



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



## FINAL REPORT

Doing Things Differently: Creating Lasting Changes in  
How Agribusiness is Done in Mozambique



**USAID**  
FROM THE AMERICAN PEOPLE

Feed the Future Mozambique  
Agricultural Innovations Activity  
(FTF Inova) February 2017 – June 2022

This publication was produced by FTF Inova for the United States Agency for International Development (USAID), USAID Contract Number AID-656-C-17-00001, at the request of the USAID Mozambique Mission. This document is made possible by the support of the American people through USAID. Its contents are the sole responsibility of the author or authors and do not necessarily reflect the views of USAID or the U.S. Government.

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# Acronyms

AICAJU	The National Cashew Processors Association
AIPM	Agro-Imbeu Park and Machinery
APROSE	Association for the Promotion of the Seed Sector
B2B	Business-to-business
BII	Business index innovation
BoP	Bottom of the pyramid
CdA	Casa do Agricultor
COGEF	A multi-national consumer goods group
CRM	Customer relationship management
CIM	Matola Industrial Company
DECA	Agricultural Development and Marketing
ECA	Empresa de Comercialização Agrícola Ltda
ETG	Export Trading Group
EVI	Ecoventures International
FAO	Food and Agriculture Organization of the United Nations
FTF	Feed the Future
FTF Inova	Feed the Future Mozambique Agricultural Innovations Activity
FY	Fiscal year
HEI	Higher education institution
IAI	Integrated Agricultural Survey
IAM	Instituto de Amendoas (former Cashew Institute)
IDN	Input distribution network
ICT	Information and communication technology
ISPM	Higher Polytechnic Institute of Manica
IPEME	Institute for the Promotion of Small and Medium Enterprises
JFS	Joao Ferreira dos Santos
K2	Klein Karoo
KdT	Ka Da Terra
MCA	Mozambique Cotton Association
MEL	Monitoring, evaluation, and learning
MeTL	Mohammed Enterprises Tanzania Limited
MGT	Mozambique Good Trade
MADER	Ministry of Agriculture and Rural Development

MOU	Memorandum of understanding
MSD	Market systems development
MSME	Micro, small, and medium enterprises
MZN	Meticais
NGO	Non-governmental organization
PACE	Emerging Commercial Agricultural Producers
PODEMM	Madal Women's Development Program
PROMAC	Promotion of Climate Smart Agriculture Project
SCM	Supply chain management
SHF	Smallholder farmer
SSP	Spray service providers
SSS	Support service systems
UBS	UniLurio Business School
UCM	Catholic University of Mozambique
USAID	United States Agency for International Development
USD	United States Dollar
USSD	Unstructured supplementary service data
USG	U.S. Government
VBA	Village-based agents
VSLA	Village savings and loan association

# I Executive Summary

The Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) is a five-year market systems development (MSD) activity that began in February 2017. With a budget of USD 21 million, FTF Inova works with market actors, such as businesses and government entities, to adopt new ways of doing business and delivering services, to help Mozambican agriculture become more competitive and inclusive. FTF Inova has been a catalyst for new practices, products, and services in agriculture, nudging the system to become more responsive to smallholder farmer (SHF) needs, while improving relationships and resilience. The report summarized here in Section 1 highlights how FTF Inova worked differently than other agricultural and other MSD programs.

Section 2 explains that FTF Inova worked with market actors, such as input suppliers, output buyers, and service providers, to help them adopt new ways of doing business and delivering services, which would facilitate the Mozambican agricultural system to become more competitive and inclusive of traditionally excluded groups, like smallholder farmers. Strengthening the resilience of market actors, by encouraging trust and cooperation amongst them, was also key, given how prone Mozambique was to shocks and stresses, like cyclones and other events, as well as experiencing the global pandemic of COVID-19, with underdeveloped communications and logistics infrastructure.

Section 3 explains that FTF Inova recognized that to get different results, the activity, as well as market system actors, needed to conduct business differently. To avoid the snapback effect that many development programs have after close-out, FTF Inova intentionally worked with existing market actors, primarily with an established presence in the Mozambican private sector, to co-create and innovate new ways of doing business. FTF Inova developed mechanisms under a Partnership Facility that would encourage commercial partners to co-invest. FTF Inova designed its technical approach to prioritize changes in the market system that would enable shared value for SHFs and partners and let FTF Inova pivot or scale depending on where there was traction, rather than locking it into partnerships or interventions.

Section 4 explains how FTF Inova organized and prioritized where to invest resources in the agricultural market system. FTF Inova structured and managed its portfolio of investments by three sub-systems dedicated to: a) how agricultural inputs are delivered to smallholder farmers (the Input Distribution portfolio); b) how agricultural supply chains—farm to table—are managed to improve productivity and quality (the Supply Chain Management portfolio); and c) how input suppliers and output buyers tailor their strategies and resources to sustainably profit from working with smallholder farmers by skilled service providers to support them with marketing, logistics, business development, research, and access to finance (the Support Services Portfolio).

To effect change in each sub-system, FTF Inova probed to see what might incentivize changes in business practices, networks of who did business together, and norms that affect commercial business relationships. Additionally, FTF Inova responded to the challenges that agribusinesses and consumers faced in food security with grants funds under a Challenge Fund entitled “Future Food”.

Section 5 explains the key results that FTF Inova achieved. Overall, FTF Inova disrupted agribusiness as usual by empowering over 100,000 smallholder farmers (increasing their voice, choice, and control in what inputs are accessible to them), by facilitating improved access to formal market buyers for smallholders by working with over 100 local businesses, and by leveraging around \$2 million in investment from the private sector to generate over \$50 million in sales.

Section 6 presents lessons learned and Section 7 includes opportunities, recommendations, and risks for future programming.

Annexes include the overall performance indicator achievements, the theory of change, an index of reports and information products, a financial report and a glossary of terms that FTF Inova used in practice.

## 2 Introduction

In Mozambique, farming is a way of life for millions of families. Rich soil, endless tracts of fertile land and ample sunshine provide enviable growing conditions for a veritable cornucopia of food crops. Yet Mozambique struggled for decades to convert its natural potential into human prosperity. Malnutrition was pernicious. Yields were consistently poor, and the crops that farmers produced were of low quality and cut off from markets that needed them. The problems were greatest in distant, hard-to reach areas – where FTF Inova worked.

Deep dives at the outset<sup>1</sup> of the activity identified a host of practical challenges shared by players across the key value chains. Among these issues, troubles was that smallholders – did not see their agricultural livelihoods as a *business*, only as a means of survival. At the same time, agribusinesses did not see millions of smallholders and the communities they live in as viable markets for their products, services, and investments. To be sure, there were many other factors at play, but the root problem was this disconnect that kept Mozambique’s agriculture market “thin.”

In a country visited regularly by floods and a myriad of other climate-related disasters, building resilience and overcoming market “thinness” - from farm to fork – was a foundational challenge. Short-term thinking by smallholders and businesses alike, rather than investing effort and money in longer-term viability, was not helpful. The enduring relationships between market actors and the robust market systems needed for commerce to thrive over time were exceptionally weak or missing altogether.

To address the systemic weaknesses holding back sustainable growth and competitiveness across commodity-specific value chains, FTF Inova took a different, agile Market Systems Development (MSD) approach that focused on:

- Cultivating trust among market actors.
- Illuminating mutual incentives.
- Co-creating with the full range of market players.
- Supporting ‘early movers’ via structured partnerships that started small, evolved, and deepened in step with their successes.
- Facilitating new ways of working in the core functions of supply and demand, supporting services, and rulemaking.
- “Nudging” market players toward an inclusive equilibrium that would last.

We prioritized flexibility and learning by developing a unique approach – ***Probe, Measure, Respond*** – which focused not only on the project’s own performance, but also on helping businesses to innovate successfully and grow inclusively – with an emphasis on women and youth.

The COVID-19 pandemic came at a particularly unfortunate time for FTF Inova – at about the midway point of the project when momentum was building. The global crisis had a deeply negative effect on our partners, forcing them to shift priorities away from forward investments and toward securing capital just to continue operating. FTF Inova also adapted, not only by supporting partners to improve their resilience, minimize disruption, and strengthen relationships and trust, but also to capitalize on new opportunities presented during the crisis. One way the project adapted was to quickly establish a Challenge Fund (see Sections [4.4](#) and [5.4](#)),

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<sup>1</sup> Analyses of [value chains](#) and the [market system](#), including the [FTF Inova baseline](#). See also <https://www.marketlinks.org/good-practice-center/value-chain-wiki/overview-value-chain-approach#:~:text=USAID%2FE3%20applies%20the%20value,into%20increasingly%20competitive%20value%20chains;http://tools4valuechains.org/node/106>



which provided partner businesses with working capital to sustain operations and, even more importantly, to buy down the risk of pursuing new business opportunities resulting from the pandemic.

## 3 FTF Inova is Different

### Our Vision

If input suppliers, output traders, and service providers see that it is in their business interest to build alliances with smallholder farmers (SHFs)<sup>2</sup> - either as customers or suppliers - then:

- they will invest money, time, and capacity building effort in the smallholders' success and growth;
- smallholders will in turn start operating as small businesses themselves, rather than simply as subsistence families doing what they can to get by.

### How We Worked to Realize Our Vision

Upfront work to analyze the priority value chains – cowpeas, sesame, cashews, groundnuts (peanuts), soybeans, banana, common beans, pigeon peas and maize – to identify systemic constraints and opportunities revealed some crucial insights that informed our “different” approach.

#### WHAT WE DISCOVERED

- Unclear or mixed roles (wholesale, distribution, retail) played by market actors in input supply chains
- Traders faced similar/systemic constraints across many key products/crops. Their challenges were not unique, specific or limited to a single value chain;
- SHFs grew multiple crops, some not part of the initially prioritized value chains
- Large retailers and wholesalers had no incentives to invest in working with SHFs or local suppliers
  - Unreliable and low-quality supplies;
  - No incentives for SHFs to upgrade productivity to meet market standard;
  - Lack of access to quality/improved inputs at the last mile.
- Middlemen/traders played key roles, but promoted low-price supplies over high-quality produce or value addition for SHFs;
  - SHFs relied on traders due to logistics constraints, subsistence versus “agribusiness” practices, low trust or transparency on transactions;
  - Thin, few business services with tailored products/services to the SHF/agriculture sector, e.g. logistics, marketing, finance, ICT;
  - Agriculture support services (like spray services or mechanization) didn't have sufficient information or capacity to effectively address the problems of SHF.
  - Access to finance is particularly challenging for the agriculture sector, as the local bank interest rates are too high vis-a-vis the levels of production from SHFs, and banks typically need collateral to offer loans/financing that the majority of SHF do not have.

### From value chains to market systems

These discoveries above led us to take a different approach. Rather than focusing on specific value chains that typically center on a single commodity and the many activities that move it from farm to table<sup>3</sup> - we focused on innovative, cross-cutting solutions in the *agricultural market system*. Market system solutions focus on the core

<sup>2</sup> In Mozambique a smallholder has less than 10 hectares of non-irrigated land, or less than 5 hectares of irrigated land, under cultivation. A smallholder is also a producer with less than 5 hectares of horticulture or orchards in production. Instituto Nacional Estatística Moçambique. Censo Agro-pecuário (CAP). 2009 – 2010.

