



the sustainable
trade initiative

Service Delivery Model Analysis

Angala Fintech

*Driving smallholder bankability and
access to finance through Payrail and
cross-value chain collaboration.*

September 2022

Disclaimer

Note that this Service Delivery Model was being designed at the time of the analysis. The report explores possible ways of implementing the Payrail software and collaboration with various aggregators in different value chains. The analyses provided are based on projections and assumptions; only limited actual data was available.

Angala Fintech has used the results of this report to inform their strategy and business model, but cannot be held accountable for meeting any targets included in the report.

If you are interested for more detailed information, [please contact us](#).

Introduction of IDH and the SDM analysis



Smallholder Livelihoods

Agriculture, including forestry, plays a key role in the well-being of people and the planet. 70% of the rural poor rely on the sector for income and employment. Agriculture also contributes to and is affected by climate change, which threatens the long-term viability of the global food supply. Farmers need access to affordable high-quality goods, services, and technologies to earn adequate livelihoods without contributing to environmental degradation.



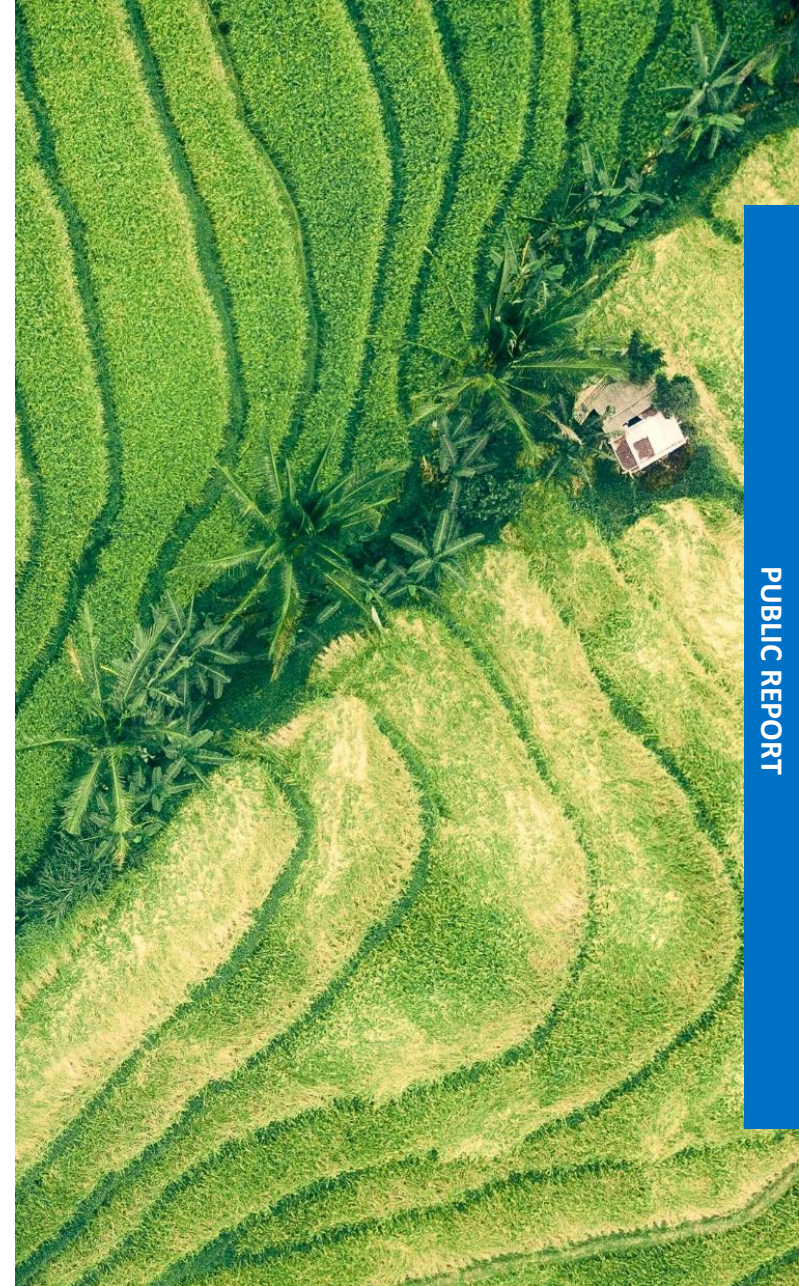
Service Delivery Models

Service Delivery Models (SDMs) are supply chain structures that provide farmers with services such as training, access to inputs, finance, and information. SDMs can sustainably increase the performance of farms while providing a business opportunity for the service provider. Using IDH's data-driven SDM methodology, IDH analyses these models to create a solid understanding of the relationship between the impact on the farmer and impact on the service provider's business.



Insights and Innovations

Our data and insights enable businesses to formulate new strategies for operating and funding service delivery, making the model more sustainable, less dependent on external funding, and more commercially viable. By further prototyping efficiency improvements in service delivery and gathering aggregate insights across sectors and geographies, IDH aims to inform the agricultural sector and catalyse innovations and investment in service delivery that positively impact people, planet, and profit.



Chapter outline



1. Executive Summary



2. The SDM



3. Business case



4. Impact case



5. Annex



1. Executive summary



Angala Fintech is an early stage start-up facilitating a range of financial services via their Payrail application. One of their products is agri-loans to aggregators and smallholders



STRATEGY

Objectives: Angala Fintech (AF) deploys technology to provide unbanked communities with comprehensive and innovative financial services such as agency banking, and local and inter-African payments, thereby enabling financial inclusion:

- onboarding 18k Agents and 10k Businesses, and
- providing finance to 2,400 ginger farmers by 2024

Staff & Agents: AF currently has a total of 21 FTE of whom 7 are female, hired in both leading and supporting positions. The positions related to Business Development are vacant, which shows a risk to AF's expansions ambitions in regards to onboarding Agents and Aggregators

Sales channels: AF operates their application, Payrail, on which they onboard Agents, Super Agents, and Aggregators, who are incentivised by earning part of commissions charged to end-users and SHFs. Each of these stakeholders reaches out to end-users and SHF to be registered on the Payrail, perform transactions, and potentially receive ginger, rice, or thresher loan.



SERVICE DELIVERY MODEL

Farmer Engagement: AF connects with commercial banks for SMEs and smallholders to open a bank account, while connecting with utility, insurance, and phone companies, enabling Payrail users to use their digital wallet for multiple transaction purposes

Service package: AF invests in tailoring the terms of its financial products to the characteristics of multiple value chains and countries, while providing financial literacy training to smallholders, increasing access, demand, and use of AF's digital payment and saving solutions

Agents/Businesses: AF onboards, trains, and links Agents and Business to its Payrail platform, while enabling them to earn part of the commissions charged on transfers and payments on the Payrail

Gender equality: AF collects gender disaggregated data and provides gender sensitive services (finance and bank accounts).

While highly sensitive to scale and Agent loyalty and effectiveness, AF is estimated to quickly become profitable. Overheads are low due to the commission-based model

	OBSERVATIONS	SUGGESTIONS FOR IMPROVEMENTS
Angala Fintech commercial viability	<ul style="list-style-type: none"> Predominantly leaning on net earnings from AF's commission model, and leveraging a low operational cost structure, AF is able to securely operate its loan operations in 2024 (year 3), with a positive combined EBT Collaborating with aggregators, and potentially other agriculture value chain players, AF has projected to reach 2,600 ginger farmers per 2024, whom they serve with a USD 1.6 mln total loan volume Relying on equity funding relieves AF from paying high interest costs during the first five years, in which external funding is required for sufficient working capital and loan capital 	<ul style="list-style-type: none"> Conduct a comprehensive risk assessment and prepare worst-case scenarios on scale and profitability, to better understand and prepare for future scenarios. Perform a market assessment on hiring qualified personnel for the vacant positions related to Business Development, to mitigate the risk of underachieving on AF's expansions ambitions in regard to onboarding Agents and Aggregators Align with impact funds and commercial FSPs to create a mixed capital structure, which decreases the cost of capital and meets external funders' risk appetite.
Agent business case	<ul style="list-style-type: none"> Agents might become constrained by the lack of adequate cash to provide agent banking services, especially in the rural areas where the service is needed the most, causing the Agents to have too little cash to facilitate withdrawals Agents are able to earn a positive return from performing transactions on AF's Payrail as AF pays the agents a percentage of commissions charged on cash-in/out and bill-payments and commissions on transfers 	<ul style="list-style-type: none"> Forecast the most appropriate number of agents to roll out agent services to, while enabling Super Agents to build their networks gradually with a focus on optimizing geographical distribution As Agents are underpinning the success of AF's model, it is recommended to further benchmark the income against alternative rural jobs to ensure the business case for Agents is competitive and attractive

AF is able to reach an EBT-margin of 62% mainly driven by their Payrail platform, while providing finance to farmers, which enables farmers to increase their income

	OBSERVATIONS	SUGGESTIONS FOR IMPROVEMENTS
Farmer business case	<ul style="list-style-type: none"> Rhizomes are the biggest investment for a farmer to start the cultivation of ginger (\$1,700/Ha/season), which, based on the current low income levels, seems unfeasible for farmers Farmers who participate in the SDM can increase their income from cultivating ginger and rice, mainly driven by an increase in productivity due to required input use, mechanization, irrigation, and the cultivation of two seasons, where the SDM farmers (community/block) can close the living income gap As a result of the access to finance, farmers are projected to unlock the more expensive service packages required to professionalize their farms and to decrease the number of months in which they are cash constrained 	<ul style="list-style-type: none"> Consider risk-based lending, where loan terms and/or interest rates are different based on the farmer's risk profile. For example, for a farmer new to a particular crop AF might charge higher interest rates. Use the cost of production for a particular crop not to set the maximum loan amount, but only as an indication of the loan size and to understand the components and seasonality. Farmers can require difference services and inputs and hence different loan amounts. These could be coupled with providing a line of credit where farmers access the credit when they require throughout the season and repay with each sale.
Gender equality	<ul style="list-style-type: none"> From the IDH Gender Intention Assessment, AF is found to be gender intentional. Although being gender intentional aligns with IDH's requirements to become a strategic partner, AF could improve the topics of gender strategy and inclusive workplace to become gender transformative The covid pandemic has increased the uptake of and interest in mobile money while showing that women, including entrepreneurs, need more support from others to learn about and use mobile money 	<ul style="list-style-type: none"> Document the gender strategy for clarity on goals and agenda. Establish KPIs (e.g., targets on the number of male and female farmers you are aiming to reach), develop a roadmap to get there and allocate resources to monitor and measure gender goals Invest in household-wide training approaches to increase digital and financial literacy, as female are most likely to seek assistance from family members

Benefiting from synergies in combined service provision and data collecting/evaluating, aggregators have a business case in a multi-stakeholder service delivery model

	OBSERVATIONS	SUGGESTIONS FOR IMPROVEMENTS
Aggregator business case	<ul style="list-style-type: none"> Reducing the working capital requirements of aggregators to provide access to finance for their farmer base, AF can improve their efficiency, in one example, saving 110k USD in finance expenses per year AF is open to actively work together with aggregators to make farmer on-lending successful They have the ambition to expand their farmer customer base by accessing other organizations that work with smallholders 	<ul style="list-style-type: none"> Align data collection, storing, and monitoring & evaluation between partners. Insights on production, demand for inputs, and implemented farmer practises allow aggregators to connect with other value chain players to further align service provision, improve farmer performance and incentivize farmers to sell produce to the aggregator. Find synergies in service provision between different value chain players to increase the effectiveness of service provision. Build and showcase evidence of a successful value chain player partnership to convince others in accessing AF financial services

AF introduces the Payrail as an interface through which Agents can provide farmers with financial services. They offer fit-for-purpose loans based on farmers' actual needs.



Payrail

Direct smallholder finance

Gender intentionality

Situation

Adoption of mobile phones and access to internet are low in many rural areas where smallholders operate. As a result they cannot access certain services, such as information, marketplace applications and financial products.

Many banks are unwilling to finance smallholders, nor have products that are tailored to farmer's needs. Loans are often not designed to accommodate for the seasonality, with adequate grace periods and repayment schedules.

