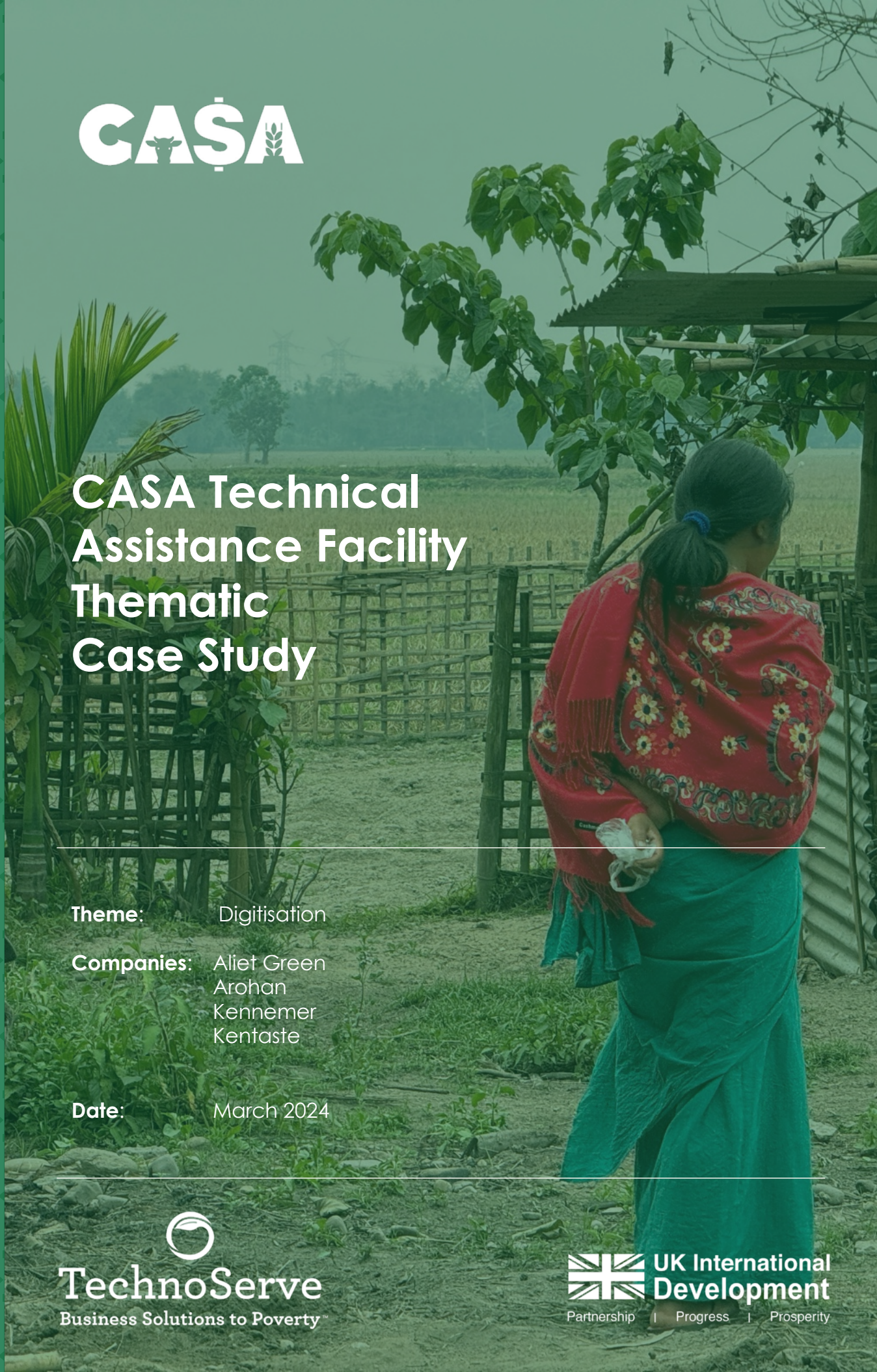


CASA Technical Assistance Facility Thematic Case Study

Theme: Digitisation

Companies: Aliet Green
Arohan
Kennemer
Kentaste

Date: March 2024

TechnoServe
Business Solutions to Poverty™

UK International Development
Partnership | Progress | Prosperity

CASA
Commercial Agriculture for Smallholders and Agribusiness

Our approach

The Commercial Agriculture for Smallholders and Agribusinesses (CASA) Technical Assistance Facility (TAF) supports agribusinesses that source from smallholder farmers across Sub-Saharan Africa and South Asia. Our approach involves working closely with agribusiness management teams to develop an Inclusive Business Plan (IBP) – a roadmap for the agribusiness to deepen, broaden or strengthen supply chains in a way that delivers value to both smallholders and shareholders.

An Inclusive Business Plan (IBP) is a piece of thorough analysis produced over 3-6 months that:

- Diagnoses smallholder supply chain challenges;
- Identifies or validates the inclusive business growth opportunity, aligned to commercial objectives, identifying opportunities for greater commercial and smallholder impact;
- Quantifies the opportunity in terms of commercial value for the business and impact for smallholder farmers;
- Lays out a strategy to access the opportunity including investment and any partners required;
- Maps out an implementation plan; a linked package of technical assistance and blended finance structure, including required partnerships to support the inclusive business model.

A recurring theme among the CASA TAF portfolio companies and IBPs is the demand for new digital systems and technology tools. Technology and data analytics are becoming increasingly critical to agribusiness operations, especially as companies combat climate change and shifting market dynamics, while also seeking to expand smallholder sourcing operations, improve operating models, and enhance business inclusivity. Navigating the complexities of technology remains a challenge to most agribusinesses, especially as technology capabilities continue to advance rapidly, underscoring the importance of tailored technical assistance that supports the sustainable implementation of digital tools.

This case study outlines our experiences, lessons learned, and practical examples from working with agricultural businesses, highlighting the challenges and successes in implementing technology solutions for sustainable growth.