<sup>3</sup> <http://tools4valuechains.org/node/106>

functions of input distribution and supply chain management as well as the supporting services that affect many value chains.<sup>4</sup>

Our thinking was that limiting our work to a handful of commodity value chains would not reach the same scale or improve the lives of as many smallholder farmers (SHFs) as a market systems approach. On the other hand, market innovations would not be feasible if the private sector was not excited enough to drive the innovations themselves. Thought leadership and technical assistance were necessary to align incentives for key market players and increase the likelihood of sustainability.

To do that, FTF Inova took an iterative, progressive approach - working through a portfolio of vetted partners in each market system<sup>5</sup> to test business model innovations, measure their effectiveness and their value, and respond with an appropriate bundle of support that catalyzed inclusive, sustainable investment. In this way, FTF Inova addressed the root causes of dysfunctions in vital market sub-systems - built on mutual incentives identified by the key players themselves - and engaged in a co-creation process that steered clear of ‘intervening’ to distort the markets.

Fast-changing, complex systems subject to climate and political shocks required a *“fail fast and iterate”* mentality. FTF Inova focused on testing business innovations — such as a new product, service, or way of doing business— then chose to scale, adapt, or close out interventions or investments. The systemic approach also facilitated replication for partners operating in other areas of Mozambique where constraints were similar.

## Objectives

FTF Inova’s overall goals were sustainable, agriculture-led economic growth and increased resilience in the agricultural sector, both critical to reducing poverty and hunger. FTF Inova also sought to stimulate a more inclusive and competitive agricultural market system.

More inclusive market systems strengthen and expand agribusinesses’ access to markets and trade opportunities. Both buyers and producers can see evidence of increased value and volume of sales within inclusive markets. Inclusivity also refers to the extent to which traditionally marginalized actors – like smallholder farmers (SHF), and especially those who are young and/or female – are engaged in and benefitting from the expansion of markets and trade.

More competitive market systems encourage agribusinesses to sell products that meet demand requirements (price, quality, quantity) and, at the same time, ensure profits over time that enable market actors in the system to thrive. Competitiveness is not determined by the number of market actors, but by how well the market actors are able to face competition, incrementally innovate their business models, and be successful when facing competition.

FTF Inova aimed to catalyze these systemic changes, i.e., changes in the way core functions of supply and demand, supporting functions, and rules worked, in order to improve the empowerment and income of people living in poverty, especially women and youth. We worked specifically to facilitate:

- Improved competitiveness and investment in each of our three cross-cutting market sub-systems.
- Strengthened cooperation and trust among market actors.
- Incentivization of behavioral change of market actors through innovations.
- Co-creation to have willingness and appropriation of innovations from partners.
- Working with partners to generate scale and replication.

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<sup>4</sup> In short, value chains operate within the agricultural market system.  
[https://beamexchange.org/uploads/filer\\_public/9b/61/9b614321-379e-47ba-a370-00c77d196114/beyond\\_value\\_chains\\_delforce-gill\\_2018\\_compressed.pdf](https://beamexchange.org/uploads/filer_public/9b/61/9b614321-379e-47ba-a370-00c77d196114/beyond_value_chains_delforce-gill_2018_compressed.pdf)

<sup>5</sup> [FTF Inova’s MEL plan](#), “A market system refers to the arrangement of actors (organizations and individuals) who produce and exchange a similar type of product, good, or service, or provide various market-supporting functions...The actors operate within a set of formal rules and informal norms that shape their behaviors and influence the overall performance of the system.”

Entrepreneurs may face competition within local or domestic markets (in which case firms, or sectors, in the same districts or country are compared with each other) or within more international markets (in which case Mozambique would be compared with other countries in the region or across the globe). Additionally, FTF Inova posits that as market actors employ more customer-centric approaches – thereby strengthening their commercial relationships by deeply understanding customer needs and fulfilling them better than others – they will gain more of a competitive advantage. This will encourage other market actors to copy and crowd in.

On the other hand, Mozambican commercial relationships are primarily driven by price, which is a lower-risk strategy but does not increase value in the market. FTF Inova worked to incentivize investments in relationships based on trust, which are driven by belief in another's competency, integrity, and reliability.

FTF Inova also sought to create more cooperative relationships between producers and buyers. Cooperative relationships can increase value in the market, thereby increasing incomes and profits for businesses and farmers. Most of the agricultural products in Mozambique fit into the low-value tier of the marketplace. There are a few medium-size and large traders who compete with producers solely over price. While they have been able to remain in the market using this lower risk strategy, the traders do not invest in producers to get higher value products because of the inherent risk of side selling, a common occurrence. FTF Inova promotes durable, increased cooperation between functional levels of agricultural market system actors to increase the production of higher value products and services, thus increasing incomes for both producers and output buyers. As innovations occur and commercial relationships strengthen, FTF Inova posited that market actors will increasingly upgrade their operations by using improved products, services, and practices.

## Innovations to Deliver on the Objectives

What we did <b>not</b> do	What we <b>did</b> instead
<p><b>We did not:</b></p> <ul style="list-style-type: none"> <li>• <b>Use a value chain approach</b> as previously done by other USAID partners</li> <li>• <b>Limit our focus</b> to subsets of SHFs growing or using <b>specific products and services</b> from the start.</li> <li>• <b>Work directly with farmers</b></li> <li>• <b>Limit our support to specific solutions</b> that FTF Inova devised upfront</li> </ul>	<p><b>We did:</b></p> <ul style="list-style-type: none"> <li>• Use a <b>Market System Development (MSD) approach</b> (systems thinking, inclusive, facilitative)</li> <li>• Seek to understand what <b>systemic challenges in norms and networks</b> prevent smallholder farmers from being more productive and earning more income</li> <li>• Work through a <b>Partnership Facility</b> to encourage commercial relationships that enhance investments and provide shared value for SHFs and partners;</li> <li>• Partner with market actors to <b>co-create and innovate</b> new ways of doing business and <b>pivot or scale</b> depending on traction</li> </ul>

FTF Inova did not concentrate on helping individual partners. Instead, the project sought to change the market system within which partners were operating. We helped nudge each sub-system we worked in towards a more inclusive, sustainable equilibrium. We combined a strategic vision of how the market could operate – informed by the players themselves and global best practices – and utilized continual feedback from our partners and stakeholders to identify and revise leverage points for a more inclusive market. Relationships within a sub-system were as important as those across sub-systems.

We used the Change Wheel<sup>6</sup> as an organizational and conceptual tool to map potential interventions to a sub-system of the agricultural market system. From the wheel, we considered illustrative activities that could stimulate a more inclusive market system. Then, in practice, FTF Inova used mind maps as the principal tool

<sup>6</sup> The USAID Feed the Future (FTF) Agricultural Value Chain activity in Bangladesh designed an Agricultural Market Systems Change Wheel, which is available [here](#).

for brainstorming the implications and connections between problems in the sub-systems and other potential issues.

## Co-creation and partnerships were central to how we worked

Our focus on market systems resulted from engaging the players, actively asking tough questions, listening, then analyzing what we learned. We prioritized co-creation when planning our activities in each of the markets. Working hand-in-hand with key local actors, FTF Inova enabled them to identify opportunities, devise plausible solutions, then ultimately adopt these solutions. We selected early adopters for the demonstration effect, encouraging other actors to adapt.

More than anything, we sought new approaches to traditional business practices in order to unblock constraints to growth for businesses and SHFs alike. Co-creation of activities, which required partners to invest some of their own resources to implement the solutions, ensured that partners had a stake in their innovations' successes and sustainability. FTF Inova's initial probes often used large firms to explore ways that interventions could obtain "reach," scale up, and be adapted or replicated by other firms.

### Partnership Facility

Once the co-creation process produced viable opportunities with buy-in from the relevant market actors, we formally entered partnerships. We set up a Partnership Facility to structure our work with businesses in each of the market sub-systems and position FTF Inova and our partners to pivot/scale up. Deal Notes laid out specific objectives to experiment (linked with each "probe"), but also allowed changes and adaptations to activities along the way (the "respond" aspect of Probe-Measure-Respond). Deal Notes thus facilitated the full participation and input of partners in the activities planned together with FTF Inova.

Flexibility and decisiveness to adapt were crucial in cases where there was not enough progress or evidence to prove the viability of individual innovations. Budgets for the activities were determined after technical planning and reaching agreement on each party's capacity. This partnership approach is an important innovation in a country with so many development agencies and organizations that tend to "lead" with funding.

### The Logic

FTF Inova recognized that expecting our partners to change how they do business only to accommodate us was unrealistic and not good for "partnering." Instead, we developed a facility<sup>7</sup> (or specialized mechanism) to create partnerships in a distinct and neutral space, integrating our partners' and FTF Inova's policies and processes. Our facility arrangements arbitrated between our partners' objectives and our own, becoming engines of innovation and sustainable change.

### The Goal

Our approach aimed to ensure that FTF Inova's role in each market system was temporary— catalyzing, disrupting, and realigning incentives, and then getting out of the way. The idea was to facilitate change by using partnerships in the same way that an engine takes in fuel and turns it into motion through pistons and gears; we designed our partnership facility's mechanics to ensure our day-to-day work was coordinated with our partners. Our Probe-Measure-Respond approach was FTF Inova's center of gravity that kept each partnership and the whole machine on track to achieve the project's objectives.

### Making it Systematic

We created a new facility within FTF Inova, wrote policies and procedures to govern it, built tools and templates to support it, and hired staff to manage in order to make partnerships well-designed and systematic. We built on the experience of similar projects, particularly USAID Feed the Future Bangladesh Agricultural Value Chains

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<sup>7</sup> By "facility," we just mean a part of our project that does not have an agenda or outcomes of its own, but instead is meant to support other parts of the project, the same way that an M&E (Monitoring & Evaluation) facility has the tools and staff to help programmatic areas understand where they are having an impact and how they need to adjust, or a grants facility helps select and fund local organizations to accomplish the aims of project components.).

(AVC), which – after adopting an MSD approach in 2015 – made its grants program more flexible by introducing adaptive management with market actors.

Co-ownership was essential to influencing market forces beyond the term of FTF Inova’s project life cycle. Sharing control with our partners opened the space to co-create objectively, without presumptions or power dynamics. It also encouraged continuous self-selection effects— not trusting that we would know who the right partners were every time.

Along the same lines, we wanted the facility to be maximally accessible and to reflect our partners’ commercial priorities. To that end, we designed Deal Note documents to be easily understandable, with clear accountability provisions. This itself was an innovation, because MOUs (Memoranda of Understanding) and Deal Notes were not part of USAID regulations, DAI’s policies, or our partners’ corporate rulebooks. Each document was tailored to the specifics of the partnership and the desired outcomes. This bridged the gap between us and the private sector without losing the operations compliance required for a USAID-funded project.<sup>8</sup>

It was also important that our partnerships serve as technical and operational management anchors for our own team. Mainstreaming MEL, gender, and environmental compliance into the partnership design process made our partnerships more holistic and helped us successfully integrate this compliance into our everyday work. Our partnership facility was a platform for technical and operations teams to work together effectively – a challenging feat for many donor-funded projects, especially when spread over a large country like Mozambique.