Women typically own fewer assets in terms of land, cash or other resources. As long as the industry does not recognize this and does not take proactive measures to overcome such differences, women have a tough time catching up with men

Innovation

AF provides Agents and Super Agents with tablets and the in-house developed the Payrail app with which Agents can provide financial services (transfers, loans, insurance, etc.) to farmers in the field

AF is collaborating with aggregators to get a thorough understanding of the farmers cost of production and crop's seasonality as a basis to design an affordable, accessible and fit-for-purpose loan

AF aims to provide equal opportunities to women, also realizing that women are on average more conscientious customers. AF requires a lower upfront collateral compared to men

Desired outcomes

Farmers are expected to get access to financial services they were previously unable to access. This allows them to buy better inputs and invest in their farms, while repaying at more suitable terms

These loans should allow farmers to purchase high-quality input packages, smoothen their cash-flows and repay their loans at times they actually have made money from the crop's sales

Women would be able to access AF's loans in equal measure as men, regardless of the fewer assets they own. Ultimately this should allow women to invest in their own enterprises, and increase their degree of independence

Connecting stakeholders creates mutual benefits as a result of finding synergies in each's unique competitive advantages, while reaching a positive financial impact on farm-level



Angala Fintech

- AF is able to keep its fixed and variable costs low, due to the use of a (Super) Agent model. The low cost enables AF to achieve sufficient margins (see [here](#)), which can be used AF to attract and incentivise Agents to acquire end-users and SHFs on the Payrail
- By collaborating with aggregators, while collecting transactions on the Payrail, AF can mitigate the information shortage for commercial FSPs on farmer financing. Providing information to FSPs provides AF with an additional business proposition apart from the agri-loans and commission model
- IT and business development are key to keeping Payrail running smoothly and ensuring the onboarding of Agents. AF is trying to fill these positions



FARMER

- Farmers require significant support to overcome the initial investment when they start the cultivation of ginger but are able to decrease the living income gap to almost zero in five years (see [here](#))
- To further align with farmers' service requirements, they require access to finance on inputs beyond fertilizer and crop protection, as rhizomes form the majority of production costs
- Tailoring financial product terms to gender, and providing women with bank accounts, has the potential to increase independence and control over resources
- Linking farmers to coops is an effective and efficient way to capture and redistribute value from value-adding activities



PUBLIC SECTOR

- Connecting aggregators, input providers, and financial service providers within one service delivery model creates mutual benefit for all value chain players involved by increasing sourcing and transactions volumes while decreasing cost by leveraging each VCPs expertise
- Gender tailoring financial products by adjusting the relative share of the cash collateral required as part of the finance principle could be broadened to also include financing planting material (rhizomes) and labor

The Service Delivery Model

Understanding the SDM's strategy, business model and financial performance

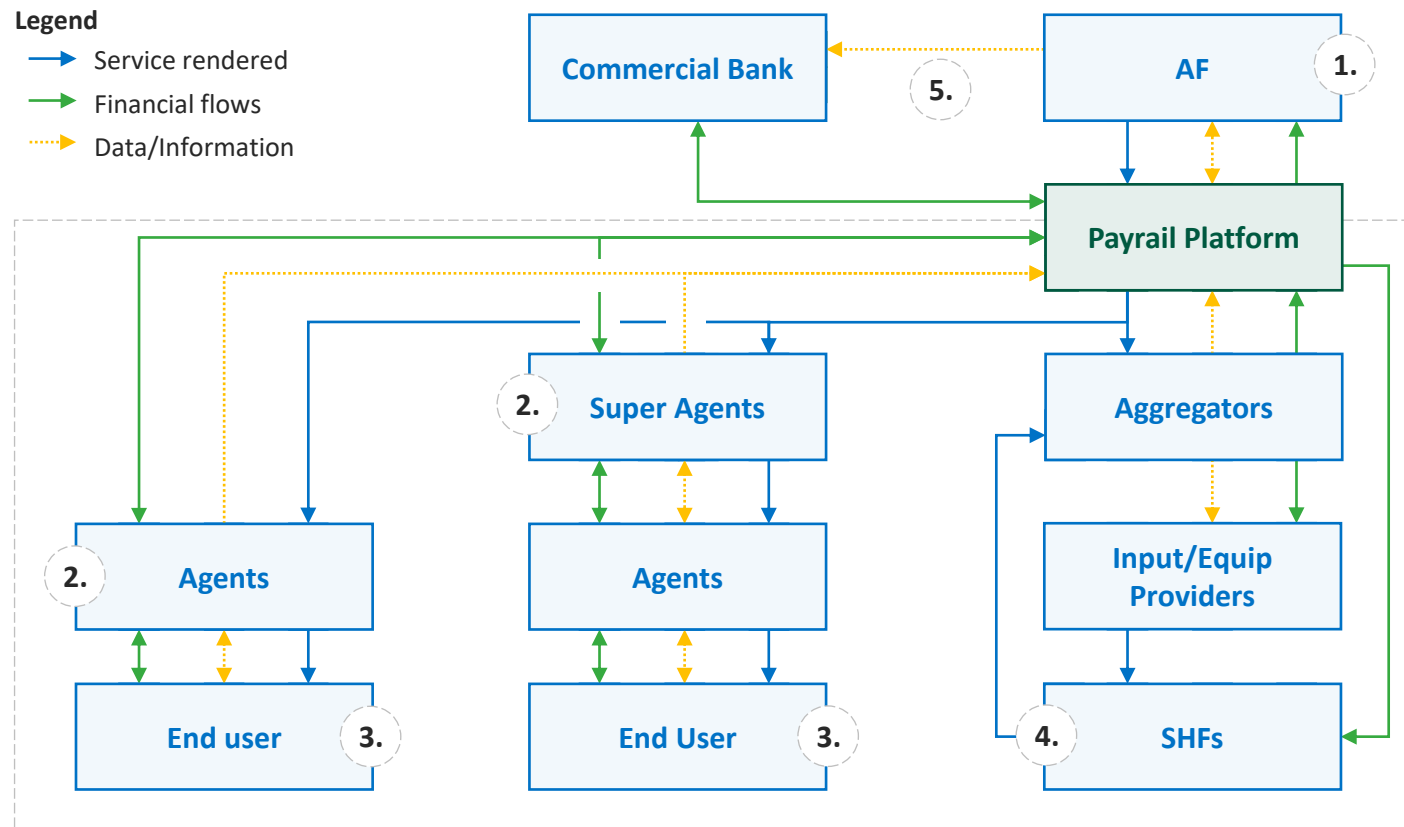
AF operates financial services on their Payrail platform with the use of Agents and Super Agents, providing access to finance and mobile money solutions to SHFs and other end-users



AF Business Model

Legend

- Service rendered
- Financial flows
- Data/Information



AF's Activities

1. AF, founded in 2021 and part of Arila Group, manages the Payrail platform by ensuring little down-time and by performing updates while charging interest and commissions on transactions on the Payrail
2. (Super) Agents, who recruit end-users for the Payrail, are verified, trained, and onboarded by a third party, and earn part of the commission on transactions they manage
3. Visiting an Agent, end-users create a Payrail wallet, while opening a bank account at a commercial bank. End-users receive financial training and can real-time see their balance and make transfers, withdrawals, and receive money digitally
4. AF provides Smallholder Farmers (SHFs) with credit on input, mechanization, and equipment through Aggregators the SHFs supply produce to. Credit is provided on the Payrail account, paid directly to the Input provider, who provides the service to the SHF. The SHF repays in kind to the Aggregator, who repays the credit in cash on the Payrail
5. Commercial Banks are onboarded on the Payrail to manage bill payments and to leverage developed end-user track records for credit scoring, which increases access to finance

SOURCE: Overview adjusted from [Efina \(2018\)](#)

AF is will positioned to provide unbanked communities with comprehensive and innovative financial services, using its experience and network of Agents, Businesses, and SDM Operators



Goals & Aspirations

AF aspires to

- secure and increase the recruitment of Agents and Businesses, reaching and providing an increasing number of unbanked communities with access to Payrail
- increase the number of transactions (money transfers, payments, etc.) they record and monitor, mitigating the current information opaqueness that hinders SMEs and smallholders access to finance
- increase the number of SDMs they collaborate with, creating more affordable access to finance for SDMs and smallholders

Goals per 2026

- Onboard Agents and Businesses
- Provide finance to ginger farmers
- Expand the business to other countries in Sub Saharan Africa



Where to Play

To increase the # of Agents/Businesses

AF onboards, trains, and links Agents and Businesses to its Payrail platform, while enabling them to earn part of the commissions charged on transfers and payments on the Payrail

To increase the # of transactions

AF connects with commercial banks for SMEs and smallholders to open a bank account, while connecting with utility, insurance, and phone companies, enabling Payrail users to use their digital wallet for multiple transaction purposes

To increase the # of collaborations

AF invests in tailoring the terms of its financial products to the characteristics of multiple value chains and countries, while providing financial literacy training to smallholders, increasing access, demand, and use of AF's digital payment and saving solutions



How to Win

Agents/Businesses

- Revisit commission policy to align with current market standards
- Revisit and potentially expand current service offering to align with Agents / Businesses' needs
- Ensure user friendliness, easy onboarding, and limited down-time of Payrail system

Transactions

- Built financial literacy and familiarity with the use of mobile money solutions
- Closely and digitally monitor and evaluate the use of different payment add-ons

Collaborations

- Leverage current existing SDM structures in different value chains and countries
- Ensure minimum turn-around time between application and pay-out
- Revisit current product terms to align with farmer household monthly cash flows



Capabilities Required

Critical capacities

- Knowledge and expertise in digital money solutions
- Network and collaborate with the government, national bank, and value chain leading aggregators
- Data and information to model and analyse the financial and environmental output of (to be) implemented financial products on farm and SDM level
- Access to finance from commercial, equity, or impact investors to create a feasible capital structure

AF provides three loan products to smallholders and farmer organizations, each with value chain tailored and gender empowering loan terms

AGRI-LOAN PRODUCT OFFERING

Ginger Farmers Hybrid Financing Facility (GFHF)

- Hybrid financing model where AF provides direct trade credit and input financing to smallholder ginger farmers, while the aggregator provides technical assistance and market access
- Input financing includes mechanized land preparation, planting, ploughing, and harvesting, and the purchase of fertilizer and herbicides and transportation

- Interest:** 22%
- Other fees:** 1%
- Insurance:** 3%
- Repayment:** 7th month
- Collateral:** Rhizomes (₦)

Smallholder Farm Aggregation and Mechanization Financing Model (SFAM)

- Rice Farmers in informal Community-based Self-Help Groups or registered cooperatives
- Input credit financing for production inputs and end-to-end mechanized primary production including land preparation (ploughing, harrowing, and ridging), mechanized planting of seeds, application of fertilizers and herbicides, harvesting and threshing

- Interest:** 22%
- Other fees:** 1%
- Insurance:** 3%
- Repayment:** 3-6 months
- Collateral:** 20%/25% cash deposit

Mechanized Threshing Services (MTS) Equipment Finance

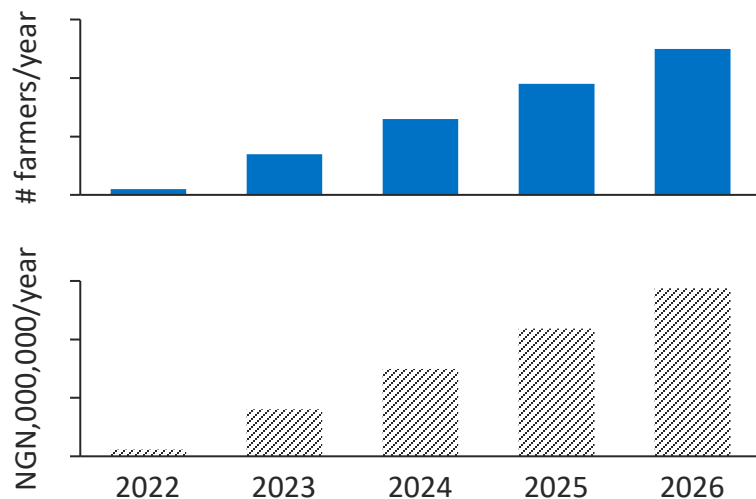
- Micro Entreprises serving identified clusters of smallholder cowpea, maize, rice, and soybean farmers
- Asset finance for the purchase of threshing machines
- Minimum size 800,000 NGN

- Interest:** 22%
- Other fees:** 2%
- Insurance:** 3%
- Repayment:** monthly (12)
- Collateral:** Women 20%/ Men 25% cash deposit

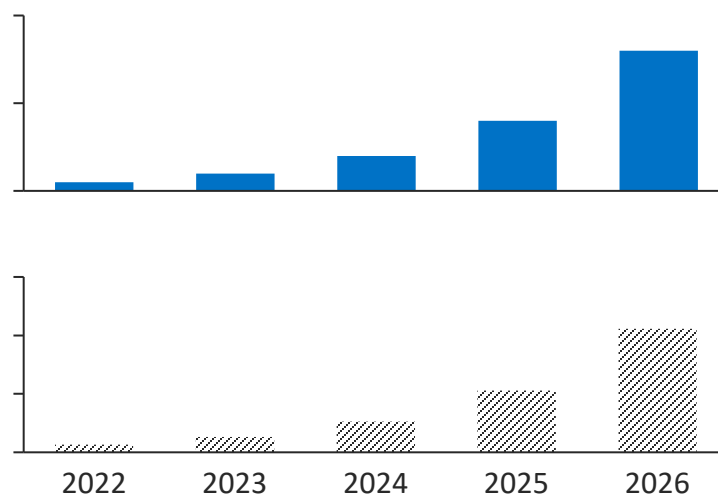
The scales of the loan products in this SDM Analyses are projected to increase, while customers (farmers/business) off take different years consecutively per product

SCALE OF AGRI-LOAN PORTFOLIO

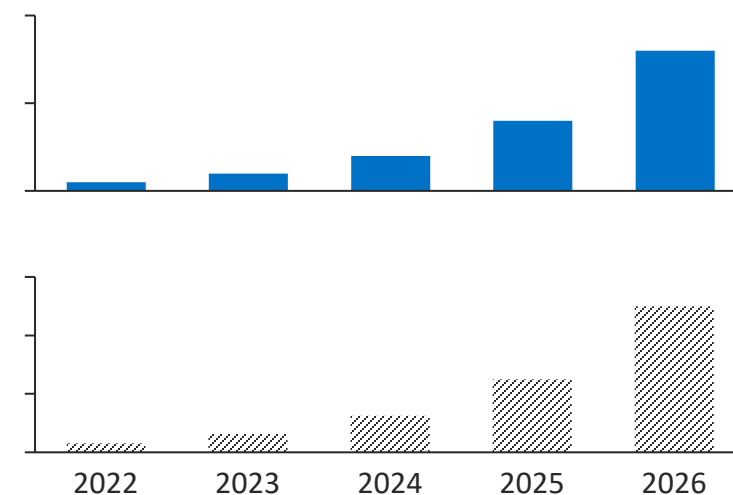
Ginger Farmers Hybrid Financing Facility (GFHF)



Smallholder Farm Aggregation and Mechanization Financing Model (SFAM)