What we mean by AgTech

In the agribusiness sector, technology can be broadly categorised into customer-facing applications and internal business tools, each with distinct functions and requirements:

Customer-Facing Tech:

- Aimed at smallholder farmers.
- Includes market access, financial services, educational resources.
- Enhances end-user experience and engagement.

Internal Business Tools:

- Streamlines agribusiness operations.
- Focuses on supply chain, inventory, data analytics.
- Critical for internal process efficiency and effectiveness.

Recognising that building technology for these categories is not the same is essential; each serves different objectives, stakeholders, and requires unique considerations in design, implementation, and support.

This distinction underscores the need for a tailored approach to technology development in agribusiness, ensuring that both customer engagement and operational efficiency are addressed through appropriate digital solutions.

AgTech is uniquely challenging

The drive toward integrating technology in agriculture faces distinct hurdles. While the promise of tech to enhance efficiency and sustainability is compelling, the practical application within agribusiness exposes a series of unique, significant challenges.

Drawing from our hands-on experience in the agricultural sector, we've identified critical, sector-specific challenges that starkly differentiate agribusiness technology adoption from other industries. Below are the three common challenges and issues we've encountered:

Agriculture's Inherent Risks:

Market volatility

Unpredictable markets and seasonal cash flow combined with narrow margins restrict technology investment.

Slow innovation cycle

Seasonal dependency slows down the innovation feedback loop, hampering iterations and the evolution of tech solutions.

Complex Operations Necessitate Custom Solutions:

Unique business requirements

Despite shared basic needs, the nuances of individual agribusiness models typically necessitate tailored technology.

Context-specific tech

The highly specific tech requirements of agribusinesses preclude the adoption of one-size-fits-all SaaS products common in other sectors.

Challenges in AgriTech Development:

Unmet expectations

After two decades of ICT for development (ICT4D) and AgTech optimism, agribusiness tech still underwhelms with high costs and inflexibility.