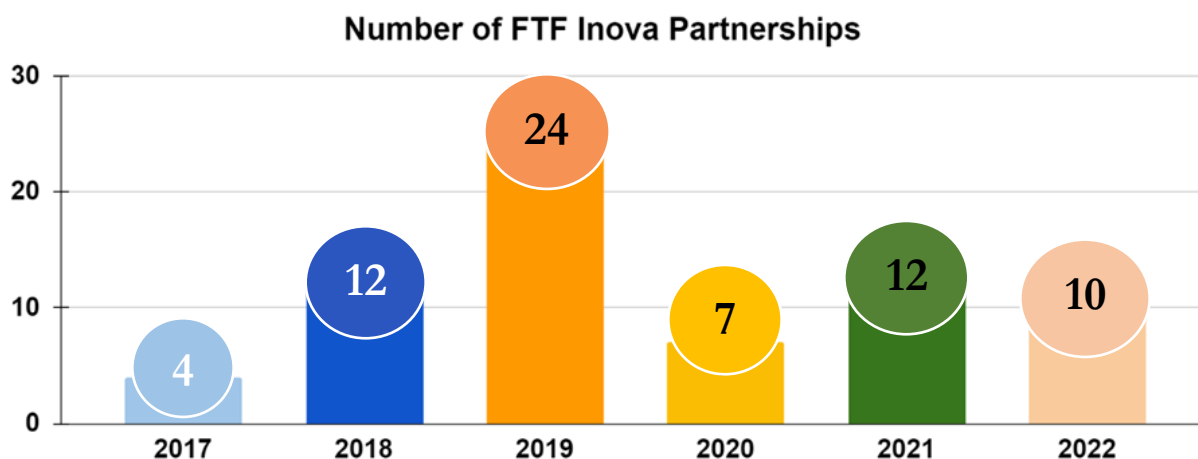


Figure 1: Number of FTF Partnerships

## Timeline and Evolution

One of the most challenging aspects of any MSD program is developing and managing the portfolio of activities. We knew that to deliver the impact expected of us - by scaling what worked and dropping what did not - we had to pursue partnerships with a wide range of market actors. We also had to get traction in terms of returns on investment by the end of year 3. This strategy<sup>9</sup> emphasized that measurable impact would come in the later years of the project, or even after project closeout, when the changes we facilitated would achieve scale. This progression is typical for a market systems project.

<sup>8</sup> For example, “customer segmentation” instead of “gender sensitivity” was easier to grasp and more compelling for private businesses in Mozambique but served both parties’ objectives.

<sup>9</sup> See FY19 Workplan here: [https://pdf.usaid.gov/pdf\\_docs/PA00TH57.pdf](https://pdf.usaid.gov/pdf_docs/PA00TH57.pdf)



In practice, this meant that our initial focus was to convince partners to sign up for co-creating innovations with FTF Inova. In fact, we decided that the most important metric for the project was internal: we wanted to sign 14 deal notes with partners in the first full year of implementation. After brokering a sizable portfolio of deals, we focused on getting traction—i.e. obtaining evidence of partners’ innovations taking off (or their imminent take-off) to inform value propositions to partners and the other agribusinesses/smallholder farmers with whom they were innovating. With the evidence generated by 2020, FTF Inova focused on scaling the elements of each successful innovation (e.g. supplier clubs using local aggregators) and pursuing opportunities for strategic alliances and linkages. In 2021, FTF Inova looked beyond innovations with partners and focused on obtaining “scale agents”<sup>10</sup> to amplify and replicate successful innovations.

A **scale agent** is an organization that mobilizes, supports, aligns, and/or coordinates the efforts of individuals, firms, and institutions across a market system. FTF Inova’s definition of “scale agent” does not exclude, nor is it limited to, our key partners with whom we co-create and innovate. For example, industry associations in cashew and seeds (like AICAJU and APROSE) were important scale agents, as were Casa do Agricultor (input distributor partner of FTF Inova) and Ka Da Terra (supermarket partner of FTF Inova).

As the portfolio was developing from 2018 to 2020—probing what might work, considering evidence, and adapting with partners—cause and effect connections related to partnership innovations were uncertain. During the project’s mid-term evaluation in 2020, USAID recommended that FTF Inova use these learnings to construct a Theory of Change graphic and narrative. This tool was meant to help external audiences understand more clearly what FTF Inova contributed with partners to facilitate change and how these interventions were linked to the overall vision and goal of FTF Inova, as presented in previous sections. Please see Annex 2 for a presentation of the emergent pathways that became FTF Inova’s Theory of Change.

## 4 Portfolio Development & Management

FTF Inova programming used an MSD approach to facilitate work with partners and explore innovative practices, products, and services developed and implemented hand-in-hand with the private sector. To meet FTF Inova’s long term development objectives for the agricultural market system and promote better inclusion of smallholder farmers, we decided with USAID that it made sense to manage FTF Inova’s co-investments as a portfolio, like the private sector does. Essentially, this meant that we selected and reviewed the tradeoffs and impact possibilities of potential innovation investments and strategically partnered with market actors on deals to influence the development of agricultural market system, dropping those that were not optimally delivering.

FTF Inova organized its portfolio of activities by sub-systems of the agricultural market system, as seen in the Figure 2. Organizing our work this way enabled us to work with more farmers and other market actors, test the viability of solutions that addressed constraints common to multiple value chains and, in that way, improve the likelihood of impact and scaling of successes.

In 2019, we decided that the innovation activities in input distribution and supply chain management had not achieved enough traction with current and potential partners to be managed as portfolios. So, we consolidated innovation activities that had interconnected market actors (academia and community radio), business services, and agricultural support services into one portfolio, as described below.

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<sup>10</sup> Please find FTF Inova’s scale agent focus explained in more detail in FY21 [quarterly report from January to March](#).

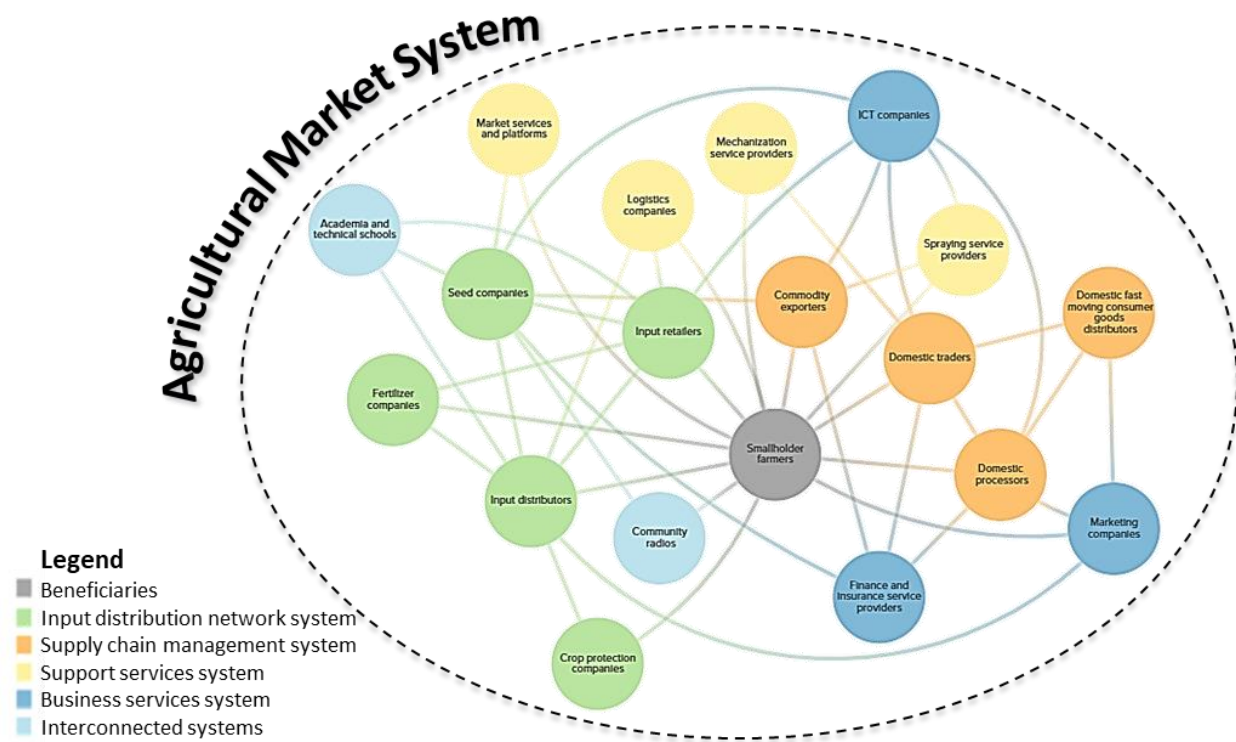


Figure 2: Agricultural Market Systems Network

### Input Distribution Portfolio

Innovations with the subsystem of market actors who supply the goods and services that farmers use to grow their crops, e.g. seeds, tools, fertilizers, spraying, plowing, etc.<sup>11</sup>

### Supply Chain Management Portfolio

Innovations with the subsystem of market actors involved in key market functions, e.g. production, processing, aggregation, retail, export, etc.

### Supporting Services Portfolio

Innovations with the consolidated subsystems of market actors that:

- Provide business services (finance, marketing, ICT, and legal support) to producers of agricultural goods and services.
- Are involved in setting or influencing the terms and dynamics - formal and informal - for developing or improving delivery of agricultural products and services.

While it is common for MSD programs to use result chains to manage and connect interventions with partners to changes in the sub-systems and overall market system they work in, we tried something different. Given the complexity of operating in such a thin market system, we continually explored pathways to improve system performance using a sense-making, structured learning approach that we designed and developed specifically to support our approach. We called it “Probe-Measure-Respond,” as depicted in the figure below and explained in more detail in the [MEL plan](#) and [FY2019 workplan](#).

<sup>11</sup> Input distribution starts with seed companies (who multiply, package and brand), and goes through distributors, agrodealers, VBAs and others to get to the farmers.

The Probe-Measure-Respond (PMR) approach structured the team’s focus on disrupting system dynamics.

To “**probe**” we explored potentially catalytic business innovations with market actors. Where our objectives and possibilities for co-investment aligned, we initiated a co-creation process to identify what could benefit our partners’ bottom line, what could benefit SHFs and how it could improve the way the agricultural market system worked

To “**measure**”, we negotiated and agreed upon a lean set of metrics of what success would be for our partners, as well as for USAID. The lean set of metrics were those that could help us capture quickly what was working and for whom. This meant that every probe had at least three metrics to help us learn while doing and course correct as needed.

1. A **sustainability metric** of whether the innovation would be adopted, internalized, and owned by market actors.
2. A **value proposition** metric of whether the innovation would deliver meaningful value to SHF.
3. A **scale metric** of whether the innovation will spread and shift the collective behavior patterns of market actors in the system.

Portfolio managers worked with our partners so they understood that evidence would drive FTF Inova’s decisions on whether to continue co-investing. We hoped it would drive our partners’ own decisions too. This meant we focused not just on designing and delivering an innovation together, but on deciding whether it was working *during* implementation. Our MEL staff played key roles in developing probes, agreeing what to measure in short timeframes, distilling insights from data, and facilitating active learning alongside Portfolio Managers and the partners.