Mechanized Threshing Services (MTS) Equipment Finance



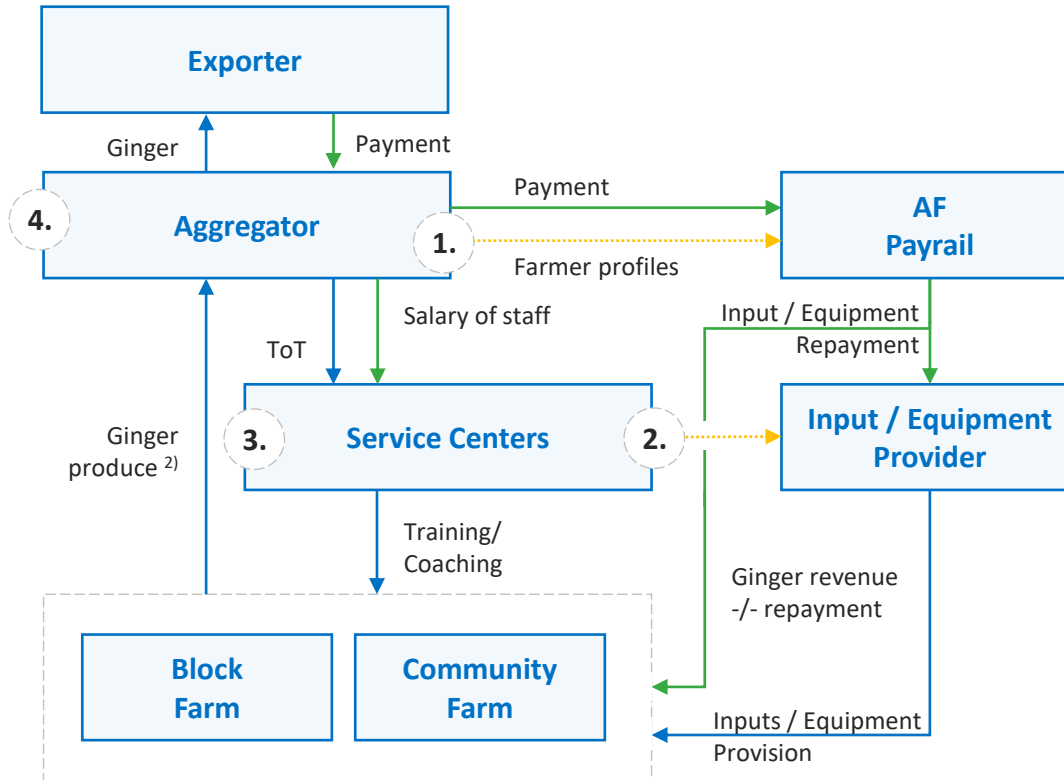
- The number of ginger farmers who receive finance is projected to increase, with farmers assumed to borrow a number of consecutive years
- With a fixed ticket size, the total loan volume increases in relation to the increase in number of borrowers
- The number of rice farmers who receive finance is projected to increase, with farmers assumed to borrow a number of consecutive years
- With a fixed ticket size, the total loan volume increases in relation to the increase in number of borrowers
- The number of thresher loans provided is projected to increase, with organizations borrowing once per live-time of the thresher

Ginger Farmers Hybrid Financing Facility (GFHF)

OPERATING STRUCTURE ¹⁾

Legend

- Service rendered
- Financial flows
- Data/Information



ACTIVITIES

1. AF receives a list of ginger farmers, who are eligible for receiving input credit
2. Each Service Center, based on the needs of its farmer base, places an order for inputs and equipment. AF pays and registers the credit position on a farmer's Payrail account
3. AF leverages and trains the extension officers of the aggregator, who train farmers on GAP and financial literacy. This way, AF and the aggregator create access to mechanization to ensure farmers increase their ginger production and manage client relations, which reduces the risks of defaults
4. The aggregator sources the wet ginger from the farmers through its service centers and repays the credit position and potential surplus on the farmer's Payrail account
5. See [\[Annex\]](#) for detailed customer journey

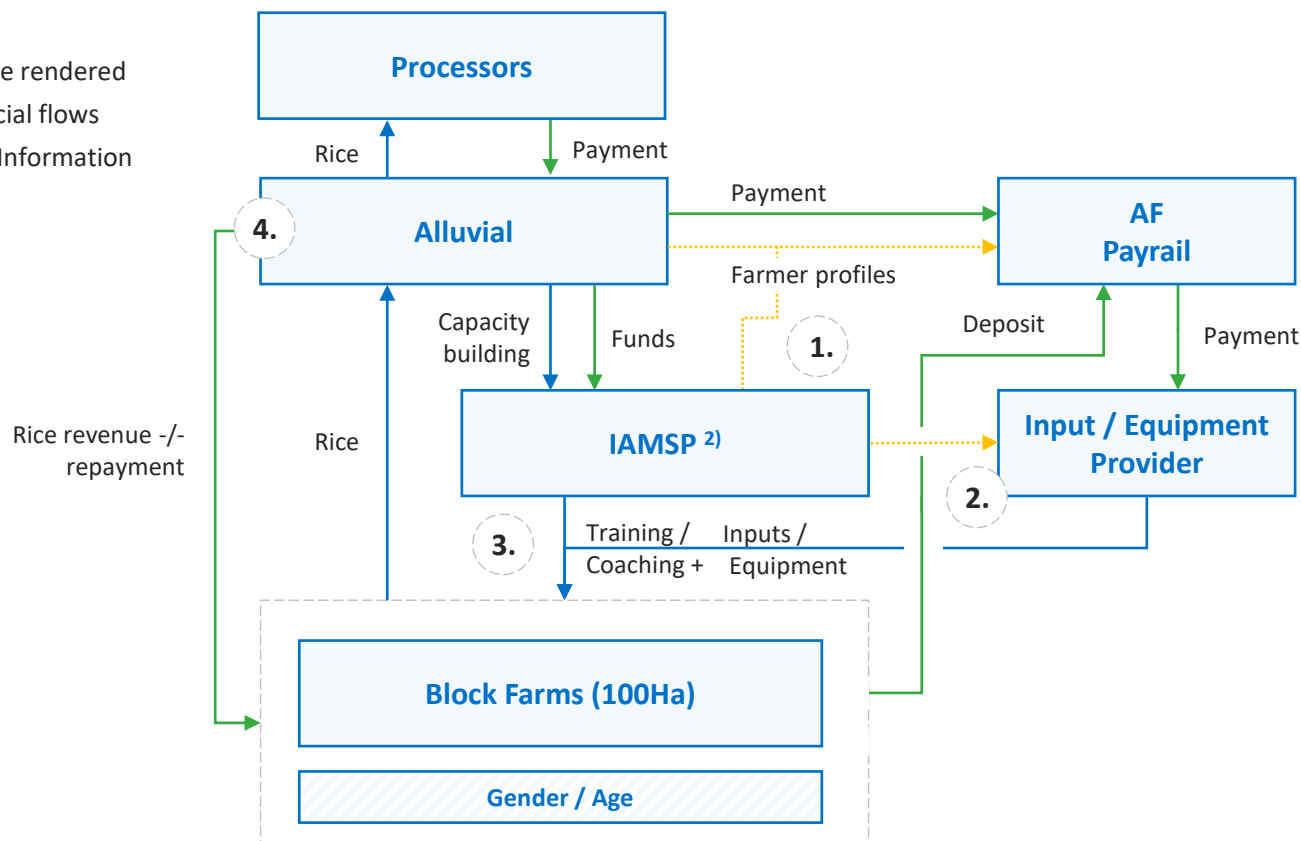
NOTES: 1) The presented Operating Structure is a combination of current and future design of providing input on credit to ginger farmers; 2) Wet ginger is sourced and sold directly by the aggregator, while ginger is processed and sold as dry ginger through the Service Centers

Smallholder Farm Aggregation and Mechanization Financing Model (SFAM)

OPERATING STRUCTURE ¹⁾

Legend

- Service rendered
- Financial flows
- Data/Information



NOTES: 1) The presented Operating Structure is a combination of current and future design of providing input on credit to ginger farmers;

2) IAMSP = Integrated Agricultural Mechanization Service Provider

ACTIVITIES

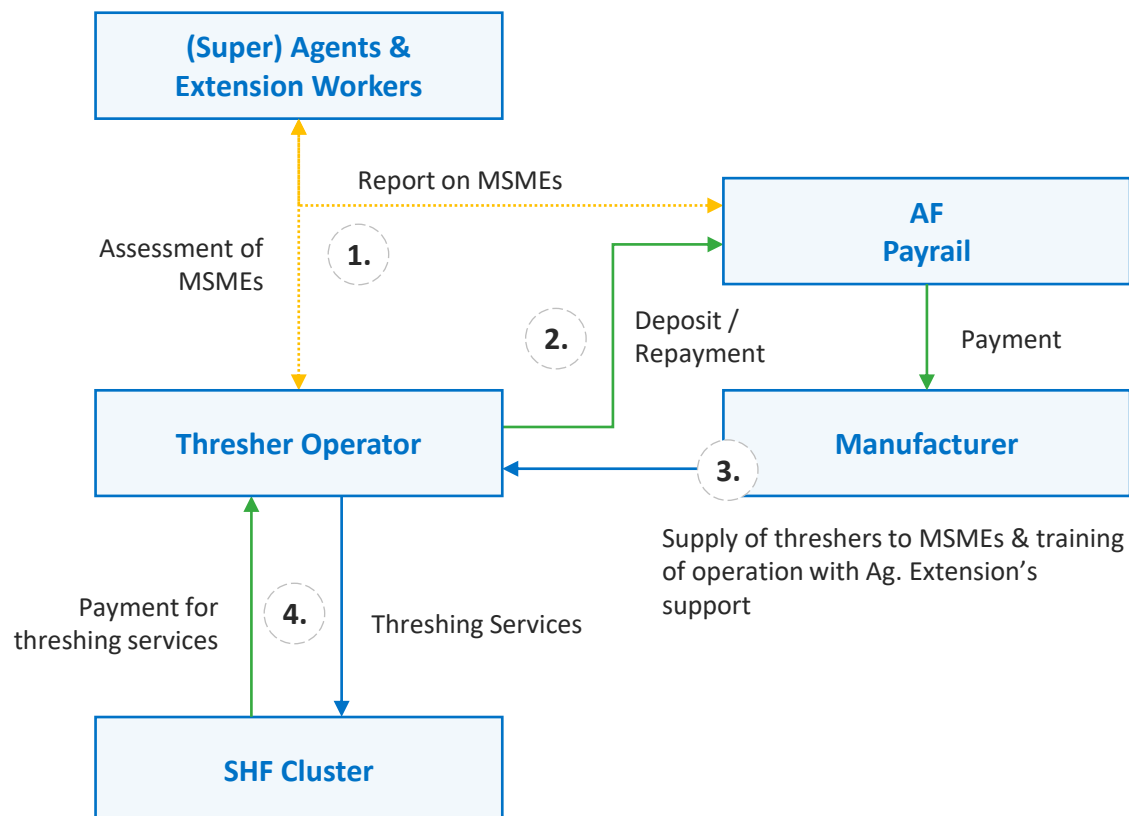
1. The Extension Officers and IAMSP ¹⁾ will identify and sensitize farming communities and reach out directly to input suppliers and commodity aggregators and processors or indirectly through the Rice Associations to onboard farmers on the Payrail
2. Input suppliers are identified by IAMSP and farmers make 20% to 25% cash deposit in Payrail Wallet and execute cross guarantee of members
3. Supply of inputs and end-to-end mechanization service is provided by IAMSP to the Farmers on 100 ha, while farms and farming activities are monitored by IAMSP, AF, and extension officer
4. Produce is harvested and the value of loan principal and interest is withheld on the payment to the farmer by IAMSP and passed on to AF
5. See [\[Annex\]](#) for detailed customer journey

Mechanized Threshing Services (MTS) Equipment Finance

OPERATING STRUCTURE ¹⁾

Legend

- Service rendered
- Financial flows
- Data/Information



ACTIVITIES

1. The Extension Officer will link the Thresher operators to identified Manufacturers. These operators must demonstrate that they have clusters of smallholder farmers they currently serve or that they have generated demand for threshing services
2. Operators make 20% to 25% cash deposit in their Payrail Wallets. Facility is approved for the Operators by AF and disbursed in kind through equipment manufacturer
3. Equipment manufacturer supplies the equipment and the Operators confirm the delivery. AF registers its interest, obtains comprehensive insurance coverage, and loan principle on the disbursed facility
4. The Operators provide threshing services to clusters of smallholder farmers at agreed fees and domicile payment in their Payrail Wallets
5. See [\[Annex\]](#) for detailed customer journey

NOTES: 1) The presented Operating Structure is a combination of current and future design of providing input on credit to ginger farmers;

AF envisions to operate two commission models driven by Super agents and businesses respectively

LOAN PRODUCT OFFERING

Payrail Agent *[ACTIVE]*

- Agent driven user acquiring strategy, in which onboarded Agents recruit and open Payrail accounts for unbanked communities
- Recruited Payrail users are able to digitally receive and transfer money from their Payrail account to their bank account, and withdraw cash if required

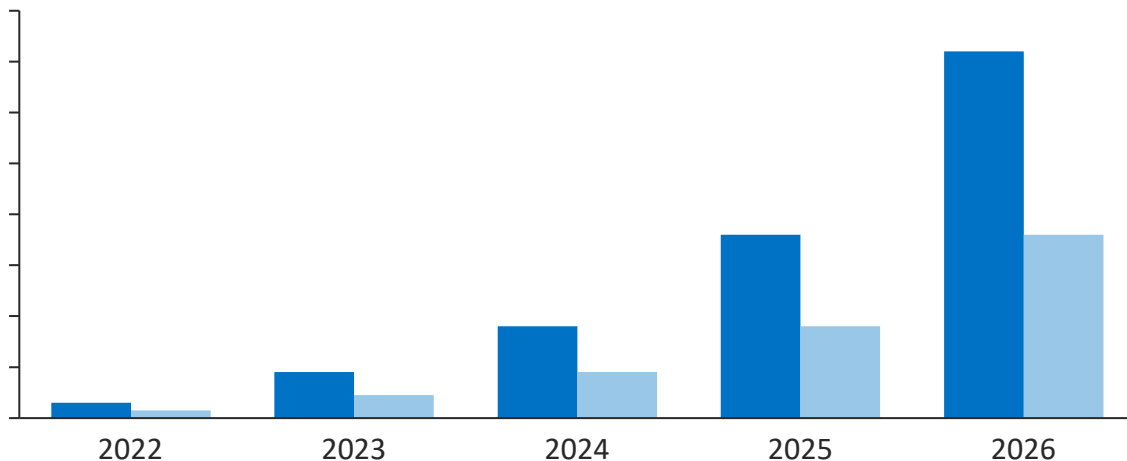
Payrail Business *[DELAYED TILL OCT-2022]*

- Business-driven Payrail user acquiring strategy, in which acquired businesses open a Payrail account for their financial transactions
- Recruited Payrail users are able to digitally receive and transfer money from their account to their bank account and apply for short-term loans

