 2024:** Iterated the design of the Mekong Farm app based on UX insights, integrating voice-to-speech and speech-to-text features
- **Q3 2024:** Developed and launched a B2B advisory solution (FarmSuite) for agribusiness to provide traceability and supply chain management
- **Q3 2024:** Partnership with Inland Fisheries Department of Cambodia to provide weather alerts to fisherfolk and support fishing trip planning
- **Q4 2024:** Signed an agreement with the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) to expand the Mekong Farm app to Vietnam
- **Q4 2024:** Formed a partnership with Smart Axiata, Cambodia's leading MNO, to develop new content and promote its services

	At the beginning of the Accelerator	At the end of the Accelerator
Investment readiness	EARLY STAGE ■ ■ ■ ■ ■ Grant received from the GSMA Ecosystem Accelerator in 2018.	DEVELOPING ■ ■ ■ ■ ■ \$15,000 raised in grant funding for its Vietnam operations.
UX readiness	DEFINED ■ ■ ■ ■ ■ The app was functional but refinements were needed to improve user understanding. This included clarifying the relevance of features for users and optimising their interaction with the app through a redesigned interface.	ADVANCED ■ ■ ■ ■ ■ Developed a voice-to-text feature for farmers after discovering farmers preferred to engage this way, and saw improved usage.

Impact

Greenovator found that farmers appreciated the visual aspect of the Q&A function on the Mekong Farm app, as being able to see pictures posted by other farmers and the issues or challenges they have allowed them to recognise and relate to the various questions being discussed.

Learn more in our blog: [Expanding beyond borders: Greenovator's journey of regional expansion](#)



COUNTRY OF OPERATION
Senegal



USE CASES
Digital advisory



BUSINESS MODEL
B2B



SERVICES
Farmer information, digital climate advisory

Summary of solution

Jokalante provides an SaaS package that enables agricultural partners, including agribusinesses, donors and farming cooperatives, to deliver digital advisory services to its users through robust communication and feedback channels. Farmers receive agronomic and climate advisory information on seed selection, planting times, cropping techniques, weather and more through multiple channels, including SMS and IVR, USSD, voice and radio.

Key milestones

- Q2 2024: Revised its B2B strategy to secure more revenues
- Q3 2024: Developed an internal data dashboard to optimise data collected from farmers and businesses
- Q3 2024: Redesigned its business model to offer a range of services, including data collection, content, e-commerce, insights and dissemination
- Q2–Q4 2024: Implemented platform/app changes to make it more user-friendly and improve the UX
- Q1 2025: Secured a contract with YAS, an MNO in Senegal, to help farmers connect with climate information

	At the beginning of the Accelerator		At the end of the Accelerator
Investment readiness	EARLY STAGE ■ ■ ■ ■ ■ Raised \$200,000 in grants and crowdfunding. Does not have a valuation.	→	EARLY STAGE ■ ■ ■ ■ ■ Shifted from donor funding to monthly recurring revenue.
UX readiness	DEVELOPING ■ ■ ■ ■ ■ Its app had low usage and an outdated interface.	→	COMPETENT ■ ■ ■ ■ ■ Made app features easy to access, creating attractive dashboard reports and a filter function.

Impact

Jokalante reached 26,815 farmers during the Accelerator and completed a strategic public-private partnership (PPP) with the National Agency of Civil Aviation and Meteorology (ANACIM) in Senegal.

Learn more in our blog: [Jokalante, Senegal: Harnessing the value of B2B partnerships for scaling](#)


COUNTRY OF OPERATION

Tunisia


USE CASES

Digital advisory


BUSINESS MODEL

B2C and B2B


SERVICES

Farm and herd management, digital advisory

Summary of solution

MooMe was founded in 2018 with a focus on empowering smallholder dairy farmers and dairy cooperatives. It offers a farm management app that enables dairy farmers and extension agents to collect data on milk production, feed consumption and reproductive cycles, providing actionable recommendations to improve productivity and animal health. Through the app, farmers receive practical advice to optimise operations and increase production, while dairy corporations gain valuable insights into their supply chains, reducing extension costs, expanding farmer outreach and streamlining sustainability reporting.