To “**respond**”, portfolio managers were tasked to reflect in portfolio reviews on what we were learning and whether any changes to business as usual were starting to emerge in the sub-systems. When innovations were proving successful, they had to come up with ways to scale up success, whether with partners or others. We built into the structure a focus on how the market sub-systems and overall agricultural market system were responding to innovations, rather than focusing on trying to make partnerships work. Our portfolio managers also had to recognize when to walk away from unsuccessful innovations or pivots. Overall, responses and adjustments were consolidated during FTF Inova’s quarterly and annual portfolio reviews. In these sessions, we also determined where we had risks and new opportunities, as well as if we needed to make any revisions.



Figure 3: Probe-Measure-Respond Approach

## 4.1 Input Distribution Network (IDN)

### Vision

Input supply manufacturers, distributors, and retailers<sup>12</sup> change their business strategies to be more customer-oriented and invest in delivering higher volumes of inputs, especially at the ‘last mile’ with remote SHFs. In turn, smallholders increasingly use higher quality inputs acquired at affordable prices and in more convenient ways, i.e. closer to their farms and with information on how to use the inputs effectively.

### Approach

FTF Inova engaged with input supply manufacturers, distributors, and retailers to improve delivery of agricultural products and services tailored to the needs of smallholder farmers. FTF Inova probed:

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<sup>12</sup> It is worth noting that while the term “network” implies collaboration between these actors, at baseline and even throughout implementation, getting market actors in this subsystem to work together in mutually beneficial alliances proved very challenging.

- Use of **pull distribution systems**<sup>13</sup> to improve the timeliness of product delivery to add value and dependability and build customer loyalty;
- Use of **customer-oriented pricing strategies** (i.e., commission schemes or price lists) to provide inputs at a fair and transparent price;
- **Human-centered design** to improve customer experiences at retail locations (leverage non-traditional sales channels to improve distribution presence);
- **Design and delivery of customer-centric products and services** to improve the value-proposition for farmers and generate more demand from customers.

These probes were tested through experiments with different partners with distinct roles in the supply chain, e.g. seed companies, distributors, and input retailers covered by 13 Market Actor Partner Agreements (MAPA) and 18 deal notes throughout the five (5) years of the project.

## Evolution

From a thin market where there was no collaboration between actors, no consideration of SHFs as a customer segment, and market actors playing the roles as manufacturers, distributors, and retailers at the same time, FTF Inova convinced input suppliers to test new approaches and invest for long-term growth – using customer centricity as the bottom line.

Pull distribution helped FTF Inova’s partners understand that input distribution is not just about infrastructure but rather delivering a quality service in a timely manner. For example, Klein Karoo (K2) could not deliver the products farmers wanted and often missed delivery days, and CdA experienced stock ruptures, which affected delivery and sales. Both partners could have increased their sales and their SHF customer base if they had delivered their inputs on time and had better customer service. To avoid these problems, companies had to invest in improving their back-end order management processes and inventory management. Moreover, for the pull distribution business model to work, the retail infrastructure network had to be structured to maximize order volumes by increasing the distribution channels at the last mile, and by signing up more manufacturers. FTF Inova deepened and scaled up this innovation with CdA and K2, helping them expand last mile distribution to strategic retail points to support the pull distribution infrastructure.

After 2019, input companies such as K2 and Bayer invested in their retailers by introducing performance-based schemes with rewards to incentivize retailers to improve their business. FTF Inova advised the input companies to also work with retailers on customer service, so farmers would be more motivated to invest in high-quality inputs. While this innovative approach has been adopted by multiple players, they must work at it continuously and may need to increase their investments to ensure the field presence needed to promote the benefits of better inputs, collect customer feedback, and assist retailers with what they need to offer customers.

## 4.2 Supply Chain Management (SCM)

### Vision

Output buyers invest in sourcing systems - from supplies to aggregation, transport, and retail. Output buyers reward performance, quality, trust, and loyalty from farmers. Output buyers also invest in purchase systems from farm gate to retailers that match quality specifications aligned with standards and rules. Beneficial relationships for both output buyers (consistency in supply) and SHF suppliers (upgrade and access better markets) are integrated systematically into FTF Inova interventions.

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<sup>13</sup> A pull distribution system is a delivery infrastructure that connects manufacturers, distributors, and retailers to bring volumes of inputs all the way down to SHFs in a cost-effective and efficient way, thereby shifting the financial burden of stocking from retailers to wholesalers.

## Approach

FTF Inova engaged with the full range of buyers - from international agriculture product exporters to domestic retailers/supermarkets - to strengthen the quality and quantity of available produce through relationships with smallholder farmers and the firms that supplied them inputs or provided services to SHFs. FTF Inova probed:

- **Transparent performance management mechanisms** with supplier clubs to increase farmer quality production and loyalty, reducing side-selling.
- **Certification and quality standards** to enable upgrading and higher value domestic and international market access.
- **Targeted branding and sourcing** of minimum quality standard in domestic markets to increase market access and satisfy latent demand.
- **Strategic alliances** to build the supply chain especially **between off-takers (buyers) and service providers** (input suppliers, finance, etc.) oriented towards farmers.
- Facilitate **market access** for producers and improve quality of produce in urban areas through linkages in transport

These probes were tested through experiments with different partners with distinct roles in the supply chain, e.g. large exporters, wholesalers, domestic retailers, and aggregators covered by 10 Market Actor Partner Agreements (MAPAs) and 12 Deal Notes throughout the five years of the project (see Glossary for details on MAPAs and Deal Notes).

## Evolution

When we initially identified the constraints to supply chain management, we found output buyers could not count on SHF to sell them large volumes of quality produce. Often, purchases happened on a first-come, first serve basis without transparency in who still had what for sale and where. This prevented supply chain actors from trusting and investing in commercial relationships, and our initial focus was on upgrading supply chains to meet international certification and quality standards, like Hazard Analysis Critical Control Point (HACCP) and British Retail Consortium (BRC). After exploring this possibility primarily with cashew output buyers, like Cashew Yetu and Condor Nuts, we found that meeting international certification standards and traceability of sourcing for these certificates, required more coordinated investments of multiple processors, given how expensive the process was. This probe, and associated experiments, were adapted in FY2020 to promote Mozambican grading and standards within national industry associations and their members to ensure SHF higher prices for higher quality production, but not necessarily meeting international certification standards.

Meanwhile, we started to focus on challenges of distrust among market actors identified during the project's baseline studies. Off-takers (including processors and larger output buyers) had trouble getting sufficient volumes of crops; this was true for both staple crops—like maize and soy—as well as cash crops—like nuts and cotton—that were destined for more premium-priced domestic, regional and international markets. Output buyers offered SHF suppliers both incentives and rewards, either through intermediary farmer cooperatives or local coordinators, if they stuck to the production plans and met the quantities and qualities set for them as supplier club members. Over the course of the past three seasons, this probe achieved the most traction and two exporters have subsequently set up their own schemes—ETG and JFS. Both are key members of larger industry associations that serve as potential scale agents in cashew (AICAJU) and cotton (MCA).

It took more than two years for FTF Inova to be ready to implement experiments on the probe related to Mozambican consumer preferences for domestic produce. Despite a deal with Mozambique Good Trade (MGT) not materializing into implementation, we successfully piloted the concept with KdT. While we recognized that strategic alliances with supply chain actors as well as service providers and input suppliers were valuable, these took significant time to facilitate, much less test.



## 4.3 Supporting Service Systems (SSS)

### Vision

Support service providers— e.g. marketing and IT firms, logistics and transport companies, universities, community radio stations, etc. – see the agriculture sector, and SHFs specifically, as viable customers. They develop products, services and marketing/branding strategies tailored to agriculture sector needs. At the same time, SHFs and other sector players understand the value of ‘investing’ in support services, making Mozambique’s ‘thin’ market more robust, resilient and competitive. Better buyer/supplier relationships will lead to better, more affordable services for bottom-of-the pyramid SHFs - boosting their productivity and incomes.

### Approach

FTF Inova engaged with marketing firms, Universities, logistics, ICT firms, radios, and financial service providers to develop options for delivering services to the agricultural sector. FTF Inova probed:

- **Marketing firms develop and provide services for agribusinesses** to facilitate access to a new set of agri-based clients, expanding retail to the SHF better;
- **Develop low-cost market-driven services to the agriculture sector**, improving value offered to customers, suppliers, and building the workforce;
- **Transportation and logistics agriculture support services** to help companies reduce costs and enable more cost-effective transportation services for distribution to the last mile SHF;
- **Applying financial service solutions through agribusiness partners** for expansion of products and services to more rural areas, and improve access to technologies for SHF;
- **ICT-Enabled inventory and digital payment solutions for agribusinesses** for better inventory and customer management practices that facilitate better services to SHF as customers;
- **Use stakeholder dialogues** to advocate for improvements in services that enhance business operations in the agriculture sector;
- The recognition of **good business practices in the form of public awards and rewards**, which can drive quality improvements in specific agricultural sectors.

These probes were tested through experiments with different partners with distinct roles in the supply chain, e.g. large exporters, wholesalers, domestic retailers, and aggregators covered by 14 Market Actor Partner Agreements (MAPA) and 16 deal notes throughout the five years of the project.

### Evolution

When FTF Inova launched in 2017, service providers were working in other sectors, but they were essentially not servicing agribusinesses. Firstly, they did not perceive the sector as profitable, and many agribusinesses, particularly SHFs, had no budgets for buying support services. In short, providers did not understand the agriculture sector and how their support products and services could be relevant to agribusinesses. On the demand side, many SMEs - particularly SHFs – did not approach farming as a business, which made it harder for them to see the value of paying to ‘outsource’ functions to providers, like spray service providers (SSP). FTF Inova worked to close the gap in understanding between the supply and demand sides, encouraging service providers inside and outside Mozambique to enter the agricultural market.

As noted in our approach above, FTF Inova developed innovative ways to bring service providers and agriculture sector players together. Starting with input distributors then other support providers, the project gave them low-risk chances to work in the agriculture sector and understand its potential. This development also opened the eyes of agribusinesses and SHFs, who after experiencing the benefits of such services, gained an appetite for logistics, marketing, advisory and IT support.

To capitalize and focus on that momentum, we partnered with a few providers to create service offerings tailored to the needs and capacities of SHFs specifically, and the agriculture sector more broadly. Over time, our priority shifted to bottom-of-the-pyramid clients, and service providers began working with market actors in the last mile. FTF Inova partners Appload, Tangerine and UBS had not been working in the sector, but now they offer profitable service packages, positioning them to continue without the project's support.

## 4.4 The Challenge Fund

The onset of the COVID-19 pandemic in 2019 had a negative impact on the agriculture sector. The remote and rural areas where FTF Inova and our partners worked were hit particularly hard. Existing supply chain and last mile issues were exacerbated along with Mozambique's overall reliance on imported inputs and produce coming from countries in lockdown. Amidst the crisis, agribusinesses had little or no revenue, and banks hesitated to provide loans. Many businesses collapsed. Without action, a deeper food crisis was a virtual certainty, and FTF Inova's progress would suffer inevitable setbacks. South Africa was also affected because of the lockdowns that limited movements of produce across borders.