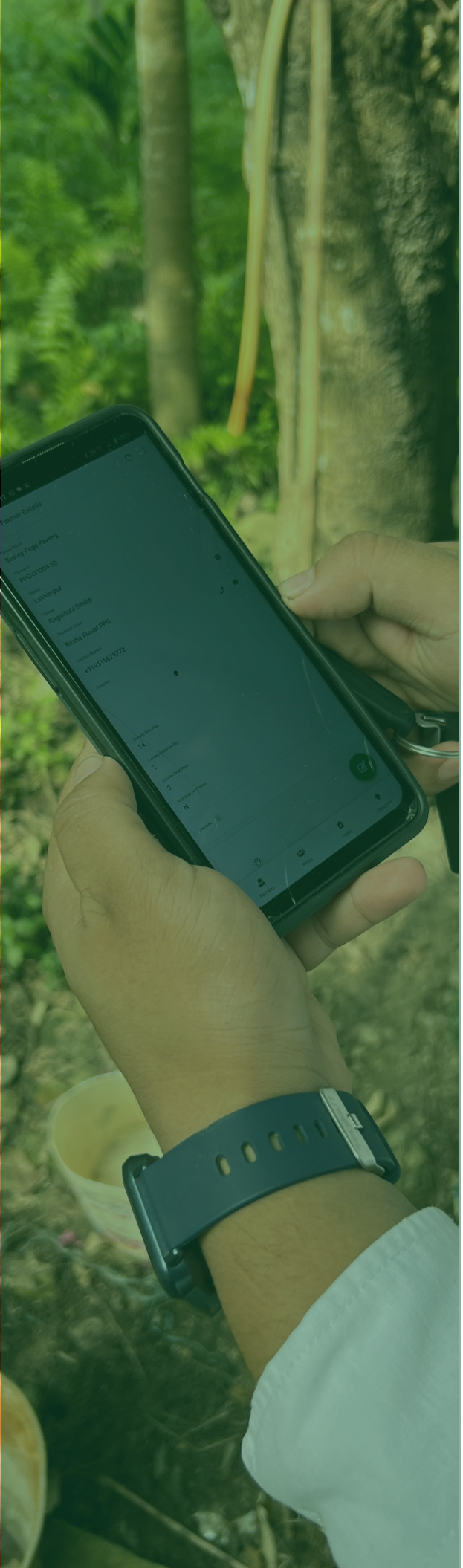
Support and risk issues

Solutions offer limited support and pose significant upfront risks to both agribusinesses and donors.

Optimism in a changing landscape

The technology landscape is rapidly evolving, and with it, the opportunities for agribusiness are expanding. Advanced technologies like AI and low/no-code platforms promise to overcome past disappointments by simplifying access and reducing costs. AI's data processing capabilities can revolutionise decision-making processes, while low/no-code platforms allow businesses to swiftly adapt to new market demands.

Companies can move from rigid project plans to an agile, iterative development approach that facilitates faster and less risky tech adoption; paving the way for scalable and sustainable solutions that are truly tailored to the agricultural sector's needs.



CASA TAF's digitisation approach

CASA TAF's support extends to various aspects of technology implementation, from advisory services and diagnostic support to rapid prototyping and implementation. This comprehensive approach not only addresses the immediate technology needs of agribusinesses, but also contributes to a broader understanding of the AgTech landscape, which has ultimately facilitated the adoption of new digital solutions across multiple agribusinesses in the programme's portfolio.

The CASA TAF digitisation approach is designed around eight key principles and lessons learned:

Configurable and scalable solutions: Flexibility is key; implementations should always favour solutions that can be adapted and scaled without significant investments, allowing businesses to grow and adapt as their needs evolve, test solutions without upfront risk, and implement tech without stopping current operations.