Key milestones

- **Q3 2023:** Pivoted away from smart farming to focus on livestock advisory and management, as the IoT devices (sourced from China) were not customisable
- **Q4 2023:** Business model change due to limited money and resources – moved away from B2C (but still offered a freemium version for users with fewer than 10 cows) to B2B dairy companies and extension agents
- **Q2024:** Simplifying the app by focusing on three data entry points for farmers: daily milk volume, weekly or monthly feed consumption and key reproduction parameters such as calving or insemination dates
- **Q3 2024:** Developed a climate data reporting feature
- **Q2–Q4 2024:** A partnership with Friesland Campina enabled MooMe to deliver its solutions in six new markets, including Tunisia, Pakistan and Indonesia
- **Q1 2025:** Secured multi-year funding from the International Development Research Centre (IDRC) in collaboration with CowTribe and Gene+ to pilot and test the integrated climate-smart livestock solutions for pastoralist communities in Kenya

	At the beginning of the Accelerator		At the end of the Accelerator
Investment readiness	DEFINED ■■■■■ Raised \$405,000 from venture capitalists (VCs) and impact investors	→	DEFINED ■■■■■ Grant funding of \$234,000 from IDRC. Additional \$5,000 from GIZ in March 2025 to kickstart software development.
UX readiness	DEVELOPING ■■■■■ Various UX issues, including onboarding, user journey, interface, feature count and understanding user routines and rationale.	→	DEVELOPING ■■■■■ Designs were shared with MooMe, but due to limited funding not all the changes could be implemented. Changes will be made as of Q2 2025.

Impact

MooMe received positive feedback from its users on the livestock management aspect, which optimises farm performance and provides meaningful advice based on the input data.

Learn more in our blog: [Bringing efficiency to livestock management: Lessons from MooMe](#)



COUNTRY OF OPERATION

Mali



BUSINESS MODEL

B2C and B2B2C



USE CASES

Agri DFS, financial inclusion, climate resilience



SERVICES

Insurance, access to loans, agronomic advice, weather alerts

Summary of solution

OKO offers weather index crop insurance that protects smallholder farmers against potential losses from adverse weather conditions. The service uses weather satellite data to monitor local weather patterns, and if a farmer is affected by events like droughts or floods, they receive automated, immediate compensation based on the indexed weather data. OKO registers farmers for crop insurance through both USSD and field agents. Farmers receive information about the insurance product through USSD, voice and SMS, and can make payments and receive claims using mobile money. OKO also facilitates access to loans as part of a bundled service with its insurance. Through partnerships with MFIs, farmers can access loans more easily due to lower guarantee requirements.

Key milestones

- **Q1–Q2 2024:** Improved the agent app with gamification features and offline functionalities
- **Q3 2024:** Launched a remittance project for diaspora members to pay for their family's insurance premiums
- **Q3–Q4 2024:** Developed a user-friendly dashboard to test the agent commission model
- **Q1 2025:** Developed a new tiered commission structure to give agents more commission with less cost to OKO
- **Q1 2025:** Raised \$300,000 from angel and impact investors, including the Catalyst Fund
- **Upcoming:** A partnership with Orange Money will enable mobile money agents to register for farmers

	At the beginning of the Accelerator		At the end of the Accelerator
Investment readiness	DEFINED ■■■■ Raised \$2,000,000 from VCs, angel and impact investors and grants. Had a valuation.	→	MATURE ■■■■ Revised its cap table and raised \$300,000 from impact and angel investors (including the Catalyst Fund) despite losing USAID funding following the stop-work order.
UX readiness	MATURE ■■■■ It is necessary to enhance process efficiency, refine USSD services and upgrade the agent app.	→	ADVANCED ■■■■ Redesigned its agent app to be more gamified and enhance the experience. Developed an updated commission dashboard for agents that is clear and concise.

Impact

OKO acquired more than 11,000 users during the Accelerator and increased the proportion of women farmers to 35% of its users through partnerships with UN Women and CARE.

Learn more in our blog: [Navigating the Challenges of Scaling Weather Index Insurance in Mali: The OKO story](#)



COUNTRY OF OPERATION

Ghana



BUSINESS MODEL

B2B2C



USE CASES

Market linkages, agri DFS, supply chain management



SERVICES

Last-mile aggregation and procurement, digital payments, storage facilities

Summary of solution

Founded in 2023, TDX provides agricultural commodity trading and brokerage services to connect smallholder farmers in Africa to markets. It focuses on last-mile procurement and aggregation of commodities for agro-processors, manufacturers, importers and distributors worldwide. TDX works with agents and aggregators to source high-quality agricultural produce from smallholder farmers. It has aggregation centres where smallholder farmers' crops are digitally weighed, and they are paid digitally via mobile money. The company also offers storage facilities for farmers to mitigate post-harvest losses and allows buyers to access produce easily upon payment.

Key milestones

Moved away from a farmer-facing platform to focus on developing agent and aggregator apps and the trader web platform.