In response to this crisis, FTF Inova devised the Challenge Fund<sup>14</sup>— which promoted domestic food production through grants to innovative SMEs. These grants assisted local agribusiness firms by providing the capital necessary to continue operations, thus mitigating the impact of COVID-19 on consumers and building up domestic suppliers. Funds were made available through in-kind grants and Fixed Amount Awards to enable rapid implementation during the pandemic.

### Vision

Facilitating Mozambican solutions to constraints in domestic supply chains for agricultural commodities and foodstuffs that provide quick relief to solve COVID-19-related problems but endure for the longer-term.

### Approach

Within months of the COVID-19 outbreak in Mozambique, FTF Inova launched the grant facility, backed by over \$750,000 of USAID funding and issued a call for proposals for viable innovations that would:

1. More efficiently manage local food supply chains and assure the quality of goods produced;
2. Improve packaging from farm gates to store shelves

Proposals were welcomed from companies, private sector associations, research institutions and universities. Successful applicants received grants ranging from \$30,000 to \$125,000 along with technical expertise to get their innovations to market quickly. We also streamlined the application process to ensure quick turn-around.

### Evolution

In the first round, half of the 49 applications pre-screened by the FTF Inova team were judged by a multi-disciplinary team of experts from across the agriculture sector, economic development, science and technology. Applicants briefly presented their proposed solutions to the judging panel during a live pitch event. Of the ten (10) finalists recommended by the external evaluators, FTF Inova funded eight (8) outstanding innovations to secure quality locally grown product and foods to consumers .<sup>15</sup>

The vision of the Challenge Fund was to encourage the production and processing of local food and inputs, while supporting and strengthening small and medium enterprises to establish themselves in local markets and recover from the Covid 19 pandemic.

Within 11 months of the COVID-19 outbreak in Mozambique, FTF Inova launched a call for proposals to sustain/build domestic food production and processing. After pre-screening and an external evaluation, five

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<sup>14</sup> <https://www.futurefoodmoz.org/>

<sup>15</sup> The 1<sup>st</sup> round winners were Soya yogurts and milk processing (So Soja), native fruits processors (Agro Servicos Ltda), food producers using hydroponic irrigation and processing (Mutiana), a digital, farm-to-fork supply chain management solution and online marketplace (Winnua).

(5) projects were chosen to receive grants during Round One of the Challenge Fund. The successful projects included soy yogurts and milk processing (So Soja), processing native fruits (Agro Servicios), crop production through hydroponic irrigation and processing (Mutiana), digitalizing supply chain management from farm-to-fork and launching an online marketplace (Winnua), and developing an online marketplace that delivers fresh, safe, and quality meats in the Grande-Maputo region (Do Campo). This direct-to-consumer model demonstrated the value of sourcing food from local farmers and growers.

Based on the unmet demand from Round One, availability of other promising ideas, and the overwhelming need to secure local food production and transport to consumers, FTF Inova implemented a second round of the Challenge Fund just six months later. Chosen from among the other Round One finalists, the three innovations selected included a honey producer improving the quality and efficiency of its honey production through a traceability system (Agrimel), a producer and distributor of vegetables expanding its market and positioning itself for growth (Casa dos Legumes), and an inputs and output trader and mechanization service provider investing in the growth of its horticulture business (Prodeca); Round Two received \$109,000 in total.

## 5 Key Results Achieved

Our Probe-Measure-Respond learning approach produced results at both the agent and system levels. The following section presents both levels of analysis that we considered. Within each portfolio, we present the agent-level changes we can more easily track and connect to FTF Inova partners and specific interventions. Thereafter, we present how we captured and evaluated wider agricultural market system-level changes.

Examples of indicators to measure results at both levels included the following:

- **Results with our partners and other agents were measured with faster moving indicators:** orders, hectares planted, sales, produce quality, financing, investment, new practices or technologies adopted by market actors (including businesses, their partners, investors, employees, and customers—women, youth, and SHF), and customer satisfaction and referral rates.
- **Results at a systemic level were measured with slower moving indicators:** business model innovations sustained, replicated, or adapted, as well as new and improved commercial relationships, customer centricity, trust and cooperation.

Faster moving indicators captured visible processes during FTF Inova's implementation and are commonly used by development practitioners and the private sector. They often change rapidly and can be more easily measured. Slower moving indicators (also known as control variables) were used to capture the underlying rules, incentives and structure of the system. These indicators served to detect emergent outcomes of long-term processes and can also constrain the response of fast-moving indicators.

As explained in more detail in FTF Inova's MEL plan, FTF Inova worked to facilitate the evolution of the agricultural market system more inclusive of target groups of farmers and make the market system more competitive in terms of how effectively the target groups of both farmers and firms interacting with farmers could adapt to sell their products to meet demand requirements (price, quality, quantity). Therefore, we needed to understand how the agent level and the systems level (as a collective) interacted and influenced each other, to assess our contribution and achievements. Ultimately, we monitored the probes we experimented with partners at the agent level to see how the overall agricultural market system responded. The presentation of our achievements herein follows this logic.

## 5.1 Input Distribution Network Achievements

In partnership with FTF Inova, private sector agribusinesses in Mozambique successfully introduced five innovations<sup>16</sup> to improve their products, retail stores, and marketing in order to better attract and serve rural smallholders. The innovations that FTF Inova supported in input distribution networks have made markets more inclusive for thousands of poor families in some of Mozambique's most vulnerable communities. We did this first by raising the importance of the SHF segment for input suppliers and then helping deliver more value to smallholders for their purchases.<sup>17</sup> Below are some of the key impact results from innovations to input delivery systems that we delivered over the term of the project:

- More efficient distribution channels and inventory management are increasing the competitiveness and profitability of agrodealers;
- Effectively managed and incentivized village-based agents to ensure last mile delivery of inputs into deeper rural areas;
- Clearly branded products scaled to the purchasing power of SHF are increasing demand and sales;
- Improved linkages and synergies between input distributors and output marketing companies are stimulating increased productivity and access to better markets;
- Changes in university training and internships to target agribusiness as a career are increasing capacity in agricultural input firms as well as universities.

These innovations continue to make the sector more competitive and profitable for large companies, agrodealers, and smallholder farmers alike. Through its activities, FTF Inova engaged 15 input firms, more than 150 spray service providers, three universities, and more than 500 agrodealers and agents who have impacted the lives of 22,000 smallholder farmers. These innovations provide field-tested, proven, profitable, and sustainable approaches that can be replicated by other firms across the country, thereby improving the lives of even more smallholder farmers in rural Mozambique.

### **Rota Certa: Delivering Inputs to the “Last Mile”**

Improvements in the input distribution system helped over 200 small, local retailers lower their transport costs via direct delivery and introduced on-demand supply, which reduced their credit requirements. Because these inputs became more readily available, SHFs could access a wider choice of inputs and more reliable supplies at retailers. Greater reliability allowed them to make more confident choices on how to manage their farms. As a result, many SHFs have now expanded their production, while others are buying new varieties and higher value crops.



*Figure 4: Delivering inputs directly to remote communities where farmers live.*

Farmers now pay lower prices for higher value inputs, as suppliers and distributors have shifted to commission-based sales and recommended prices, while also increasing the value of their inputs by bundling them with services and technical information that SHFs need to improve their production. SHFs are now buying more inputs locally, reducing transport costs and long travel times to buy supplies. Local purchases also boost economic activity in remote areas where many poor Mozambicans live. Locally available, on-demand input supplies also reduce the need for farmers and retailers to stockpile, pay for storage, and take the risk of investing in inputs that can spoil easily.

<sup>16</sup> [Input Story 2 pager 9.18.2021 Final-SP edits.docx - Google Docs](#)

<sup>17</sup> For example, farmers want to buy pesticides, but they cannot afford a liter bottle as manufacturers sell, but if they offer a 100 ml bottle, farmers will buy and value that effort of a company to bring that product in the quantity they can afford.

The COVID-19 crisis was a major test for FTF Inova's partners and innovations. Still, according to FTF Inova's COVID-19 impact assessment, last-mile distribution innovations enabled farmers in rural areas to obtain necessary supplies and continue farming despite countrywide travel restrictions. In addition, the distribution networks that FTF Inova helped establish and grow were used to provide vital information on how to cope with COVID-19 and to get personal protective equipment to people who needed it.

### ***Achievement 1: Faster, more reliable and affordable input delivery with investments in last-mile distribution***

FTF Inova enabled access to improved inputs delivered to SHF via trusted agrodealers and village-based agents (VBAs) in their communities. Orders are placed regularly rather than stock being pushed or farmers having to stockpile due to uncertainty of supplies.

Among the most noteworthy changes in the delivery infrastructure were:

1. Rota Certa trucking routes, which increased CdA's distribution capacity through regular deliveries along 17 routes to reach almost 200 rural agrodealers that serve about 15,000 SHFs.
2. The employment of more than 70 community or village-based agents (VBAs) to supply inputs to SHFs in their communities led K2, Luteari, Oruwera, and other key players to focus on SHFs as a key market segment rather than prioritizing government or NGO buyers.).

Improving relationships based on trust and cooperation have led to the beginnings of specialization in the market. Firms that develop working relationships in the value chain now feel confident in trusting other firms to provide services. For example, rural agrodealers and CdA used to compete for customers. They now collaborate successfully in an extended distribution system. CdA now encourages farmers to go directly to their agrodealers, rather than journeying to buy from town shops, recognizing that in the long-run this will lead to higher sales. Sales in 2021 from Rota Certa reached USD 642,046. Agrodealers benefit significantly from this, and in turn, are relying more heavily on CdA as their main distributor. As these specializations and collaborations continue to grow organically beyond FTF Inova, the system will become all the more effective, diverse, resilient, and robust, strengthening food security for the long-term.

### ***Achievement 2: Input firms are offering more customer-centric products and services to clients***

In FY 2019, FTF Inova observed that, while companies acknowledge the importance of customer-centricity, they hesitate to invest in the market research needed to become truly customer-centric. However, when partnering with FTF Inova, input firms expressed interest in testing new models and investing in customer centricity once they saw evidence that incorporating changes based on customer input and feedback could increase sales. With FTF Inova support, input suppliers like Oruwera, K2 and Agro-Imbeu Parque e Máquinas (AIPM) reconsidered their packaging of seeds to address the needs and preferences that SHF shared in terms of volume, price, information, and utility. Oruwera developed a new customer-centric seed bucket for packaging seeds (useful for SHF in cultivation), and K2 improved the quality of its seed packaging material, including labels with clear information on the seed variety. AIPM conducted market research which led them to also consider tailoring their packaging to SHF needs. From this experience, partners learned that market research and product design should be integrated into a company's internal strategy. At the same time, FTF Inova learned that more support can be given to companies to improve their capacity to collect data and use evidence.

SHFs also responded positively to customer-oriented retail strategies, like investments in new retail locations and shop designs for the distribution of agricultural inputs. FTF Inova supported the shop redesign of Cantina 2001 and new tactics to improve the customer experience at this input retailer shop. FTF Inova also supported Novatech with the setup of new retail locations for inputs from metal shipping containers. The first location in Honde served more than 500 farmers (around 120 a week) in its first few months.



FTF Inova has seen the positive impacts that input distributors' innovations have had on SHFs and distributors alike. Farmers have more trust in input suppliers like Cda and Bayer, and intentionally choose agrodealers who are part of these distributors' networks. In addition, credit offered by distributors to agrodealers to enable them to buy products from distributors is being paid back on time or early, as agrodealers look to solidify relationships that are increasingly valuable to them.