The number of the onboarded and active Agents/Businesses in this SDM Analysis are projected to increase significantly aimed to create a sufficient transaction volume for AF's commission business model

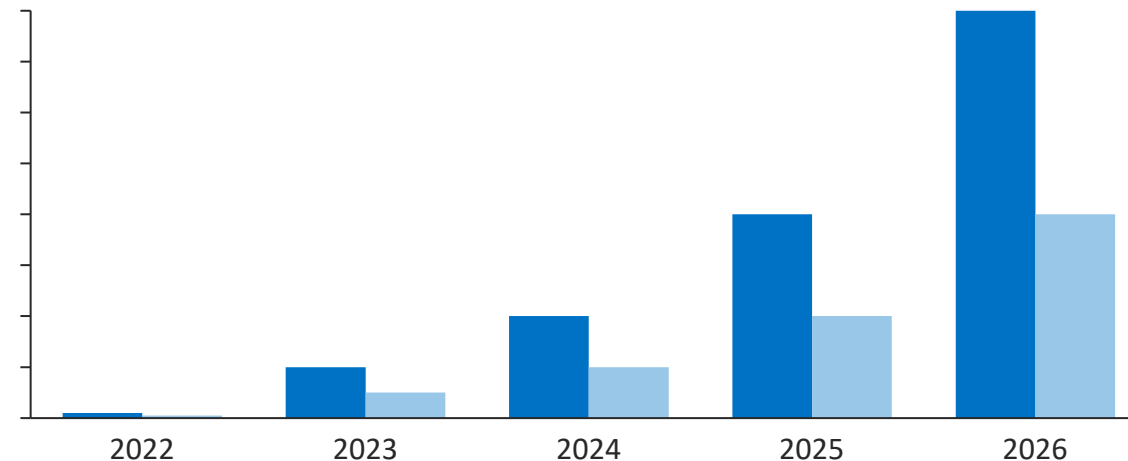
SCALE OF COMMISSION MODEL

Payrail Agent [ACTIVE]







- AF has projected to onboard an increasing number of Agents per 2026, of whom a specific percentage are active in mediating transactions on the Payrail for end-users and SHFs

Payrail Business [DELAYED TILL OCT-2022]



- AF has projected to onboard an increasing number of Business per 2026, of whom an estimated percentage are active in mediating transactions on the Payrail for their own business operations

Given that AF works with different stakeholders in its ecosystem, AF's product offering should adequately aligned with multiple potentially conflicting interests

Stakeholder	Function (within SDM)	Revenue model	Incentive to participate
 Aggregators / Thresher Business	<ul style="list-style-type: none"> Value chain investor Sources and processes commodities (ginger/rice) and exports final products 	<ul style="list-style-type: none"> Margin on ginger/rice sales Margin on service provision 	<ul style="list-style-type: none"> Increase and secure sustainable ginger supply, by achieving sustainability goals, transform the sector, accelerate progress, and contribute to alleviation of poverty in rural communities
 Commercial Banks	<ul style="list-style-type: none"> Blends investment with advice and resource mobilization to help the private sector advance development 	<ul style="list-style-type: none"> Payment of interest and commissions associated FSPs 	<ul style="list-style-type: none"> Attract new financial customers Increase experience on business with agricultural client serving FSP
 Project Leads (IDH)	<ul style="list-style-type: none"> Accelerate/scale up sustainable trade with impact-oriented coalitions; Develop business solutions to poverty by linking people to information, capital and markets; 	<ul style="list-style-type: none"> None Advice fee 	<ul style="list-style-type: none"> Increase experience on business with smallholders and service centers Bring into practice the results of research
 Government	<ul style="list-style-type: none"> Governmental organizations Contributes to regulation, stabilization and development of the financial sector in Nigeria 	<ul style="list-style-type: none"> N/a 	<ul style="list-style-type: none"> Catalyses the development of the financial value chain in Nigeria Promote a diversified economic model for new generation farmers

Via its Payrail platform, AF manages relations and transactions between (Super) Agents, Aggregators, and end-users, showing the significance of adequate outreach, screening and contracting



Outreach

- AF operates the Payrail on which they onboard Agents, Super Agents, and Aggregators, who are incentivized with earning part of paid commissions
- Each of these entities reaches out to end-users and SHF to be registered on the Payrail, perform transactions, and potentially receive a ginger, rice, or thresher loan



Selection

- End-users and SHFs are selected, assessed, and onboarded on the Payrail by the Agents, Super Agents, and Aggregators
- Selected end-users and SHFs are screened by AF by using an external data-base



Contracting

- AF has formal agreements with (Super) Agents and Aggregators
- End-users and SHF agree with the General Terms and Conditions when opening a Payrail account
- If acquiring a loan product, AF signs a formal agreement with the SHF, Aggregator, and (if applicable) Guarantee



Segmentation

- End-users and SHFs are currently only segmented based on their farming practices: ginger, rice, and/or threshing
- AF would be interested in developing a segmentation approach for service provision and insight into when segments required access to finance



Graduation

- AF currently doesn't have a graduation approach to incentivize end-users / SHFs who are part of the Payrail
- The graduation approach, in combination with the commission distribution, is to be developed and revised after AF has piloted the current service offering and loan portfolio



Data collection

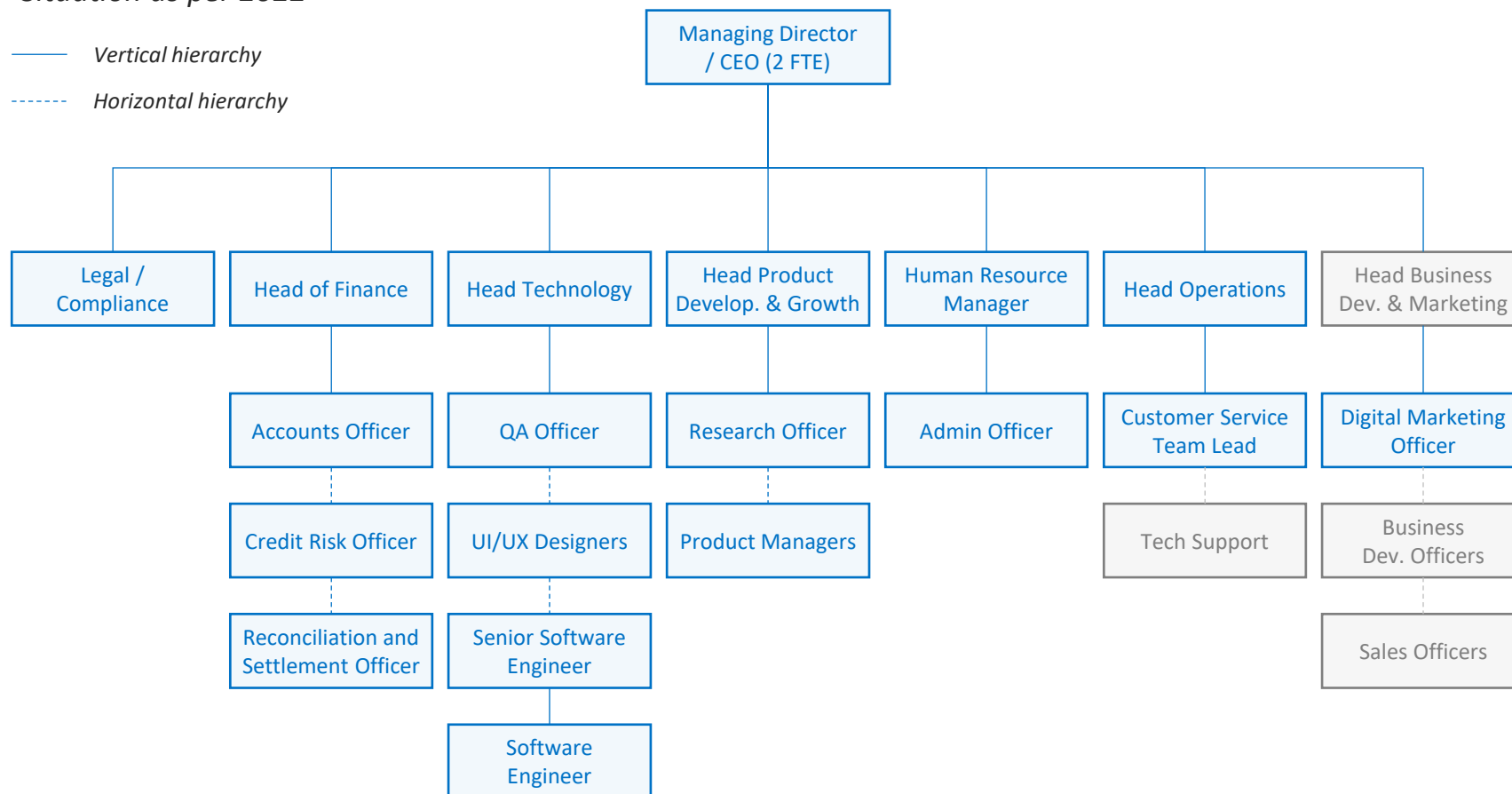
- AF collects all transaction data through their Payrail Platform
- (Super) Agents and Aggregators use Payrail to register farmers.
- See [\[Annex\]](#) for the customer journey and a detailed list of data points registered per product.

The SDM is fully integrated within the wider organization of the AF, although the current workforce requires support from three vacant positions in technical support and business development

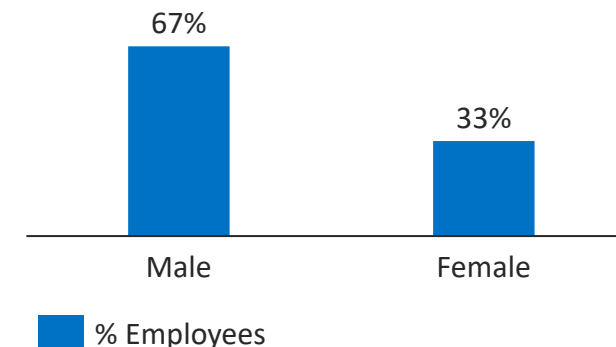
ORGANOGRAM

Situation as per 2022

— Vertical hierarchy
- - - Horizontal hierarchy



GENDER RATIO



- The positions related to Business Development are vacant, which shows a risk to AF's expansions ambitions in regards to onboarding Agents and Aggregators

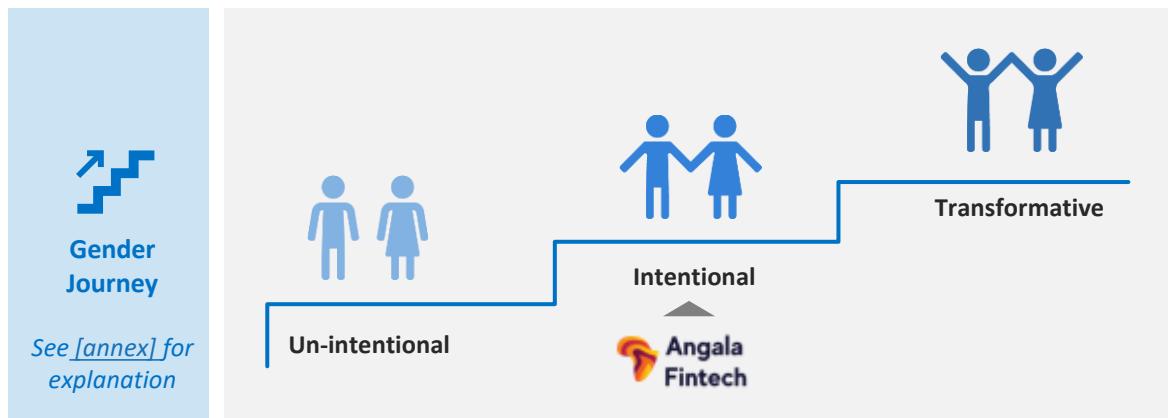
AF is gender intentional through the provision of gender-sensitive financial service and AF could improve its gender intention by formalizing a Gender Strategy and by developing Gender Policies

Category	Status	Observation
Gender Strategy Is gender equality a strategic goal for AF which is communicated in documents?	NO	<ul style="list-style-type: none"> Although AF has gender tailored financial products, the company has not developed a formal gender strategy on how to be transformative in the long run
Data Collection Does AF collect data on staff or customers / farmers disaggregated by gender?	YES	<ul style="list-style-type: none"> AF collects data with the use of Payrail (transactions and account details) of end-users and SHFs disaggregated by gender
Inclusive workplace Does AF have policies or practices to make the workplace inclusive for both women and men?	NO	<ul style="list-style-type: none"> No formal policies or practises are developed yet to ensure and potentially enforce inclusivity for both women and men
Inclusive consultation Does AF speak to or consult both male and female customers (farmers) to learn about their different needs and preferences when designing a product	PARTLY	<ul style="list-style-type: none"> AF's Product Developers consult the onboarded Agents, Super Agents, and Aggregators to ensure loan products for end-users and SHFs are gender sensitive
Inclusive tailoring If services are tailored based on customers' needs and preferences, does AF tailor these based on how needs may be different for men/women?	YES	<ul style="list-style-type: none"> AF implements positive discrimination towards women with gender sensitive loan terms regarding collateral for women of 20% and men of 25% of the loan principle
Independence and control over resources Does AF provide services that allow women to have more independence and control over resources or move into roles in which they can gain more value?	YES	<ul style="list-style-type: none"> AF envisions collaboration with the aggregator and Alluvial to ensure women have access to a bank-account and a mobile money wallet, with which they can have more control over their own resources

AF is considered gender intentional, and can improve its over all corporate gender strategy by documenting a gender strategy and collecting sex disaggregated data on farm-level

Gender Assessment

JOURNEY ON GENDER INTENTION LADDER



- Current situation**
- AF is **gender intentional**. The company has taken steps to at least understand the different needs and constraints of women and men in its internal process with the goal of ensuring both women and men have access to resources.
 - Although AF does not have a documented gender strategy in place, the company is looking to commission CARE Impact Partners to **develop a comprehensive strategy which will include KPIs to track efforts made by AF**.
 - AF maintains a **gender disaggregated farmer database** and seeks to **understand the unique needs and preferences of the male and female farmers** they work with.