Simple, proven technology tools: Prioritise simple, established tools over the allure of custom development, buzzwords, and shiny objects; leveraging technologies such as Appsheet, Google Sheets, and other similar solutions may not be the buzzword of the day, but they are inexpensive and provide reliability and ease of use, familiarity, and easy pathways for quick adoption and sustained use.

User-centric design: Technology must be simple, intuitive, developed with the end-user in mind, and without frills; every feature and functionality should add value, and every version of a technology solution should be immediately useful and relevant.

ROI-driven approach: The only thing that matters is business growth; solutions must cater to the specific needs of each business, with a clear return on investment (ROI) that directly improves operational visibility, solving key challenges preventing growth, and aligns with a longer-term roadmap and overall business strategy.

Iterative and flexible approach with rapid Iterations: Set a north star for outcomes, but always develop new tools and technology with an approach based on agile methods; frequent updates and constant improvement aligns tech with evolving business needs and avoids the stagnation of long-term project plans.

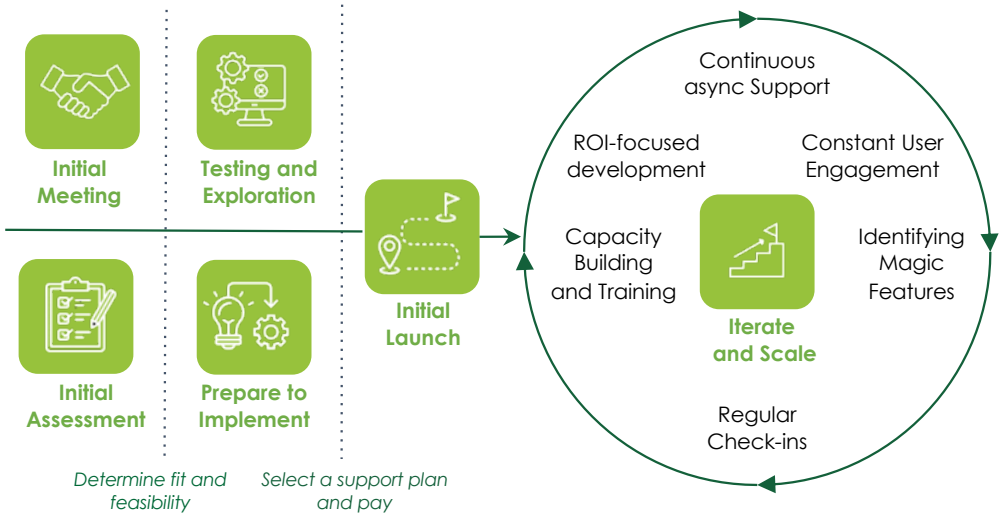
Transparency and accountability: Launch projects with clear goals, metrics, dashboards, and insights from the outset; ensure that all stakeholders have visibility into what is working and what is not, to help facilitate trust and continuous improvement, and to engage agribusinesses directly in the design and development process to foster ownership.

Building side by side with companies: Prevent the "us versus them" dynamic all too common among tech providers; structure projects so that technology is an internal, integral part of the business, rather than an external imposition or service, ensuring better alignment and adoption through collaboration.

Meeting companies where they are: Recognise that each company has a different starting point; tech adoption and competencies and will develop at different paces across a portfolio of companies, and there should be no pre-set timeline or expectation for when and how technology implementation takes place.

Digital case studies

The implementation of CASA TAF's digitisation approach across various agribusinesses has highlighted that technology can be implemented quickly, consistently, and with little upfront risk. Multiple companies in the programme's portfolio have successfully implemented tech using the principles and lessons learned. We use the following approach when engaging companies:



Below are five examples of how CASA TAF supported the digitisation process at businesses to support the implementation of an inclusive business plan:

Company: Aliet Green
Sector: Organic coconut sugar
Country: Indonesia
Investor partner: C4D
Project date: 2023 - 2026

Description: Based in Yogyakarta, Aliet Green operates within the coconut value chain, focusing on regenerative organic practices and local empowerment.