## 5.2 Supply Chain Management Achievements

### ***Achievement 3: Domestic products increasingly valued locally by suppliers and buyers***

Before FTF Inova started, large retailers and wholesalers in Mozambique had little reason to invest in buying produce from or working with local smallholder farmers. Many consumers seemed to prefer imported goods, and the investment needed to bring products from Mozambican suppliers into the formal sector was expensive and difficult. These and other obstacles kept smallholder farmers from the more remote regions of the country, outside of large consumer markets such as Grand Maputo.

To change that, FTF Inova worked with several partners to explore the business case for Mozambican companies to establish longer-term relationships with smallholders. This included analyzing the supply capacity (potential suppliers, year-round production availability and volumes, and quality), logistics costs (transport, packaging, storage, and distribution), and especially consumer preferences for domestic produce.

One of the things that FTF Inova discovered was that urban consumers valued locally produced, quality products and were often willing to pay a premium for products "Made in Mozambique." That discovery led Ka Da Terra, a large domestic supermarket company, to engage local transport and branding services to bring branded rice from the central regions to its distribution hub in Maputo.

As a result of these innovations, the Ka Da Terra rice brand became the second-biggest seller, a shift that demonstrated consumers' demand for local goods and encouraged large wholesalers to continue placing more orders for rice. This intervention is benefiting tens of thousands of SHF suppliers, 25% of whom are women, who now have better terms of the sale for their rice.

Even with consumers preferring local produce, many Mozambican smallholder farmers are informal businesses with no tax registration and payment, no invoices and no formal payment system. To overcome these obstacles, Ka Da Terra helped two local aggregators in Niassa (Majune Women Association) and Zambézia (Impere) provinces to **formalize their businesses**, so that they could sign agricultural produce supply contracts.

Unprofitable return trips with empty trucks posed another challenge. FTF Inova therefore supported a logistics company in its efforts to obtain agricultural produce for the return trips on the routes they run to rural locations. The effort was immediately successful, and the company is now working with 50 aggregators to transport tons of local produce to urban retailers.

### ***Achievement 4: Improved purchasing terms between output buyers and SHFs***

Five years ago, relationships in the supply chain for many agricultural commodities were primarily transactional. Purchases happened on the spot or within a few days with little to no negotiated terms of sale. SHFs did not know ahead of time when output buyers would come to purchase their products, how much they would purchase, or at what price. Similarly, output buyers could not count on SHFs to sell to them instead of other buyers. The situation created intense competition, caused a lack of trust, and led to conflicts between market actors.

This difficult business environment hindered chains. For example, local processors could not always get either the right quality or quantities to suit the optimal milling capacity of local processors. Meanwhile, cash crops, destined for more premium priced domestic, regional, and international markets, were not being produced to the quality standards nor in consistent and sufficient volumes to attract interest from buyers and exporters.

FTF Inova looked for ways to promote better relationships between output buyers and SHF suppliers. These innovations were clustered around 1) performance management to align buyers' incentives with improving SHF

productivity; and 2) establishing transparent dispute mechanisms to improve trust between producers and buyers.

Currently, a number of buyers have structured, transparent performance schemes to fit their business goals. For example, because Miruku has limited technical personnel to directly managed SHF relationships, it works through intermediary farmer cooperatives to promote the production of quality staple crops like maize and soy. Two exporters (Olam and Novo Madal) use local coordinators to directly manage SHFs growing cotton and sesame and guar beans respectively. Novo Madal also buys staple crops (cereals) from SHF, as a reward for performance.

As a result, Olam and Miruku recorded increasing numbers of farmers producing higher volumes of cotton, maize, and soy with the right quality and in line with supply agreements. So far, a total of 5,725 farmers, of which 36 percent are women, have upgraded their supply of agricultural commodities to meet buyers' specifications and are benefitting from access to high quality inputs, knowledge, and better sales terms.

Other agribusinesses have been paying attention. ETG adapted the Miruku's scheme, using a network of contracted SSPs as intermediary coordinators to ensure purchase of high-quality cashews from SHFs. After taking over part of Olam's cotton production catchment area, JFS has continued to develop its relationships with 74 of Olam's performance clubs.

### **Achievement 5: Output buyers are using service providers more effectively**

Market actors in Mozambique's agriculture sector, especially output buyers, have traditionally played multiple roles outside of their core functions. They might supply agricultural inputs directly to some farmers or cooperatives, pay for all of the transport and logistics, or do their own marketing for products. Keeping these support service roles "in house" has led to inefficiency and high transactions costs.

To improve efficiency, FTF Inova worked with output buyers who were investing in sourcing strategies to coordinate with other market actors. The initial alliances were between processors, input distributors, and service providers. The aim was to offer right-sized services as an incentive for boosting performance.

One example of a strategic alliance fostered by FTF Inova is the relationship between ETG, a cashew buyer, and spray service providers (SSPs). SSPs know the farmers who are producing high quality cashew crops because they work with cashew farmers throughout the growing season. ETG partnered with SSPs to serve as "aggregators" of better-quality cashews. SSPs are paid for both their aggregation and spray services, and are therefore incentivized to ensure that SHFs maintain the quality of their cashew trees. With ETG as a guaranteed buyer through the aggregator SSPs, SHFs are incentivized to maintain spraying services and ensure the quality of their cashew crops, therefore receiving higher prices. Through this innovation:

- Sixty-nine SSPs signed contracts for cashew aggregation and management of a network of cashew suppliers with ETG;
- ETG sourced a total of 479.8 more tons of cashew from 1,343 smallholder cashew producers through the 69 SSPs;
- ETG paid farmers prices up to 11 cents per kg higher than the prevailing market price;
- All 69 SSPs recovered all credit/loans from their spray service clients;
- SSPs earned extra income of 16 cents per kg of cashew delivered to ETG as a fee for performing aggregation services. Two spray service providers from Eráti district used their extra income to purchase and install a maize miller in their community.

### Supplier Clubs: Improving Productivity and Quality

Improvements in supply chain management, using transparent performance supplier club schemes, helped over 9,500 smallholder farmers increase their productivity, income and wellbeing. In Miruku's business case, this translated to a 38% increase in productivity of maize in the Alto Molocue district. 67% of maize sourced from the supplier clubs was of high quality and selected for processing. Miruku paid farmers 16% higher for quality maize, because of the reduced cost of selecting grains and potential for improved profits



*Figure 5: Miruku supplier clubs give a guarantee to the farmers that they will have access to inputs, technical assistance and reliable market.*

## 5.3 Supporting Services Achievements

During the initial stages of the project, the only support services available were offered to big agricultural firms that could afford them. The market system works very differently now. As FTF Inova closes, some logistics, marketing and advisory groups have agribusiness lines serving SMEs and SHFs.

FTF Inova supported innovations that (1) increased focus on the agricultural sector from service providers, with these actors starting to offer marketing and business services; workforce and business development services; logistical and agricultural delivery services (transport, spraying); financial services; and ICT; and (2) improved the rewards for quality of agricultural product(s) and service(s) using feedback collection and monitoring from SHF and other market actors via community radios, national radios, and stakeholder dialogue platforms. In addition, commodity platform associations and a seed association helped set, monitor, and reward quality standards in cashew, cotton, and other agricultural commodities.

### **Achievement 6: Spate of specialized services started across market systems**

Support services - marketing, business development services, logistics, financial services, ICT, media, etc. - are necessary for companies to grow, become more efficient, and expand to serve more customers. They are also essential for entrepreneurs, helping them turn innovative ideas into successful businesses, and potentially challenging the few large companies that dominate the agriculture sector in thin markets like Mozambique. Since service providers have the potential to interact with many market actors, they were important channels for amplifying and replicating FTF Inova's innovations.

FTF Inova partnered with six (6) service providers to pilot tailored services for the agricultural sector and SHFs specifically. Now, they are selling their services, know the market potential, and are willing to invest, albeit with additional support as the market is still learning to work with service providers in those areas.

FTF Inova's support led to the following service innovations:

- **Logistics** – Enabled farmers, input suppliers, and off-takers to transport products to and from markets.
- **Marketing** – Helped firms understand SHFs' needs and raise brand visibility to encourage SHFs to purchase and use higher-quality inputs.
- **Business development** – Supported agri-businesses to grow and continue innovating so they can more efficiently connect more SHFs to markets.
- **Financial services** – Increased agri-businesses' access to financing and unlock investment.

- **Technology integration** – Helped identify, innovate, and adopt tech solutions that help agriculture companies harvest and manage data.
- **Business membership organizations** – Built capacities of industry and trade groups to promote adoption of best-practices among members.

### **Marketing: Linking retailers with agrodealers via the web**

Ag sector retailers had very limited opportunities to utilize support services, especially for marketing. The few providers there were focused on working with large, multinational businesses. Most marketing firms saw no profitability and thus no investment prospects in the agriculture sector due to its thinness and the nature of SHF operations. In some cases, marketers lacked the information needed to develop relevant services for the sector, tailored to the needs of agribusinesses and SHFs. At the same time, SHFs rarely had extra funds to use for marketing.

FTF Inova's change strategy centered on helping innovative service providers scope out the market, learn about its needs, and develop connections with potential customers to test innovative solutions.

Tangerine, a marketing firm, saw the potential in investing to develop services tailored to the agriculture sector. In partnership with FTF Inova, Tangerine developed a new web-based platform – Cultiva – which gives input distributors and hundreds of agrodealers real-time access to data on product availability and sales rates at dealer shops. During the pilot phase, Tangerine linked 1,000 agrodealers via the Cultiva platform. In doing this, they created demand for marketing services by major sector players like DECA, K2, Winnua, Phoenix, and ICM. The initial partnership with FTF Inova prompted Tangerine to establish a new agriculture portfolio to scale up its business and meet growing demand for the new marketing services in FTF Inova areas and other parts of the country.

## ***Achievement 7: Higher Education Institutions have tailored their programs to serve the agricultural sector***

### **Higher Education Institutions**

The agriculture industry faced a long disconnect between Higher Education Institutions (HEIs) and private sector companies. HEIs did not offer courses that responded to market needs, such as Bottom-of-the Pyramid (BoP) marketing strategies, ICT-based management, tailored, practical research and short courses that could quickly respond to more immediate demand.

To address this challenge, FTF Inova engaged with three of Mozambique's pre-eminent universities, Instituto Politécnico de Manica (ISPM), Universidade Católica de Moçambique-Faculty of Engineering (UCM/FENG) and Unilurio Business School-(UBS).

The partnership with ISPM consisted of recruiting interns for specific FTF Inova activities. UCM/FENG tested regular engagements with private firms through guest speakers, job fairs and regular pitches of research and training. They did this using a business innovation platform established with FTF Inova support to connect the university with agribusiness firms. UBS focused on introducing practical training modules to their curriculum, tailored to the agribusiness sector. These include business simulations, marketing contests, marketing tactics and expansion models for rural settings, and basic management tools for staff in rural Agri firms. UBS also invested in coaching student interns which demonstrated the potential for not only income generation for the universities but also for improving students' skills and expanding their career opportunities, which should also contribute to increased enrollment.