- **Q1 2024:** Development and launch of an aggregator app for farmer registration, digital record keeping and crop aggregation, inventory of crop bags collected from farmers (traceability)
- **Q1 2024:** Development and launch of a trader web platform to facilitate crop orders
- **Q2 2024:** A partnership with MEDA provided women farmers with access to a market for their produce at better and fairer prices
- **Q3 2024:** Launch of a pilot with the World Food Programme (WFP) to store commodities in smart silos where humidity, moisture and temperature are controlled remotely via sensors
- **Q4 2024:** Secured third-party financing for buyers: \$100,000 as debt to support aggregators on its platform
- **Q1 2025:** Launch of the trader app

	At the beginning of the Accelerator	At the end of the Accelerator
Investment readiness	EARLY STAGE ■ ■ ■ ■ ■ TDX had raised close to \$50,000 from family and friends and from grants.	DEVELOPING ■ ■ ■ ■ ■ Raised \$100,000 as debt to fund the aggregators and \$50,000 from WFP and Mastercard Foundation for the smart silo project.
UX readiness	EARLY STAGE ■ ■ ■ ■ ■ TDX had no digital product in the market and a team that was relatively new to software development.	DEFINED ■ ■ ■ ■ ■ Launch of agent and aggregator apps and traders web interface, leading to seamless registration, optimised selling and buying, easy tracking and record keeping.

Impact

As a result of the UX work, TDX has gained more user traction. 4,800 farmers have been onboarded, leading to a revenue increase of \$600,000 transacted through the aggregator app.

Learn more in our blog: [How user-centred design can improve agri e-commerce interfaces that cater to the needs and literacy levels of smallholder farmers](#)



COUNTRY OF OPERATION
Nigeria



BUSINESS MODEL
B(2B)2C



USE CASES
Supply chain management, market linkages, agri DFS



SERVICES
Access to market, digital procurement, digital payments

Summary of solution

Winich Farms is a Nigerian agritech that addresses key challenges in agricultural value chains through a digital marketplace platform connecting smallholder farmers with informal processors and market buyers. Its solution includes a dual app system with agent functionality for farmer registration and produce aggregation, as well as offtaker functionality, allowing processors to order and receive produce directly. The platform features real-time inventory management and tracking, along with fulfilment centres for processing and distribution. Winich has expanded its services to include digital financial solutions for smallholder farmers, offering branded debit cards for digital payments in partnership with banks, and facilitating access to credit through produce-collateralised loans and API-based sharing of transaction data with FSPs.

Key milestones

- Q1 2024: Refined the Winich Agent app by improving the farmer onboarding process and allowing Winich offtakers to navigate through the app and view available products without having to complete the registration process
- Q3–Q4 2024: Winich raised \$3.1 million from a group of investors, including Acumen Resilient Agriculture Fund (ARAF) and Sahel Capital
- Q4 2024: A partnership with Sterling Bank enabled bank transfer payments to smallholder farmers (creation of bank accounts and issuance of debit cards)
- Q1 2025: Added the produce collateralised loan product to the Winich Farms App
- Q2 2025: Pilot for the produce collateralised loan product

	At the beginning of the Accelerator		At the end of the Accelerator
Investment readiness	MATURE ■■■■ Raised \$825,000 from VCs and angel and impact investors. Had a valuation.	→	ADVANCED ■■■■ Raised \$3 million from the Acumen Resilient Agriculture Fund (ARAF) in a pre-series A stage.
UX readiness	DEVELOPING ■■■■ Existing app but had to enhance the user experience.	→	MATURE ■■■■ Refined the customer experience to allow users to use the platform as guests.

Impact

The number of registered users increased from 2,214 in Q2 2023 to 23,090 in Q4 2024.

Learn more in our blog: [How Winich's market aggregation platform is driving financial inclusion for Nigerian smallholder farmers](#)



COUNTRY OF OPERATION

Egypt



USE CASES

Digital advisory



BUSINESS MODEL

B2C



SERVICES

Precision farming

Summary of solution

ZR3i provided a digital agriculture platform as a service, offering precision farming solutions including crop monitoring and management. Using satellite technology, it provided services for smallholder farmers to improve agricultural production and provided data to overcome challenges such as climate, irrigation efficiencies, soil health and structure and appropriate crop selection. ZR3i also intended to provide insurance services for farmers to mitigate climate risk.

ZR3i closed operations in early 2025.

Key milestones

N/A

	At the beginning of the Accelerator	At the end of the Accelerator
Investment readiness	DEVELOPING ■ ■ ■ ■ ■ Raised \$35,000 from angel investors. Had a financial valuation.	N/A ■ ■ ■ ■ ■ ZR3i no longer exists as a company, but the founder is exploring investment opportunities to launch a new agritech venture.
UX readiness	EARLY STAGE ■ ■ ■ ■ ■ Its app had many technical and UX issues.	N/A ■ ■ ■ ■ ■ No technical development to the platform due to a lack of funding. ZR3i did not qualify for PIWs on UX/UI as its product was not ready and not available on the market for users.

Impact

N/A

Learn more in our blog: [Zr3i: Lessons from an ambitious precision agriculture startup](#)

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