Inclusive business plan

CASA TAF's support for Aliet Green is centred on increasing yields of women coconut farmers through a coconut rehabilitation programme. The main elements of technical assistance includes the the distribution of dwarf coconut seedlings, agronomic training, alongside the introduction of a digital traceability system.

CASA TAF is supporting the development and implementation of a supply chain software solution, improving management of procurement and seedling loan repayments.

Digital support

Aliet Green leveraged CASA TAF's support and technology implementation approach to quickly implement a new mobile and desktop app, facilitating offline data entry for farmer profiles and purchases.

These tools paved the way for the launch of the coconut seedling credit model.

Company: Arohan Foods
Sector: Pigs
Country: India
Investor partner: C4D
Project date: 2023 - 2026

Description: Arohan Foods, based in Assam, specialises in the pork value chain, working to elevate the health and productivity of the Northeast Indian pig sector.

Inclusive business plan

CASA TAF is supporting Arohan with TA to launch a pilot for a decentralised pig aggregation and processing model. This support focuses on developing technology and operational capacities to enhance food safety, animal welfare, and increase farmer incomes in India's North-eastern Region.

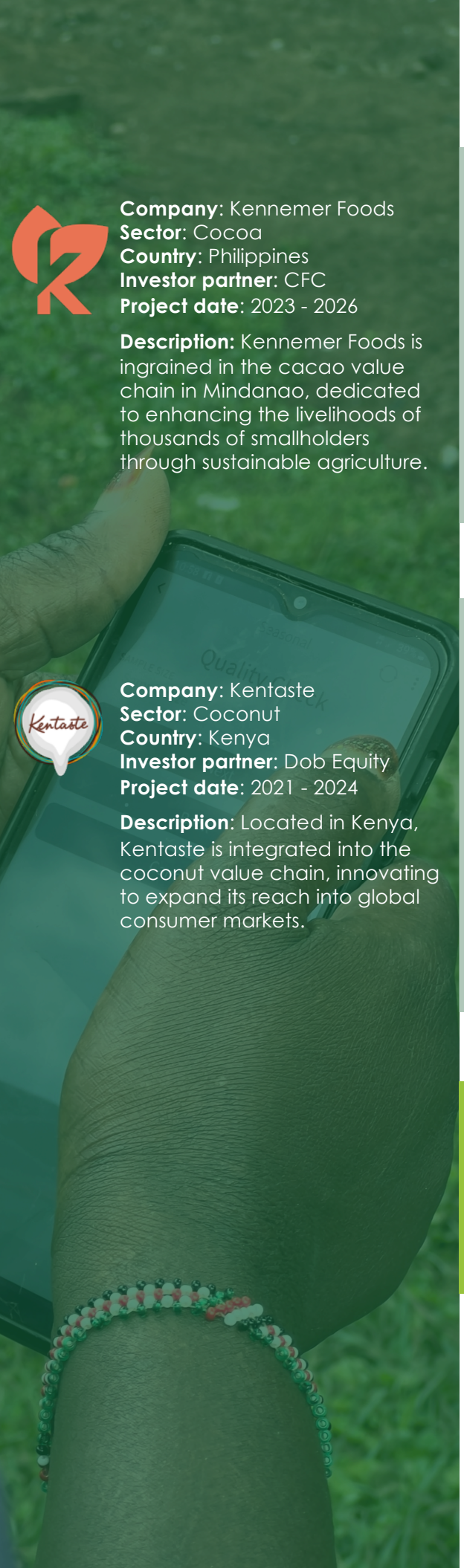
The initiative aims to streamline the supply chain by establishing a network of rural slaughterhouses operated by farmer organisations, promoting sustainable growth in the piggery sector.

Digital support

Together with the support provided by CASA TAF, Arohan developed a new mobile and desktop-based pig health monitoring system to achieve real-time visibility into field operations, disease outbreaks, and the overall health of the Northeast Indian pig sector.