Possible measures to be taken

INTERVENTIONS / KPIs

Best practices to implement in becoming transformative

- **Document the gender strategy** for clarity on goals and agenda. Establish KPIs (e.g., targets on the number of male and female farmers you are aiming to reach), develop a roadmap to get there and allocate resources to monitor and measure gender goals.
- Promote an **inclusive workplace** for staff by developing **comprehensive internal gender policies**, approved by the management, and ensuring that these are periodically disseminated to all staff.
- Use **sex disaggregated data collected to inform service delivery to farmers** e.g., track sex disaggregated farm level metrics such as yield and income to understand gaps and need for services and skills.
- **Inclusive tailoring of services** by identifying women's needs and preferences in view of training times and location to ensure their participation.

Potential KPIs to monitor on the gender journey

- Number of women benefitting from improved working conditions
- Number of women with reduced living wage gap
- Number of women with access to and control over income
- Increase in income for women
- Increase in the number of women accessing services

Sources: Gender module responses from AF

The business case

Assessing AF's business case and opportunities for improvement

For business sensitivity reasons, we have excluded the pages of 'The business case' chapter from the report. If you are interested in more detailed information, [please contact us](#).

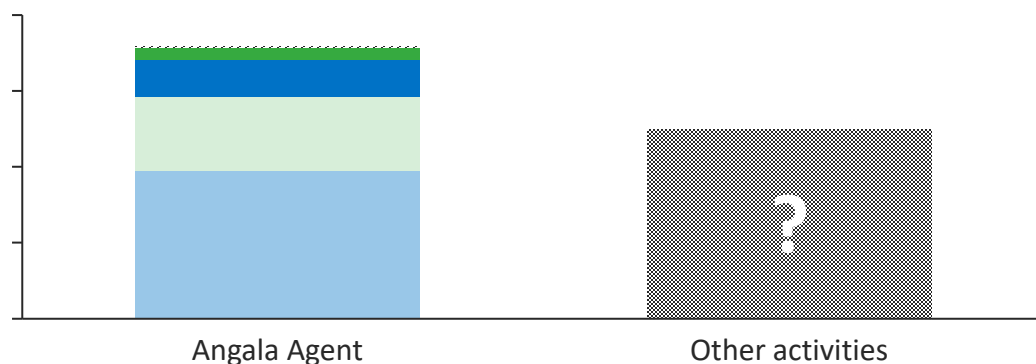
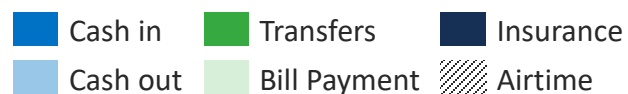
The impact case | VCP-level

Assessing VCP impact and opportunities for improvement

Agents have an incentive to increase their effort in onboarding farmers on the Payrail

Business case of Agent in AF's Ecosystem

ANNUAL INCOME



- An Agent's income is mainly driven by the commission charged on 'cash out' transactions as end-users convert their mobile money into cash
- AF is recommended to assess and understand an Agent's income activities to identify with what activities AF has to compete in terms of time dedicated to acquiring end-users and performing transactions

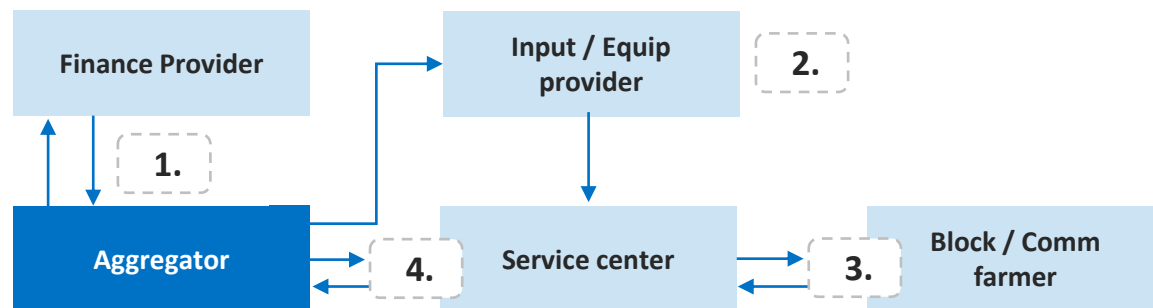
INCOME SENSITIVITY

	% of Commission						
	10%	20%	40%	60%	70%	80%	90%
Transaction per day ¹⁾ 2.0	26	53	106	159	185	212	238
5.0	66	132	265	397	463	529	595
10.0	132	265	529	794	926	1,058	1,190
15.0	198	397	794	1,190	1,389	1,587	1,786
20.0	265	529	1,058	1,587	1,852	2,116	2,381

NOTES: Transactions per day refer to Cash-out transactions, with Cash-in, Transfers, and Bill Payment reaching 50% of each step.

Engaging with AF, and achieving a different finance structure, enables the aggregator to decrease its finance cost and number of month the business is cash constrained

SDM without Angala, see flow chart [\[here\]](#)



USD 1.5 mln/year¹⁾

USD 110,000/year

13 months

USD 0/year

N/a

N/a

Annual finance requirement

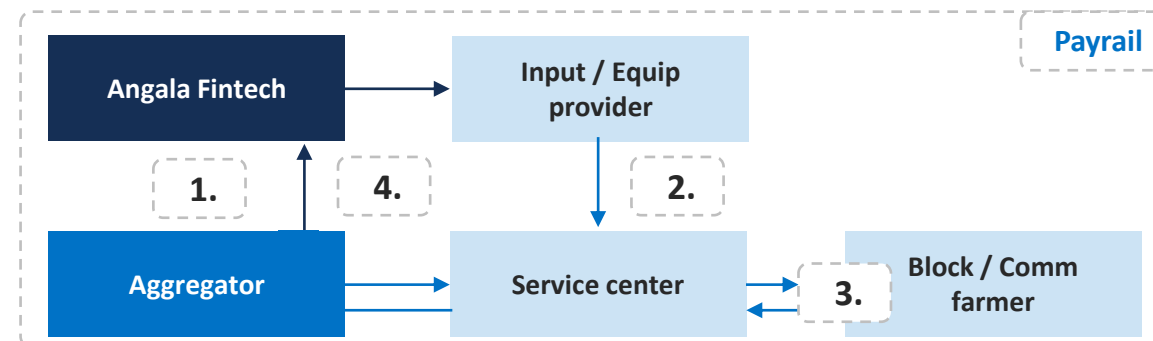
Annual finance cost

#/months due²⁾

1. A finance institution provides a credit facility to the aggregator to procure ginger and to facilitate the purchase of inputs & equipment
2. The aggregator facilitates the purchase of bulk inputs / equipment in March
3. Service centers distribute the inputs, equipment and mechanization to farmers and receive capacity building
4. Farmers repay with wet ginger Oct-Dec, which is processed at the centers and sold by the aggregator in Apr - June

NOTE: 1) Annual numbers are based on the 5-year average between 2021 – 2025; 2) Number of months between issuing the loan to farmers and the moment dry ginger is sold and money is received

SDM with Angala, see flow chart [\[here\]](#)



USD 35,000/year¹⁾

USD 2,400 /year

7 months

USD 1.5 mln./year

N/a

N/a

Annual finance requirement

Annual finance cost





#/months due²⁾

1. Angala opens a Payrail account per farmer, registers the farmer collateral (rhizomes), initiates the purchase of inputs & equipment
2. Service centers distribute the inputs, equipment and mechanization to farmers and receive capacity building
3. Farmers repay with wet ginger, which is processed at the centers and sold by the aggregator
4. Credit is repaid with value of sourced wet ginger and registered on Payrail account, money for surplus is likewise paid digitally on the farmer's Payrail wallet

The impact case | Farm-level

Assessing farmer impact and opportunities for improvement

AF's ginger farmer base is segmented in community and block farmers, where the latter cultivates two instead of one season per year

				
Distinctive characteristics*	Baseline**	Community farmer	Block farmer (1-Season)	Block farmer (2-Seasons)
Farm size	1 hectare	1 hectare	1 hectare	1 hectare
Number of seasons	1 per year	1 per year	1 per year	2 per year
Current yield	10,000 kg/ha	15,000 kg/ha	15,000 kg/ha	15,000 kg/acre
Rhizomes for replanting	3,500 kg/ha	3,500 kg/ha	N/A	N/A
Own consumption	N/A	N/A	N/A	N/A
Farmgate price high season	0.28 USD/kg	0.28 USD/kg	0.28 USD/kg	0.28 USD/kg
Farmgate price low season	0.45 USD/kg	0.45 USD/kg	0.45 USD/kg	0.45 USD/kg
Share of low season sales	0%	0%	0%	50%
Cost of production	974 USD/ha/year	1,338 USD/ha/year	3,327 USD/ha/year	8,262 USD/ha/year
Farmer practices				
Harvesting	Manual	Manual	Mechanized	Mechanized
Land sanitizing, planting, cultivating	Manual	Mechanized	Mechanized	Mechanized
Rhizomes	Normal	Normal	Micro tubers	Micro tubers
Fertilizer / Crop protection	N/A	NPK + Crop protection	Organic, NPK, Crop protection	Organic, NPK, Crop protection
Irrigation	No	No	Yes	Yes

* Assumptions are based on the 2021/22 season. Prices and costs are converted from NGN to USD using an exchange rate of 480 GHS/USD

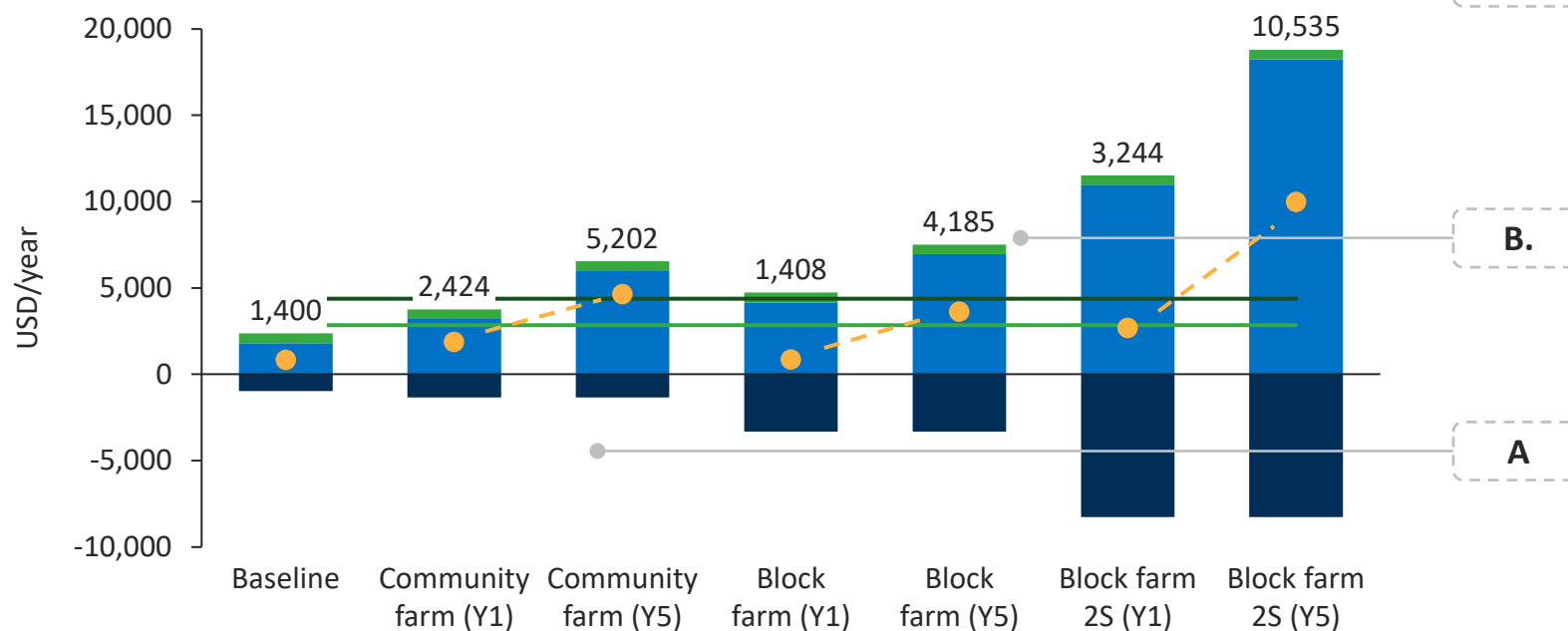
** A Baseline farmer is a farmer not receiving services from the aggregator. An SDM farmer is a farmer that does receive services from the aggregator.

Implementing GAP and utilizing the services in the associated Ginger SDM, both community and block farmers are enabled to close the living income gap with ginger income

Poverty and living income gap per farmer segment

USD/year/Ha

■ Ginger revenue ■ Ginger cost — Poverty line*
■ Other income ● Income — Living income**



- A. Purchasing Rhizomes is 1,700 USD/Ha for the initial cost to start cultivating ginger. Segments considered in this analysis perform propagation from part of their ginger harvest, which is outweighed by the increase in productivity, which decreases the cost of production to the current level
- B. As a result of costly mechanization, with equal productivity, the block farm cultivating one season has lower profitability at full maturity compared to the community farmer, who is using less mechanization
- C. Dependent on the extent to which farmers in the SDM are able to meet EU requirements, farmers are able to benefit from cultivating two seasons

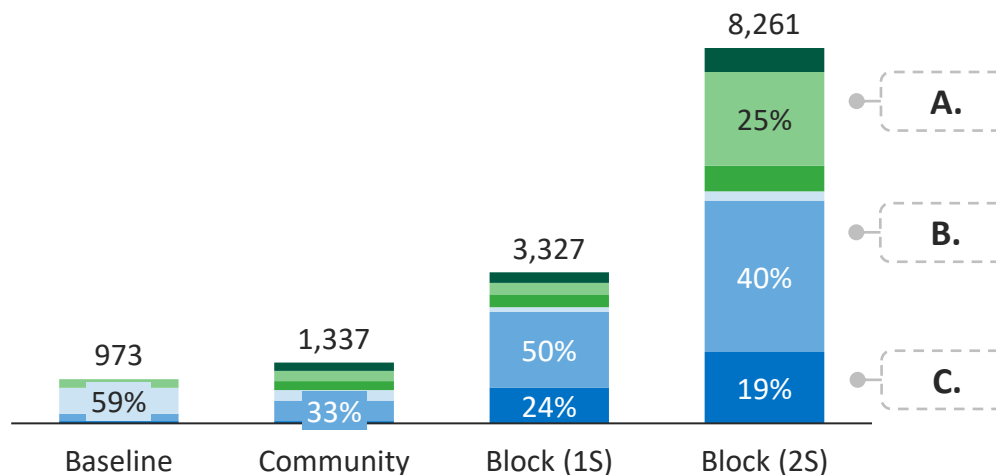
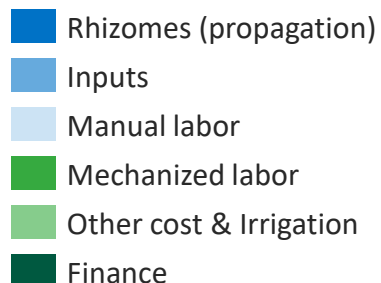
*Data on poverty line is obtained from [World Bank \(2022\)](#)

**The Living Income (LI), see [Anker \(2020\)](#), is an approximate income needed to meet a family's basic needs including food, housing, transport, health, education, tax deductions and other necessities. The difference between the LI benchmark and actual income is referred to as the living income gap. The living income benchmark depicts a typical family of five members (2 parents and 3 children).