### **Internships**

Placing youth into retail agribusinesses was a decisive innovation that had measurable results. HEIs that partnered with FTF Inova integrated hands-on internship programs into their curricula and invested in coaching

student interns. Their investments have paid off – for the HEIs, numerous agribusinesses, and for the youth interns as well as for thousands of SHFs.

Input firms like Luteari, K2, and two CdA-preferred agrodealers took on interns who helped them develop catalytic innovations like introducing customer-centric management practices (e.g., databases, customer service, shop layouts), testing low-cost marketing tactics (e.g., mini-raffles), and expanding input firms' footprints at the last mile through village-based agents. This increased customer numbers markedly, improved services, and increased access to vital inputs and information for smallholders who would have otherwise had to spend time and money to travel to the shops– or risk forgoing inputs altogether.

UBS also created Mozambique's first dedicated incubator for agricultural trading and retailing businesses, where graduate students developed innovations to improve agriculture retail services. On the back of this, [EASI Seeds](#) - a joint venture between the European and African Seed Industries - approached UBS to use the incubation center to develop its distribution network from scratch.

FTF Inova also helped UBS to develop a technical service provision model engaging junior consultants/interns who provide tailored advice for input suppliers and output buyers. UBS also integrated agriculture modules in its third-year courses, while also launching short courses for agriculture managers.

- UBS's first pilot - 20 junior consultants - benefitted 2,000 SHFs served by agrodealers.
- Some of the first cohort secured long-term employment, which encouraged other youth to apply to the UBS program.

The second cohort of 20 UBS students worked with input firms and output buyers, benefitting 10,000 SHFs.

### **Achievement 8: Improvements for logistics and transportation services**

Traditionally, logistics and transportation services have been very limited in the agriculture sector. Most providers avoided servicing the sector due to bad roads, which prevented them from reaching last mile buyers to deliver inputs and collect produce. As a result, these services had never been organized and coordinated, leading to high costs and preventing some SHF from getting their goods to market before they spoiled, if they could access any transport services at all.

Seeing a crucial need, FTF Inova convinced two service providers, Appload and Adicional, to invest in the sector. We did this by de-risking some of the activities, supporting them to do something that they would take much longer to do on their own.

#### **Appload**

With FTF Inova's support, Appload started by carrying out a feasibility study to see if logistics services that they had previously only offered in other countries could also work in Mozambique.

The study identified opportunities and Appload aligned its service plan for the agriculture sector accordingly. By the time FTF Inova finished, Appload had created a web-based platform and registered more than 100 clients, 300 transporters and more than 3,000 trucks, covering over 150,000 km in Mozambique and the surrounding region – facilitating not only domestic trade, but exports as well.

Currently, about 75% of the goods being transported are agriculture-based goods. This brings new opportunities because such support services providers are becoming more interested in offering their services to the agriculture sector. Also, agriculture sector players are also showing interest in using well-organized logistics platforms – and paying for these services.

At the same time, we supported Appload to work with local governments to study the best ways to engage small, informal transporters at the district level and get them registered on the platform. This would help transporters operate in a more formal way and offer better services to BoP players. The effort continues to pay dividends for Appload - while exploring service opportunities outside Mozambique, Appload is expanding its services to cover Zambia, Malawi, and South Africa. FTF Inova's work with Appload in Mozambique could help tens of thousands of SHFs across the region.



## Adicional

Adicional, a Maputo-based logistics company with 20 years' experience in Europe, mainly in last mile distribution. Through support from FINTRAC, a USAID-funded project, Adicional expanded its logistics hubs to cover the central and northern provinces while investing in last mile distribution routes to transport consumer goods, agricultural inputs and SHFs' produce - a goal shared with FTF Inova.

FTF Inova support enabled Adicional to develop an integrated last mile input distribution model that sold backhauling space to food distributors, agro-processors, wholesalers and aggregators, selling vegetables to traders and street vendors while creating an off-taker market for SHFs. This also reduced costs for another FTF Inova partner CdA, under the "Rota Certa".

### Low-cost consultancy services: UniLúrio Business School Internship Program

Inova co-financed a pilot project in which UBS students provided support and consultancy to agrodealers, providing different types of technical knowledge and assistance. FTF Inova was also active in raising awareness among agrodealers of the importance of expanding to last mile through networking with VBAs to reach more local farmers. For example, an agrodealer who adopted all innovations suggested by an intern saw a 400% increase in business volume. Also, the foot traffic in stores supported by the interns increased by 150%.



Figure 6: UBS Interns support the marketing and distribution sales of inputs at the last mile

## 5.4 Challenge Fund Achievements

### Supporting agri-food businesses through COVID-19

FTF Inova launched the Challenge Fund as a direct, rapid response to the COVID-19 pandemic and its economic effects on SMEs and SHFs across Mozambique. By making \$750,000 quickly available (of which over \$450,000 was directly invested into essential market players) the Challenge Fund was not only a critical lifeline, but helped *strengthen* many SMEs, positioning them to produce and process local products and channel them to markets where food supply chains had been weakened by COVID-19.

#### So Soja

For So Soja, a small soya yogurt producer in Chimoio, COVID-19 had a drastic effect. The Challenge Funds enabled the company to re-vamp its production capacity and increase shelf life to capitalize on new market opportunities beyond its base, where availability of healthy products was weak. So Soja's yogurt was popular, attracting scores of new buyers previously skeptical of non-dairy yogurt. They also won contracts to supply to schools and government institutions. As a result, So Soja has introduced new products in the



Figure 7: So Soja employees sell their products

informal (BoP) market with competitive prices, acquired distribution equipment including a refrigerated truck, mobile cooler boxes, medium-sized branded refrigerators placed in different selling points including canteens, kiosks; increased the shelf life of the yogurts from one to three months; and doubled production capacity from 400 liters per month to 800 liters per month. With the equipment received from the Challenge Fund, So Soja

is now in a position to sell their products for longer periods under refrigerated and cooler conditions (street trolleys, cooler boxes, and retailer fridges). From the start of their production in late 2021, the firm has managed to get orders from Vilanculos, Tete, and Pemba for the supply of soya yogurts.

As of November 2021, So Soja sold 2,000 liters of soya yogurt in Chimoio and about 300 liters of soya milk. Through the Challenge Fund, So Soja engaged six (6) preferred suppliers of raw materials, employed 11 people (two women), established 10 sales points in Chimoio for the formal market, and is registering 90 direct ordering clients which aggregate about 100 orders per week. In addition to the formal market, such as shops, kiosks, supermarkets, and convenience shops, So Soja is investing in targeting the bottom of the pyramid market segment. A total of 10 trolleys with cooler boxes are in circulation in Chimoio, Inchope, and Machipanda with foot vendors. The product quality is perceived as satisfactory; however, cheaper sachets would be better suited to the purchasing power of the BoP market segment. Currently, So Soja's foot vendors are managing to sell at least 20 bottles of 400 ml soya products per day.

On top of increased shelf life, production levels, and feasibility of So Soja's brand in the market, the grant application process empowered So Soja to better organize its administrative documents. As a local SME at the start of the Challenge Fund, the firm had challenges locating or renewing requisite documents to secure funding. With FTF Inova's support in the grant due diligence process, So Soja managed to update and renew several documents and licenses.

### **Agro Servicos Limitada**

Agro Servicos is a processing company that makes homemade jams of fruits native to Mozambique, such as malambe (*Adansonia digitata*), mapfilwa (vangueria unfortunate), massala (*spinosa Striychnos*), passionflower (*Passiflora spp*), tamarind (*Tamarindus indica*) and jambalão (*Syggium cordatum*). The Challenge Fund helped the SME to increase its production of native fruit pulps; improve its brand, quality, and services; and encourage Mozambicans to incorporate more healthy, locally produced juices and jams into their diets.

To increase its food market presence, Agro Servicos invested in a small factory for processing 100% natural fruit pulps. As it fine-tuned its brand (Gutsamba), Agro Servicos also designed and launched a website that allows the company to interact with customers. The firm is now adept in this regard, often leveraging social media to market its products and facilitate orders.

To further market the consumption of native fruit products, Agro Servicos is developing a cookbook. To support this effort, the company hired a popular market influencer in the gastronomy business to attract the brand's target group and gain consumer loyalty by promoting recipes based on native fruits. Recently, Agro Servicos launched its products through an association of catering service providers in Vilanculos, training 40 cooks to use their pulp products in restaurants and hotels.

With the arrival of a refrigerated truck and other processing equipment (purchased in-kind through the Challenge Fund), Agro Servicos continues to grow its business. In addition to processing and preserving 575 kgs of passionfruit and Galician lemon, Agro Servicos trained 57 suppliers and cooks on quality food standards as a step towards ISO 22000 certification. Even more, the company is starting to expand its supply base of native fruits. Since the new equipment will guarantee proper storage conditions and transportation of products, Agro Servicos has established contacts as far as Manhica and Novo Mambone. Increased purchases will start between July and August, when most native fruits will be ready, and may continue through December.

### **Mutiana**

Mutiana, a local women-owned business, used Challenge Fund support to increase its production of locally sourced products (lettuce, cabbage, cucumber, colored pepper, and arugula) – doubling its production capacity and promoting outgrower schemes to supply the market year-round. This support enabled Mutiana to improve its marketing strategy, leading to a 40% increase in online sales. The in-kind purchase of a new cold-room allowed Mutiana to store perishables and reduce food waste, further enabling women to sell when market prices

were higher. Mutiana attracted ten new suppliers to join its suppliers' clubs and provided paid training on buyer requirements in Grand Maputo, benefitting more than 30,000 consumers in Mozambique's capital.

With the installation of a hydroponic system (also secured through the Challenge Fund), Mutiana has the capacity to harvest 900 units of lettuce per week. The company also employed nine (9) people to manage the system. To strengthen its supply chain management, Mutiana trained 10 suppliers on quality certification (Global GAP standard), defined and communicated Performance Suppliers Club criteria to suppliers, and obtained buy-in from suppliers.

Mutiana is observing remarkable progress in production and marketing. By establishing an online shop linked to Facebook and advertising on multiple social media channels, the company reached 2,300 online store sessions per month (an 84% increase compared to the October 2021-February 2022 period), stemming from an 82% increase in online customers. It is worth noting that Mutiana receives 144 orders per month, with an average value of USD \$15-21 per order (a 9% increase from January to February 2022). With its new investments in organic production, Mutiana is attracting and retaining its clients. For instance, about 77% of customers are returning (compared to 38% between Jan-Feb 2022). As a result of Mutiana expanding its presence in the local market, its sales volume has so far increased by 12%.

### **Do Campo**

Do Campo is a local company that farms, slaughters, packages, and distributes chicken. COVID-19's arrival in Mozambique jeopardized the company's previous monthly sales of 12,000 chickens and 120,000 eggs, thereby threatening vital food supplies for consumers. Logistics disruptions due to the pandemic added to the problems. Challenge Fund support enabled Do Campo to introduce a zero-inventory, "farm-to-fork" online marketplace that secured traceable deliveries of safe, healthy, vacuum-sealed organic chicken to key markets. FTF Inova also supported Do Campo to develop performance criteria and launch a supplier club. This effort upgraded the quality production capacity of 200 small producers and integrated them into a market that pays higher prices for their goods. While investments such as hiring logistics services for home delivery are still in progress, Do Campo has already invested its own funds to build a new slaughterhouse. The facility has an installed capacity of 2,000 units/day and is equipped with freezers, machines to cut chicken, and a 4,000 units/day incubation unit for day-old chicks. After acquiring better packaging equipment (vacuum sealing) and developing an [online marketplace system](#), Do Campo is planning to engage 200 producers as suppliers. Currently, Do Campo has employed 44 people and engaged 10 suppliers, with plans to engage 200 additional producers as suppliers. In terms of production, Do Campo now processes 15,000 chickens per month and receives 1,500 orders per week.