The new technology tools have enabled the launch of a new piglet distribution model, which is helping smallholder women farmers to increase their incomes.

Digital case studies cont.



Company: Kennemer Foods
Sector: Cocoa
Country: Philippines
Investor partner: CFC
Project date: 2023 - 2026

Description: Kennemer Foods is ingrained in the cacao value chain in Mindanao, dedicated to enhancing the livelihoods of thousands of smallholders through sustainable agriculture.

Inclusive business plan

CASA TAF is supporting Kennemer Foods in enhancing its cacao sourcing through technical and agent training assistance, focusing on a decentralised extension model.

The plan includes developing a digital farmer database, enabling effective scaling of the agent model, and conducting a biochar feasibility study. The support aims to increase farmer yields, aid climate resilience, and ensure gender inclusiveness by targeting female participation and adapting training to accommodate female farmers' needs.

Digital support

CASA TAF assisted Kennemer rapidly deploy multiple mobile and desktop apps, which immediately provided traceability for over 30,000 smallholders.

The establishment of a data warehouse has also enabled the company to launch the "cacaoprenuer" model, which helps local agents launch microenterprises based on the cacao farm advisory services they provide.

Company: Kentaste
Sector: Coconut
Country: Kenya
Investor partner: Dob Equity
Project date: 2021 - 2024

Description: Located in Kenya, Kentaste is integrated into the coconut value chain, innovating to expand its reach into global consumer markets.

Inclusive business plan

CASA TAF is supporting Kentaste in enhancing its coconut sourcing through technical assistance for establishing farmer groups, piloting village agent models, and improving extension services with training videos.

This support, aimed at boosting smallholder productivity and loyalty, involves transitioning to a more efficient direct sourcing model that will allow Kentaste to develop longer term relationships with farmers and farmer groups. It also includes the promotion of climate smart agricultural practices through digital channels.