Production cost of all segments consists considerably of the cost of rhizomes, where block farms pay fertilizer and leverage lower cost of micro tubers

Cost of production year 1 for ginger cultivation

USD/year/Ha



- A. Cultivating two seasons, the block farmer performs flood irrigation during the dry season (Feb – March), of which the product is sold during April - June
- B. Block farmers use both Organic and in-organic fertilizer to optimize productivity and increase sustainability through the use of soldier fly produce organic fertilizer
- C. Where the Baseline and Community farmers perform ginger propagation to prepare planting materials, block farms use micro-tubers as planting materials which reduces the amount and cost of tubers (rhizomes) required per ha/season
- D. See annex for the overview of [\[what items are provided financed\]](#)

Farm-gate price (NGN/MT)	133,333	133,333	133,333	175,000
Marketable surplus (Kg/Ha/year)	6,500	11,500	15,000	30,000
Farm size (Ha)	1	1	1	1
Number of seasons	1	1	1	2
Planting material value (NGN/year)	801,500	801,500	366,400	366,400
Interest & Insurance charge	N/a	22% / 3.5%	22% / 3.5%	22% / 3.5%
Profit (USD/farm)	1,400	2,424	1,408	3,244

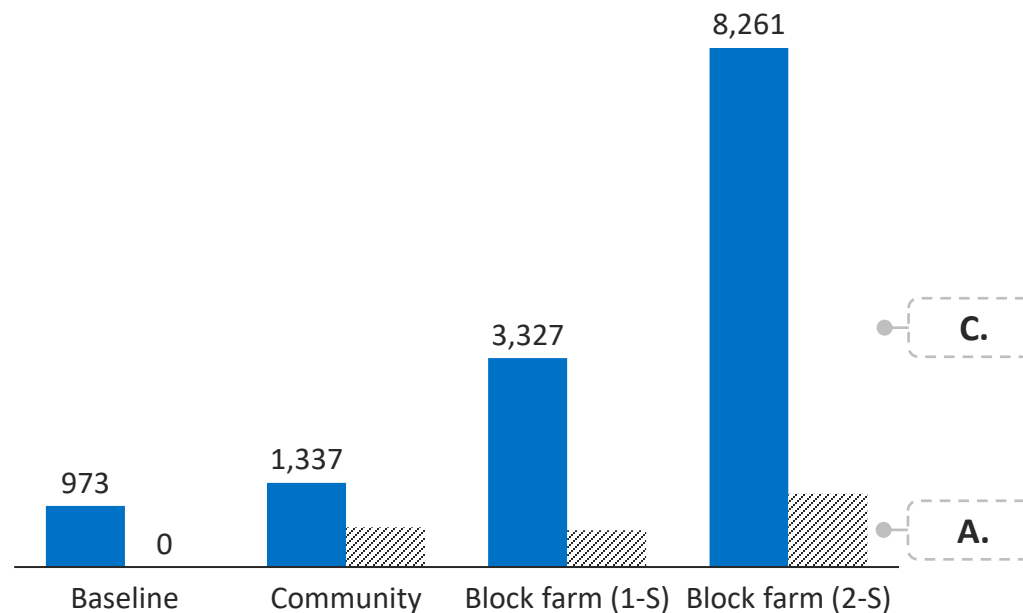
* Prices and costs are converted from NGN to USD using an exchange rate of 480 NGN/USD ** Other consists of Crop protection, land rent, and transport cost

The current selection of activities to be financed only partly cover initial cost of ginger cultivation, showing the need to expand the finance to planting materials and irrigation

Cost of production for ginger cultivation in Year 1

USD/year/Ha

■ Total cost
▨ Finance



- A. The current selection of activities to finance partly covers the annual cost of initiating the cultivation of ginger, while major cost items such as organic fertilizer, irrigation, and micro-tuber (rhizomes) remain unfinanced, which puts pressure on a [farmer's cash position](#)
- B. Community farmers receive slightly more finance because they do not perform mechanized harvesting, but perform more expensive manual harvesting [\[see assumptions\]](#)
- C. The current selection of activities to finance partly covers the annual cost of initiating the cultivation of ginger, while major cost items such as organic fertilizer, irrigation, and micro-tuber (rhizomes) remain unfinanced, which puts pressure on a [farmer's cash position](#)

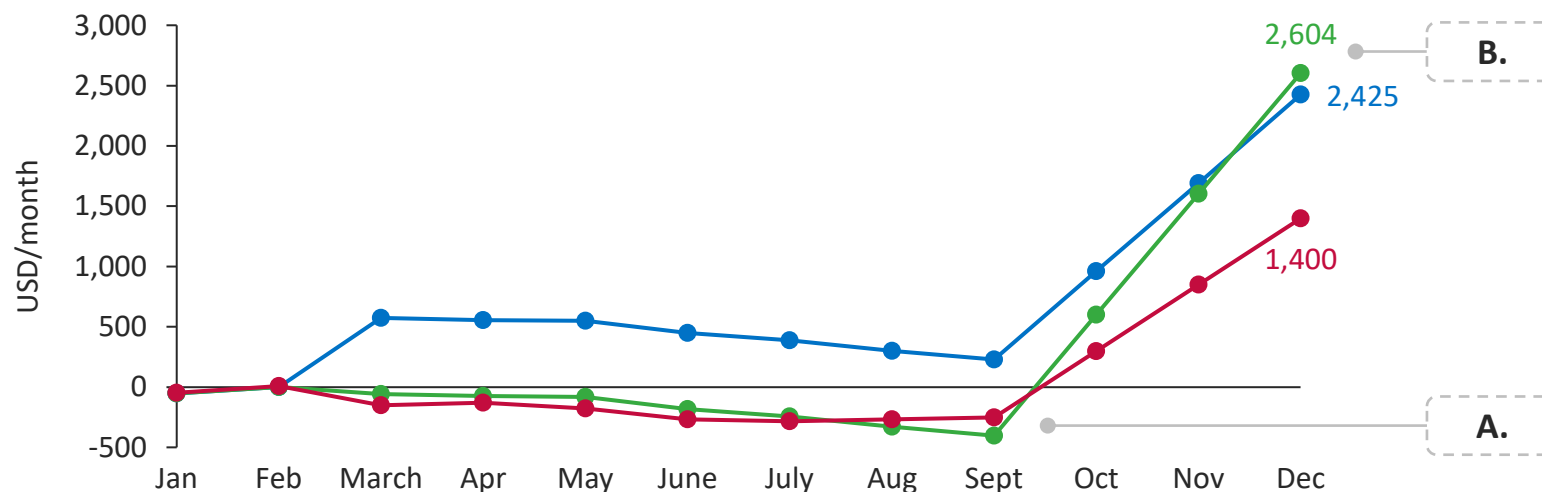
Production cost finance %	0%	47%	18%	14%
Finance cost (USD/year)	0	179	236	527
Loan per season (USD/season)	0	630	583	583

The current level of input and labor finance is just sufficient to prevent farmers who have rhizomes from previous ginger cultivation from becoming significant cash constrained

Initial (year 1) cumulative net cash flow for ginger farmers per month *

USD/year

Community Y1 (with finance) Community Y1 (without finance) Baseline



1 season

Land prep

Ploughing,
Harrowing, Planting

Fertilizer and Crop protection
application

Harvest

* Projected farmer cashflows do not factor in household expenses such as school fees, medical expenses etc. These expenses could lead to a different result if considered.

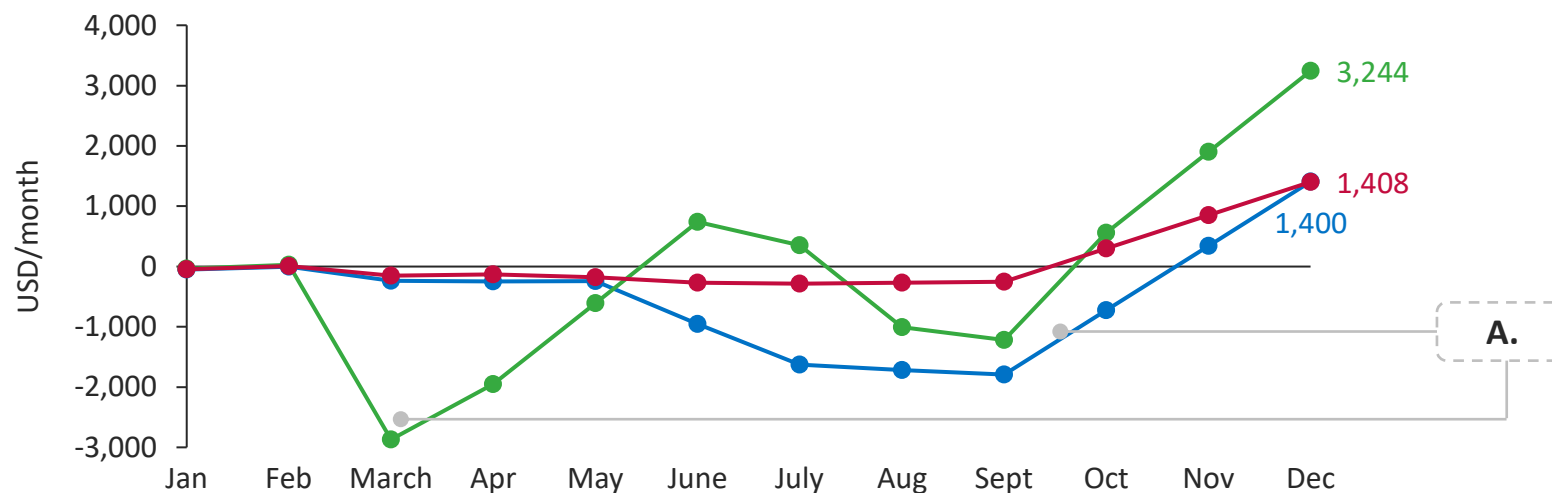
- Received finance for inputs, mechanized labor and land use in March is sufficient to mitigate the risk of becoming cash constrained between March and September, which is one month before harvest starts
- Community farmers who do not have rhizomes, but want to initiate ginger farming, face an initial investment of \$1,700/Ha for which there are no sufficient cash flows
- Productivity and annual income surpassing the living income benchmark after [\[five years cultivating within the SDM\]](#), showing the possibility to slowly increase the credit-line to community farmers as there is an increased certainty of farmers being able to repay while earning sufficient income

Leveraging cash surplus from the first season, only block farmers who cultivate two seasons can reduce the number of cash constrained months significantly, but remain cash constrained in the first season

Initial (year 1) cumulative net cash flow for ginger farmers per month *

USD/year

Block farm (1-S) - Y1 Block farm (2-S) - Y1 Baseline



- A. The Block farm requires additional funding to ensure no cash constrained positions are faced during the first year, due to major expenses of micro-tubers (rhizomes) and organic fertilizer, which is not funded by AF, see [cost of production](#)
- B. Cultivating 2 seasons provides the block-farmer a positive position in June and Oct-Dec in year 1 (cash surplus), whereas the block farmer cultivating 2-seasons in year 5 only becomes cash constrained during Jan – Apr

1 season






2 seasons



* Projected farmer cashflows do not factor in household expenses such as school fees, medical expenses etc. These expenses could lead to a different result if considered.

AF's rice farmer base is segmented in block farmers who cultivate either 1 or 2 seasons per year

			
Distinctive characteristics*	Baseline**	Block farmer (1-Season)	Block farmer (2-Seasons)
Farm size	1 hectare	1 hectare	1 hectare
Number of seasons	1 per year	1 per year	2 per year
Current yield	2,500 kg/ha/season	4,000 kg/ha/season	4,000 kg/ha/season
Rice for replanting	N/A	N/A	N/A
Own consumption	10%	10%	10%
Farmgate price high season	0.38 USD/kg	0.38 USD/kg	0.38 USD/kg
Cost of production	534 USD/Ha	731 USD/Ha	1,585 USD/Ha
Farmer practices			
Planting, cultivating, harvesting	Manual	Manual	Manual
Land clearing, ploughing, harrowing	Manual	Mechanized	Mechanized
Seeds	FARO 44	FARO 44	FARO 44
Fertilizer / Crop protection	50% Urea and Crop protection	Organic, NPK, Crop protection	Organic, NPK, Crop protection
Irrigation	No	No	No

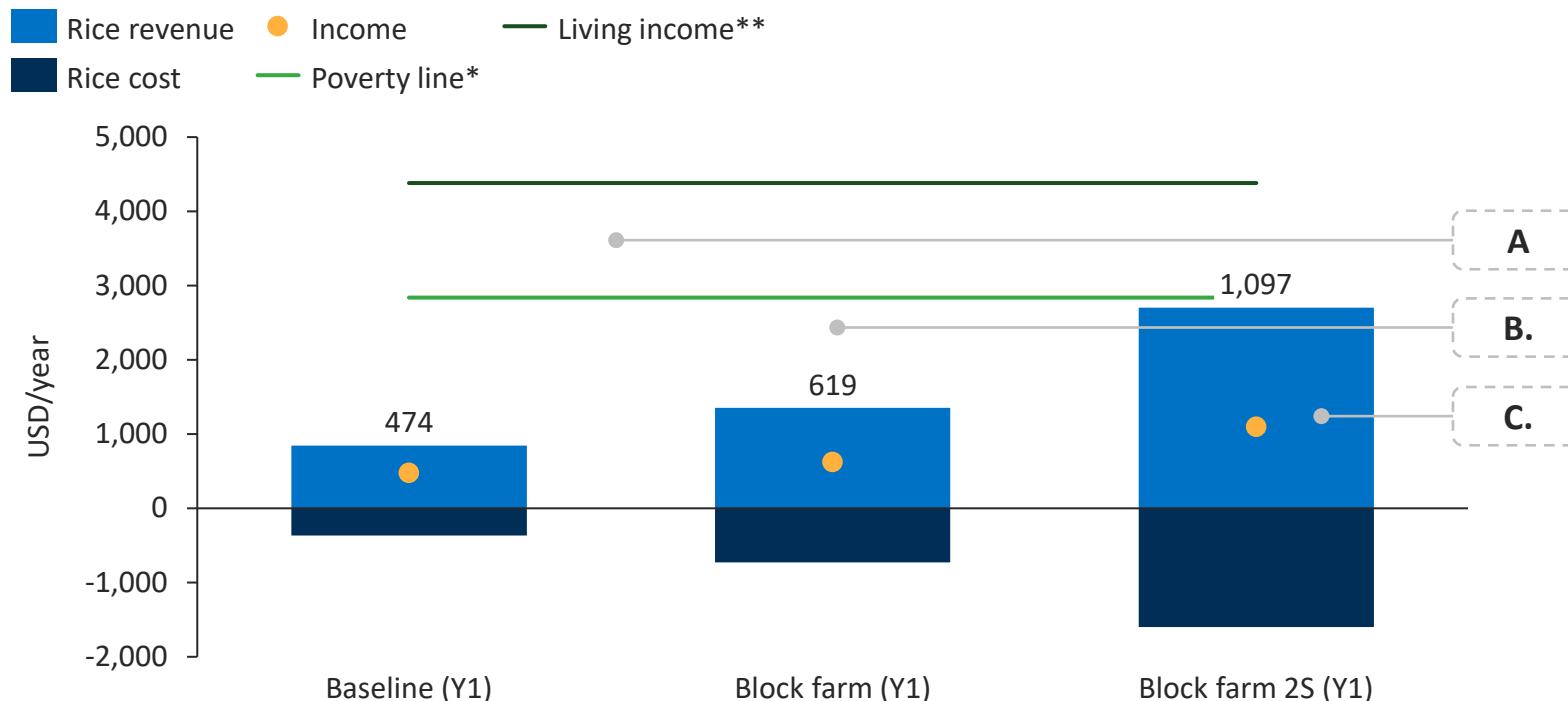
* Assumptions are based on the 2021/22 season. Prices and costs are converted from NGN to USD using an exchange rate of 480 GHS/USD

** A Baseline farmer is a farmer not receiving services from Alluvial. An SDM farmer is a farmer that does receive services from Alluvial

Current services packages in the Rice SDM do not provide an income from rice farming that is sufficient to earn an income above the poverty line

Poverty and living income gap per farmer segment

USD/year



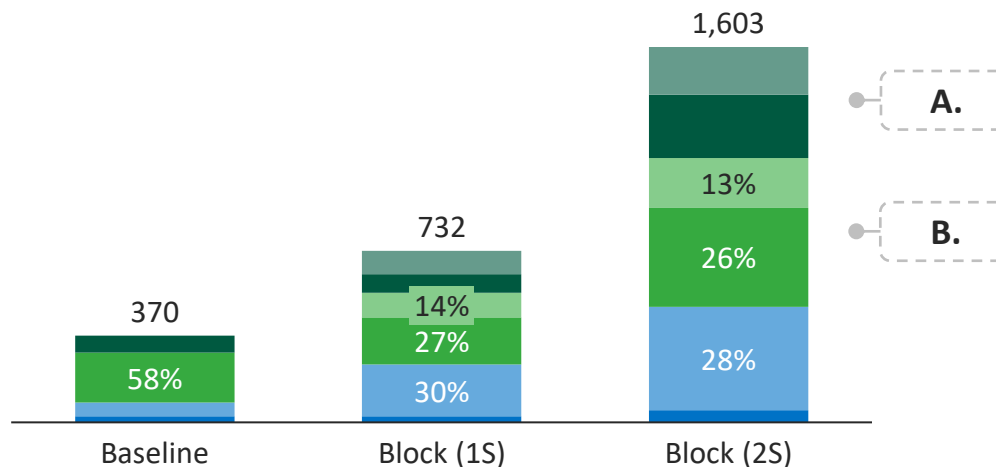
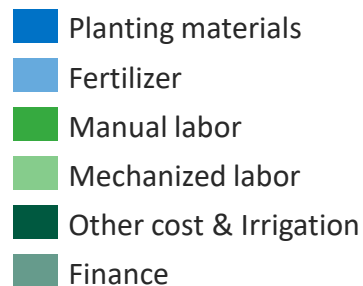
*Data on poverty line is obtained from [World Bank \(2022\)](#)

**The Living Income (LI), see [Anker \(2020\)](#), is an approximate income needed to meet a family's basic needs including food, housing, transport, health, education, tax deductions and other necessities. The difference between the LI benchmark and actual income is referred to as the living income gap. The living income benchmark depicts a typical family of five members (2 parents and 3 children).

Block farmers have an increased cost of production due to mechanization, the use of fertilizer, and the implementation of irrigation during the dry season

Cost of production for rice cultivation

USD/year



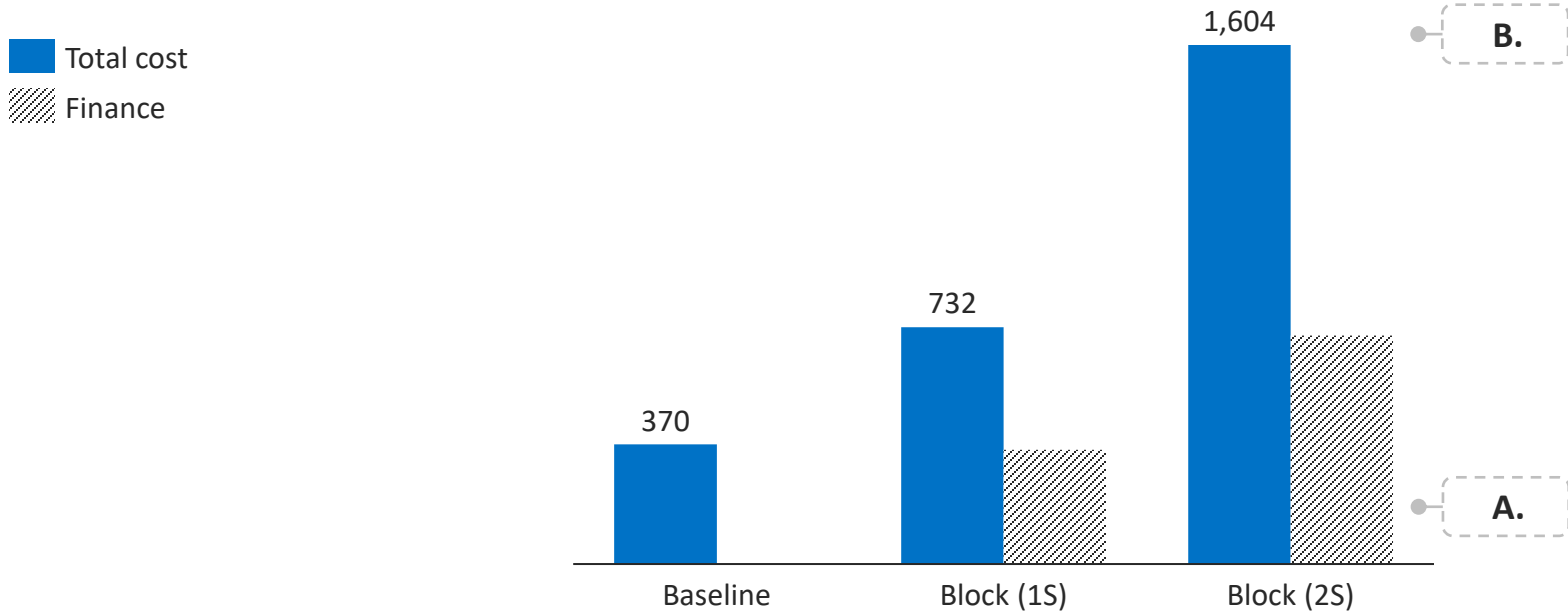
A. To ensure increased productivity, block farmers implement fertilizer and irrigation during the 2nd season (dry), doubling the cost of production compared to the Baseline

B. Performing mechanized land clearing, ploughing, and harrowing, the block farmers increase their total labor cost from 214 USD/year (Baseline) to 307/635 USD/year (Block 1S/2S), which is outweighed by an increased productivity

Farm-gate price (NGN/MT)	180,000	180,000	180,000
Marketable surplus (Kg/Ha/year)	2,250	3,600	7,200
Farm size (Ha)	1	1	1
Number of seasons	1	1	2
Interest & Insurance charge	N/a	22% / 3.5%	22% / 3.5%
Profit (USD/farm)	474	619	1,097

The current selection of activities to be financed only cover 44-48% of initial cost of rice cultivation, showing the possibility to expand the finance to irrigation and manual labor

Cost of production for rice cultivation USD/year



- A. The current selection of activities to finance partly covers the annual cost of initiating the cultivation of rice, while major cost items such as irrigation and manual labor, remain unfinanced, which could put pressure on a [farmer's cash position](#) thorough the year
- B. As indicated in the [cost of production](#), costs of the block farms are mainly driven by increased cost of fertilizer, irrigation, and the use of mechanized labor, see [farm-level assumptions](#)

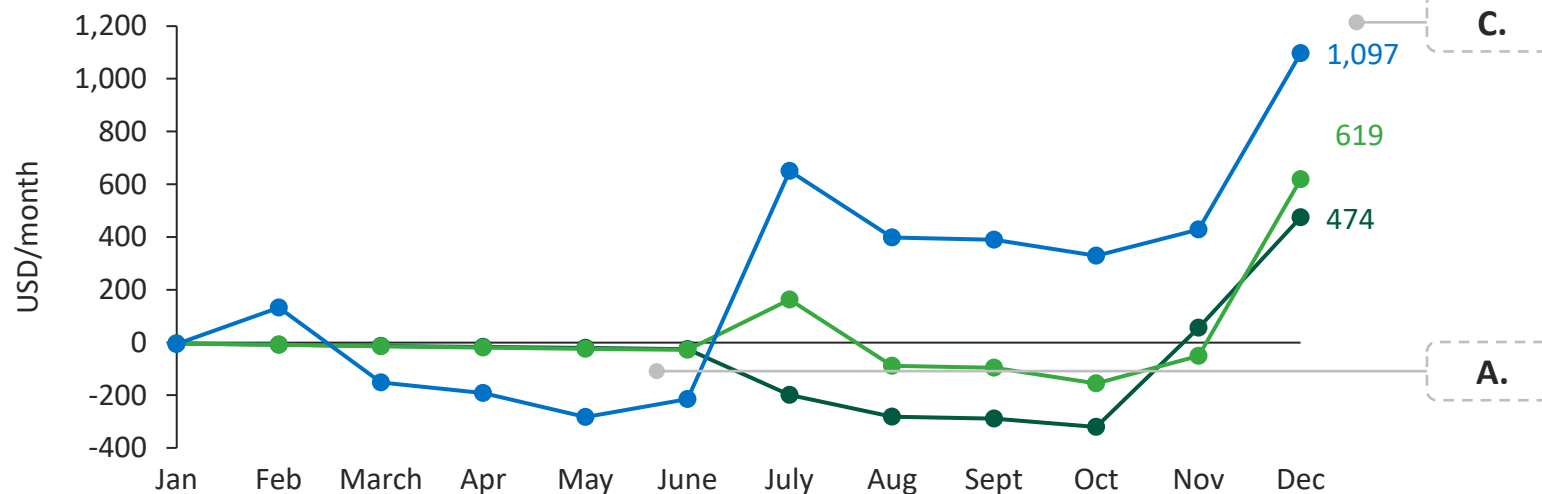
Production cost finance %	0	48%	44%
Finance cost (USD/year)	0	100	204
Loan per season (USD/season)	0	353	706

Leveraging cash surplus from the first season, only block farmers who cultivate two seasons can reduce the number of cash constrained months significantly

Cumulative net cash flow for rice farmers per month * (USD/year)

USD/year

Baseline Block farm (1-S) Block farm (2-S)



- A. Leveraging the revenue from the first season, the block farmer who cultivates two seasons is cash constrained during March – June on its rice operations, with a maximum shortage of USD 283
- B. With the majority of rice farmers cultivating only during the wet season (July – Dec), AF could serve most of the unbanked community in that period
- C. Relying on rice as a cash crop, while other crops are cultivated as food crop, farmers who only cultivate one season, don't have sufficient cash in 10 of the 12 months thorough the year

1 season

Land prep

Cultivati
on

Harvest

B.

2 seasons

Land
prep

Cultivati
on

Harvest

Land prep

Cultivati
on

Harvest

NOTES: * Projected farmer cashflows do not factor in household expenses such as school fees, medical expenses etc. These expenses could lead to a different result if considered.