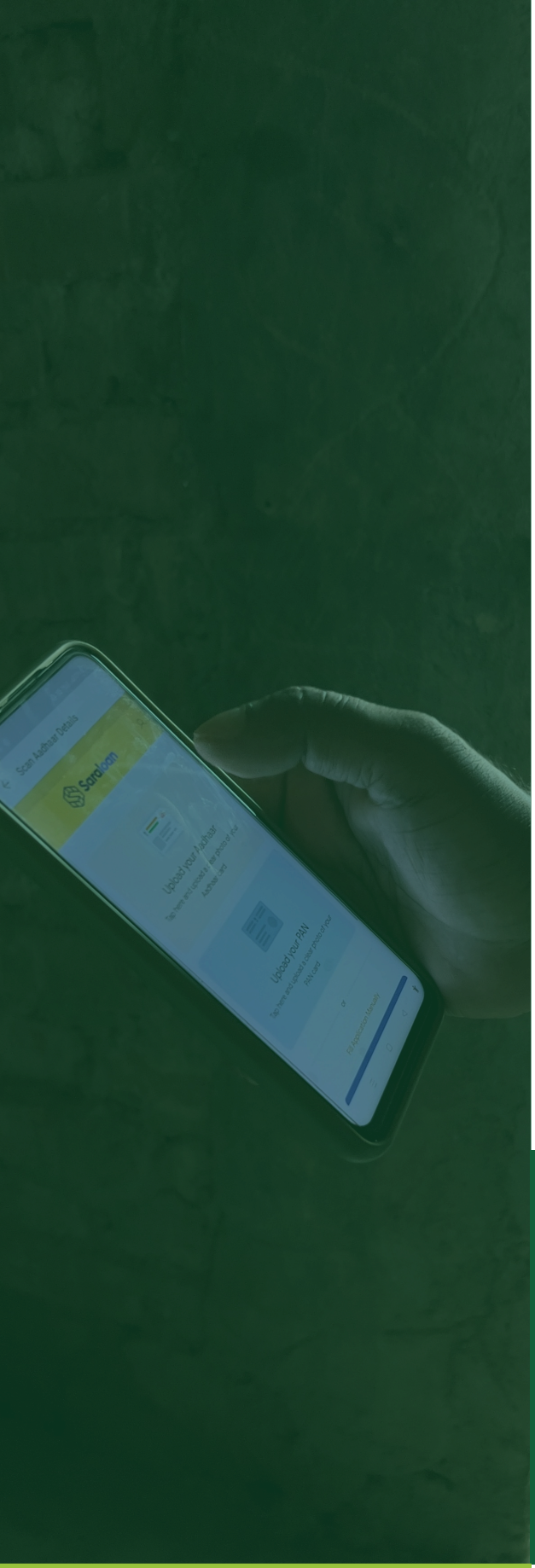
Digital support

Kentaste has quickly adopted a new mobile app, web app, and dashboard for tracking farmer profiles, field management, harvests, and projections.

The company's new technology capabilities have enabled the development of an expanded sourcing strategy that supports the rollout of new consumer products in European and American supermarkets, as well as the forthcoming launch of a coconut seedling model that supports smallholder farmers.

CASA TAF projects taking part in technology implementation projects receive app updates, as well as participating in daily check-in calls to discuss new iterations, gather feedback, and coordinate the rollout of new features. This process - proven on dozens of projects - leads to increased engagement and adoption by companies and helps position technology as a true "partner" working side by side with a company, rather than an external service.

Each case study illustrates the transformative role that digital solutions can play in scaling agribusiness operations, enhancing supply chain management, deepening smallholder engagement, and launching new business models. In all cases, technology has positioned each business for significant growth, increased inclusivity, and broader impact.



Key takeaways

CASA TAF's experience has demonstrated the effectiveness of agile, responsive technology implementation strategies that are based on modern and flexible tools. The approach has led to a 100% success rate for technology implementation projects spanning multiple countries, radically different contexts, and a half-dozen value chains that include both crops and livestock.

Moving forward, sustainable technology implementation strategies should prioritise scalable, adaptable, and flexible solutions that can serve a broad user base without bespoke development. The advancement of AI and low-code/no-code technologies presents a unique opportunity to achieve this outcome by allowing even the most resource-constrained agribusinesses to benefit from digital transformation.

As the world moves forward and technology capabilities continue to advance rapidly, the symbiotic relationship between technology providers and agribusinesses will continue to be of utmost importance. Programmes such as CASA TAF and other similar initiatives must foster an ecosystem where continuous feedback and collaborative technology development are the norm, and new paradigms are established that catalyse, rather than hinder, innovation within the sector.

Looking ahead, CASA TAF envisions a future where digital solutions are seamlessly integrated into agribusiness operations with very low upfront risks or costs; thereby helping to ensure AgTech innovation flourishes, partnerships strengthen, and the agricultural sector prospers through the shared vision of sustainable growth.

The FCDO-funded Commercial Agriculture for Smallholders and Agribusinesses (CASA) Technical Assistance Facility (TAF) partners with investors with development interests to increase the smallholder impact of existing investments. We design, co-fund, and manage delivery of inclusive technical assistance (TA) projects at selected agribusinesses that can drive commercial and social impact by strengthening, deepening, or broadening inclusive supply chains.

Over its seven-year life cycle, the CASA TAF will collect data on the impact of inclusive technical assistance, not only at the farmer-level, but also at the portfolio company and investment fund level. The objective is to learn and to influence DFIs, impact investors, commercial investors, and TA providers on the significance of generating compelling evidence to track commercial and development impact metrics, thus demonstrating the value of inclusive TA.

https://www.casaprogramme.com/technical-assistance/

For further information:

Melanie Machingawuta
TechnoServe Director, Inclusive Investment
mmachingawuta@tns.org

Ana Herrera
CASA TAF Team Lead
aherrera@tns.org

TechnoServe
Business Solutions to Poverty

UK International Development
Partnership | Progress | Prosperity