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IDH Annual Report 2021



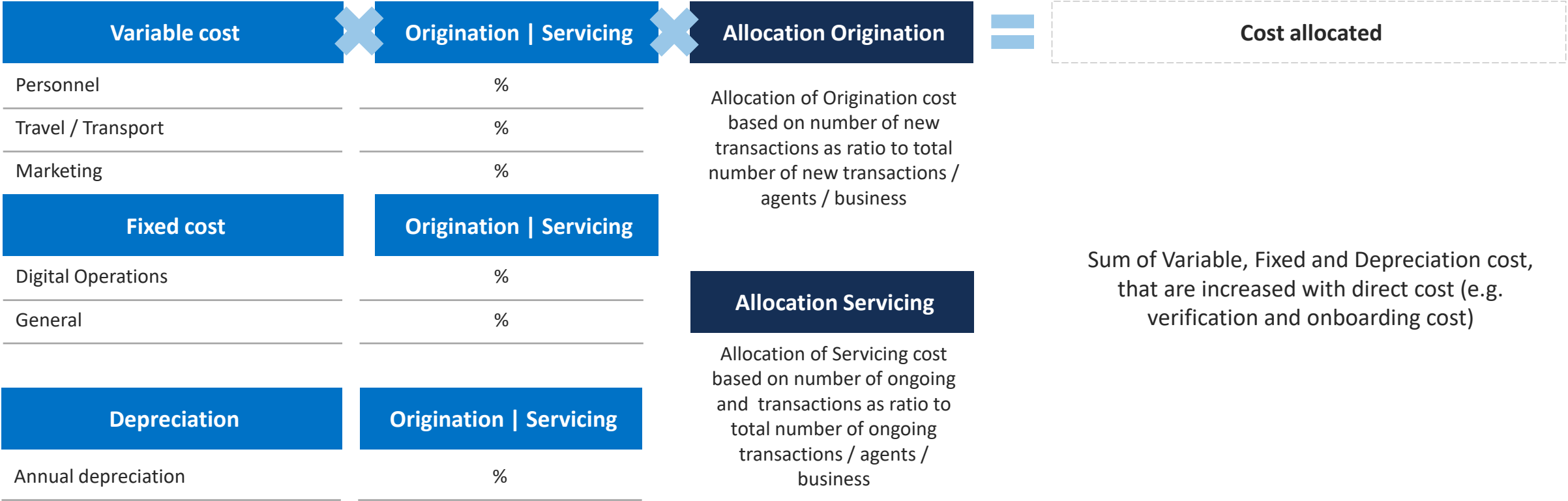
IDH Shifting Gears

This report was built using **think-cell**

Assumptions and methodology

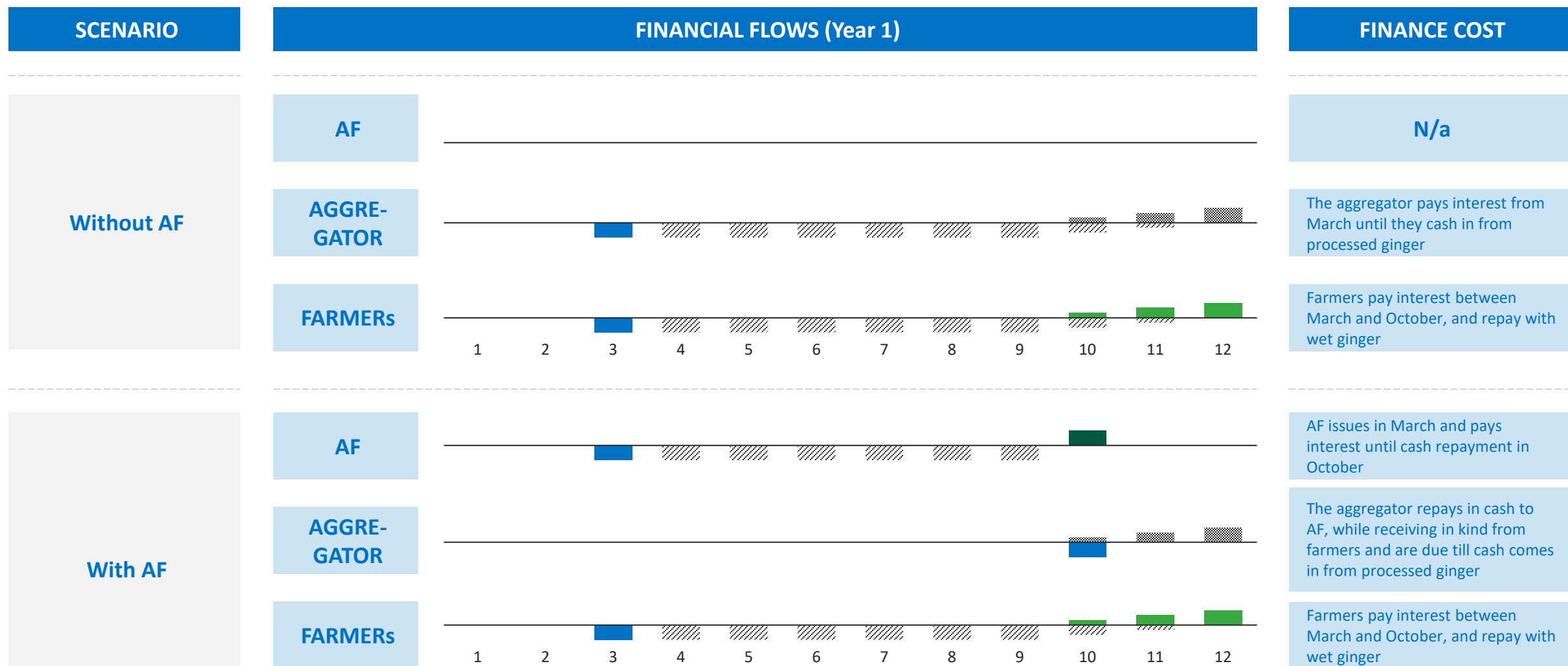
Key assumptions and background information

Cost allocation (Activity Based Accounting)



Overview of financial flows of financing with or without support from AF

■ ,000 USD / Year 1 ▨ Due / Issued ■ Repayment (in kind) ■ Repayment (in cash) ▨ Value to recover with processed ginger



Assumptions | Ginger farming

Ginger Farm level (1/4)

Variable		Baseline 1	Community	Block farm (1-S)	Block farm (2-S)
Farm size		2.0	2.0	2.0	2.0
Cultivation ginger	Ha	1.0	1.0	1.0	1.0
Cultivation non-ginger	Ha	1.0	1.0	1.0	1.0
Number of season	#/year	1	1	1	2
Productivity					
Year 1	Kg/Ha/season	10,000	15,000	15,000	15,000
Year 5	Kg/Ha/season	10,000	25,000	25,000	25,000
Propagation	Kg/season	3,500	3,500	0	0
Own consumption	Kg/year	0	0	0	0
Bag size	Kg/bag	60	60	60	60
Sales price (NGN/bag)	Oct – Dec	8,000 (100%)	8,000 (100%)	8,000 (100%)	8,000 (50%)
	Apr – June	13,000 (0%)	13,000 (0%)	13,000 (0%)	13,000 (50%)

Assumptions | Ginger farming

Ginger Farm level (2/4)

Variable	NGN/unit	NGN/unit	Baseline 1	Community	Block farm (1-S)	Block farm (2-S)	Financed
Manual labor	Days/Ha/season						
Land preparation		2,000	50	0	0	0	0%
Planting		3,500	20	0	0	0	0%
Fertilizer application		2,500	1	2	2	2	0%
Herbicides application		1,500	1	2	2	2	0%
Pesticides application		1,500	0	2	2	2	0%
Aflasafe application		1,500	0	2	2	2	0%
Mulching application		3,000	3	5	5	5	0%
Weeding		2,000	15	10	10	10	0%
Harvesring		2,500	25	25	0	0	100%
Mechanization	Days/Ha/season						
Land preparation		30,000	0	1	1	1	100%
Planting		25,000	0	1	1	1	100%
Ploughing/Harrowing		40,000	0	1	1	1	100%
Harvesting		40,000	0	0	1	1	100%
Inputs							
Seed sorting	Days/Ha/season	1,000	8	8	3.7	3.7	100%
Seed treatment	Kg/Ha/season	750	4	4	1.8	1.8	100%
Seed propagation	Bags/Ha/season	208	65	65	29.7	29.7	100%

Assumptions | Ginger farming

Ginger Farm level (3/4)

Variable	NGN/unit	NGN/unit	Baseline 1	Community	Block farm (1-S)	Block farm (2-S)	Financed
Rhizomes	Kg/Ha/season	229	0	0	1,600	1,600	0%
Fertilizer	Bag/Ha/season						
Organic fertilizer		1,500	10	10	400	400	0%
NPK		12,000	3	6	6	6	100%
Crop protection							
Herbicides	Litre/Ha/season	1,500	2	4	4	4	100%
Pesticides	Litre/Ha/season	1,000	0	4	4	4	0%
Aflasafe	Kg/Ha/season	1,200	0	10	10	10	100%
Other							
Mulch	Bundles/Ha/season	200	100	500	500	500	0%
Transportation (bulk)	NGN/Ha/season	5,000	0	1	1	1	100%
Transportation (ind)	NGN/Ha/season	2,000	1	0	0	0	0%
Equipment	#/farm						
Rake	2 years	1,500	2	0	0	0	0%
Cutler	2 years	2,000	2	0	0	0	0%
Plough	5 years	5,000	1	0	0	0	0%
Hand hoe	5 years	3,000	10	0	0	0	0%
Knapsack	3 years	6,000	2	2	2	2	0%
Basin	3 years	4,000	5	0	0	0	0%
Bags	1 years	200	108	285	343	687	0%

Assumptions | Ginger farming

Ginger Farm level (4/4)

Variable	NGN/unit	NGN/unit	Baseline 1	Community	Block farm (1-S)	Block farm (2-S)	Financed
Land rent	NGN/Ha/year	50,000	1	1	1	1	100%
Irrigation	NGN/Ha/season	400,000	0	0	0	1	0%
Finance							
Loan	Yes/No		No	Yes	Yes	Yes	
Principle	Yes/No		N/a	See %	See %	See %	
Interest	Yes/No		N/a	22%	22%	22%	
Insurance	Yes/No		No	Yes	Yes	Yes	
Principle	Yes/No		N/a	See %	See %	See %	
Premium	Yes/No		N/a	3.5%	3.5%	3.5%	

Assumptions | Rice farming

Rice Farm level (1/3)

Variable		Baseline 1	Block farm (1-S)	Block farm (2-S)
Farm size		2.0	2.0	2.0
Cultivation ginger	Ha	1.0	1.0	1.0
Cultivation non-ginger	Ha	1.0	1.0	1.0
Number of season	#/year	1	1	2
Productivity				
Year 1	Kg/Ha/season	2,500	4,000	4,000
Propagation	Kg/season	0	0	0
Own consumption	Kg/year	10%	10%	10%
Sales price (NGN/bag)	Oct – Dec	180,000 (100%	180,000 (100%)	180,000 (100%)

Assumptions | Rice farming

Rice Farm level (2/3)

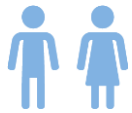
Variable			Baseline 1	Block farm (1-S)	Block farm (2-S)	Financed
Manual labor						
Land preparation	NGN/Ha/season		40,000	0	0	0%
Ploughing	NGN/Ha/season		7,500	0	0	0%
Harrowing	NGN/Ha/season		7,500	0	2	0%
Transplanting	NGN/Ha/season		0	0	27,500	0%
Broadcasting	NGN/Ha/season		17,500	17,500	17,500	0%
Pre-crop protection	NGN/Ha/season		5,000	12,000	12,000	0%
Post-crop protection	NGN/Ha/season		5,000	12,000	12,000	0%
Harvesting	NGN/Ha/season		10,000	45,000	45,000	0%
Fertilizer application	NGN/Ha/season		10,000	10,000	10,000	0%
Mechanization						
Land preparation	NGN/Ha/season	700	0	30	30	100%
Planting	NGN/Ha/season	15,000	0	1	1	100%
Ploughing/Harrowing	NGN/Ha/season	15,000	0	1	1	100%
Inputs						
Planting material	Bag/Ha/season	500	25	25	25	100%
Fertilizer	Bag/Ha/season	28,000	0.5	2.9	2.9	100%
Crop protection	Bags/Ha/season	10,300	1	2	2	100%

Assumptions | Rice farming

Rice Farm level (3/3)

Variable	NGN/unit	NGN/unit	Baseline 1	Block farm (1-S)	Block farm (2-S)	Financed
Equipment						
Equipment	NGN/farm	30,000	1	1	1	
Bags	100kg/bag	200	22.5	36	72	
Transportation	NGN/Ha/season	500	20	20	20	
Land lease	NGN/Ha/year	10,000	1	1	1	
Irrigation	NGN/Ha/season	75,000	0	0	0.5	
Finance						
Loan	Yes/No		No	Yes	Yes	
Principle	Yes/No		N/a	See %	See %	
Interest	Yes/No		N/a	22%	22%	
Insurance	Yes/No		No	Yes	Yes	
Principle	Yes/No		N/a	See %	See %	
Premium	Yes/No		N/a	3.5%	3.5%	
Other income						
Other crop income	NGN/year					
Off-farm income	NGN/year					

IDH has adopted the following definitions to define the extent to which a gender lens has been integrated by partners. IDH aims for all its projects to be intentional and for some to be transformative.



Gender unintentional

No steps taken to understand the different needs and preferences of men and women, or target gender gaps/barriers.



Gender intentional

Considers the different needs and constraints of women and men and takes some steps to create gender equality. Such projects adapt to the needs of women and men without seeking to change gender norms or barriers.



Gender transformative

Understands the different needs and constraints of women and men and address the root causes of gender inequality. A gender transformative approach needs to foster changes in **individual capacities (agency)**, **gendered norms and expectations (relations)**, and **institutional rules and practices (structures)**.

Why we believe investing in women can work for business

- By tailoring goods and services to the needs of women, companies can reach a large and often underserved market, potentially increasing revenues from service provision or enhancing their supply security.
- If women had similar access to and control of productive resources as men, yields of female farmers could increase by up to 30 percent. Higher farm yields and incomes create greater business opportunities for companies working with those farmers.
- Companies that are committed to gender equality outperform their peers. Improving gender diversity in the workplace can improve a company's financial performance by up to 25 percent.
- When companies are seen to invest in gender equality, this has the potential to lead to higher levels of farmer and/or worker loyalty. Conversely, unequal opportunities for women can negatively affect companies' reputations which can lose businesses customers as well as workers.