### **Prodeca Sarl**

Prodeca is an input/output trader and mechanization company that links suppliers and off-takers with smallholder farmers. The company's services took on greater importance during the pandemic, when securing food supplies became difficult in Mozambique. While its horticulture business presented an opportunity to meet emerging needs, Prodeca needed capital to grow its capacity. Prodeca had also planned to consolidate a service center in Sofala province but also lacked the capital to establish it. Inspired by the "one-stop shop" concept, SHFs would be able to access inputs and mechanical services and sell their produce at this center.

The Challenge Fund helped Prodeca to create a reliable and current database of SHFs in order to secure the quantities the company needed. The grant also helped Prodeca to conduct develop a credible business plan for its initiatives, backed by a feasibility study. With these elements in place, Prodeca became better positioned to access investment from other partners for its processing center. Also, after presenting its business plan to the IRRIGA project in Manica province, Prodeca has entered a partnership that will see the company working with 1,500 SHF under IRRIGA-financed irrigation schemes. The SHF will produce different horticultural crops and supply to Prodeca. Lastly, the company is also adding a processing center for SHF crops.

## Winnua

Winnua is a small processor for fortified porridge (PAPA SEMPRE), a staple of children's diets in Mozambique. Sourcing high quality maize and soya beans had always been difficult for the company, but it became much more complicated with the pandemic. Challenge Fund support from FTF Inova enabled Winnua to improve the quality of its raw materials and boost direct purchases from farmers. By developing a **digitalized traceability system**, Winnua was able to better manage its supply and distribution and trace products back to each of its 1,000 individual smallholder farmers/suppliers. Digital tracing also made it possible for Winnua, a school food supplier, to seek HACCP food safety certification.

Even further, Winnua recruited 10 agricultural advisors who developed relationships with 1,017 family farmers supplying soya beans and maize to the company. The project's impact is significant, as it allowed the company to procure 57% of its planned volume in soya and 56% of maize for the 2020/21 agricultural season, equivalent to 57.5 tons and 376.2 tons respectively. Through this procurement process, Winnua transferred 5,402,008.00 Meticaís – 25% above the targeted procurement level – to 1,017 smallholder farmers, of which 13% are women. It is worth noting that Winnua has never bought more than 30 tons of produce from farmers in the past, and the increased volume purchased this cropping season is due to the development of a formal farmer's network and availability of working capital to stock. From the 2019/20 agricultural season to 2020/21, the percentage of SHFs among Winnua's suppliers rocketed from just 14% to 90%. On the other hand, procurement from traders dropped from 81% to 13%. This is an indication that investing in long-term relationships with smallholder farmers leads to improved trust, incentivizing more cooperation and cutting down the middlemen who usually collect more margins in the market. The company also observed quality improvement with no noticeable aflatoxin in the raw material procured from farmers from July to December 2021.

## Agrimel

Agrimel is a company creating alternative income sources for rural communities through the production of sustainable honey. The company is currently working with 126 beekeepers, with the aim of reaching another 450 farmers over the next five years in Zambézia province. Agrimel applied to the Challenge Fund to establish a **web-based traceability system** to minimize the risk of counterfeit honey, gain entry to specialized markets, and improve beekeepers' incomes (rewarding them for the quality of honey produced). FTF Inova helped Agrimel to procure a service provider and set up this system.

Currently, Agrimel has engaged 126 beekeepers and expects to expand to 450 in the next five years. In 2020, Agrimel purchased 400 kg of honeycomb from its four original beekeepers in Gurue, translating to an income of 10,000 meticaís per beekeeper and 250 kg of filtered honey, which was bottled and sold locally. In line with the traceability effort, Agrimel is also utilizing ICT technologies for training. Before commencing practical activities, beekeepers can undergo a virtual training using 3-D glasses. The company now has training packages tailored for start-up beekeepers.

## Casa dos Legumes

Vegetables are at the core of Casa dos Legumes' (CdL) business, but as perishable goods, vegetable supply chains were disrupted significantly by the COVID-19 pandemic. CdL's reliance on sourcing from local growers prevented them from growing their client base due to the instability of supply from smallholder farmers, who often operate on seasonality. CdL needed to invest in its own production. The Challenge Fund helped CdL prepare a viable business plan for increasing its vegetable supply, expand its suppliers base, and attract clients – all while leveraging existing local suppliers, including smallholder farmers and aggregators.



## 5.5 Capturing Systems Changes

FTF Inova sought to positively influence how agricultural systems in Mozambique evolved and will continue to evolve, by promoting better integration of SHFs, women and youth in agribusiness. The key inclusive behaviors that we helped integrate into market players’ operations were in business strategies, patterns of competition and cooperation among input suppliers, as well as purchasing and adding value to supply chains. We developed and used measurement tools<sup>18</sup> to detect and assess shifts in slow-moving variables— like the behaviors and expectations of market actors, underlying rules, incentives and structures of each sub-system.

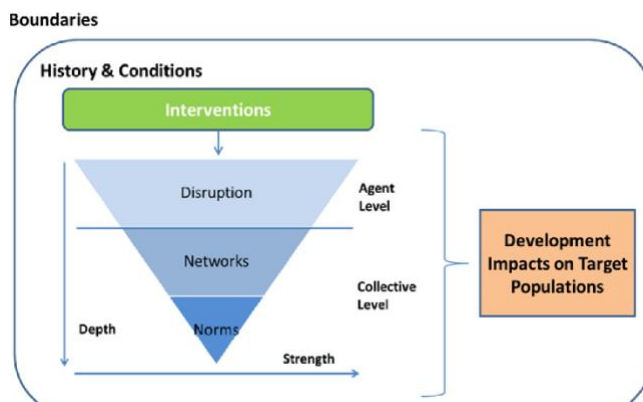


Figure 8: Disrupting System Dynamics Framework

We evaluated the scale and significance of shifts in the ever-changing agricultural market systems by considering the depth (meaningful changes in norms or networks) and/or strength (number of people changing their behavior or expectations, number of system actors buying in to an innovation, or relevance of changes to the goal). We also assessed our contribution to the shifts (importance of FTF Inova involvement technically and financially). The Disrupting Systems Dynamics Framework<sup>19</sup> helped us conceptualize and assess systemic changes.

### How the agricultural market system has changed

Prior to FTF Inova interventions,<sup>20</sup> most competition for sales of agricultural inputs focused primarily on prices or volumes. Agrodealers and other input retailers regularly competed to offer the largest inventories of low-priced inputs they could get in their shops to encourage SHFs to buy from them; larger input suppliers - like manufacturers and wholesalers - focused on customers able to buy large volumes – such as government agencies and aid programs - rather than smallholder customers at the last mile. SHFs (between 3-4 million producers) had little voice, choice or control over the quality of inputs available to them. Shifts catalyzed by FTF Inova indicate that some agricultural input suppliers are now using new **inclusive, customer-centric approaches**—focusing on SHFs as “customers” they need to understand and satisfy better. Select firms, including but not limited to the 15 input firms and associations, 150 spray service providers, and 500 agrodealers and agents supported by FTF Inova, have invested more than US\$1.3 million in meeting farmers’ needs for quality products and customer service to encourage brand loyalty in rural locations. How FTF Inova assessed this change is summarized in the chart below.

Change	<b>Inclusive, Customer-Centric Approaches for Agricultural Input Delivery</b>
Depth of change	Input suppliers are investing in their distribution capacity to make more products available in rural markets. To build this capacity, input supply manufacturers and distributors are investing more in relationships with agrodealers and village-based agents (VBAs). The change is disruptive with potential to be deeper over time. However, until agrodealers and VBAs can get more information and better inputs to smallholder farmers consistently, the network changes at the last mile and normative expected changes—for rural retailers to compete to meet farmers’ needs on quality of products and services at prices they can afford—will not take hold.

<sup>18</sup> FTF Inova’s Monitoring, Evaluation, and Learning Plan found [here](#) explains measurement tools in more depth.

<sup>19</sup> The Disrupting Systems Dynamics Framework can be found [here](#).

<sup>20</sup> FTF Inova’s Market System Baseline is available [here](#).



Strength of change	Input suppliers that probed or adopted more inclusive, customer-centric approaches have reached over 35,000 smallholder farmers in FTF Inova areas. The adopters are investing their own resources to sustain customer-centric practices because they are seeing returns on their investments. Concurrently, some rural areas are becoming increasingly competitive at the retail level.
Analysis of FTF Inova contribution	FTF Inova co-created the design and implementation of input product development and/or delivery for several input suppliers, including CdA (Rota Certa trucking route), Bayer (hub dealer performance rewards), K2 (pre-order village-based agents), Oruwera (female buyer clubs of new seed packages), Novatech (new shop designs in shipping containers), and more than 200 associated agrodealers, including Luteari and Cantina 2001 (new marketing and distribution tactics). Encouragingly, several other input suppliers, e.g. Yara and ETC Adubos, have replicated similar strategies on their own. UBS is also providing accessible low-cost technical assistance to input suppliers and agrodealers to improve their investments in inclusive, customer-centric approaches.

Another important change involves the agricultural supply chains. Prior to FTF Inova, many smallholder farmers considered the buyers of their produce only as harvest time neared, not prior. SHFs could not be sure who would come to purchase, when, or at what price, and they had been burned by broken buyer promises in the past. As most agricultural products are low value, the competition amongst buyers—processors, traders, larger retailers and exporters—had been driven by price and volumes. The off-takers also rarely offered any incentives for higher quality produce. So, SHFs invested little or nothing in upgrading the quality of their crops. “Side selling” was prevalent, offering a lower risk than waiting for an output buyer who made upfront promises to purchase but may not show up post-harvest. FTF Inova has seen evidence of increased **investment in commercial relationship-building between supply chain actors** to improve sourcing and purchasing from SHFs, as well as upgrading of operations by SHFs in terms of products, services, and practices used. At least five (5) large exporters and seven (7) wholesalers have invested more than \$2.6 million in improvements to work with more than 100 aggregators, 10 micro-retailers, three sectoral associations, and nearly 50,000 SHF.

Change	<b>Investment in commercial relationship building between supply chain actors</b>
Depth of change	Network relationship building was noticeable in supplier club schemes, especially when linked with input suppliers and service providers, and in sourcing of domestic produce via aggregators. Network changes in interactions of multiple types of actors within a system, providing new channels for finance and information to flow between smallholder farmers, aggregators, output buyers, and ultimately wholesalers and retailers started to emerge during 2020 and 2021. While new relationships between businesses built during FTF Inova (B2B relationships), the number of famers with new or improved commercial relationships with partner firms was more than 150,000, the existing system patterns of behaviors of output buyers in Mozambique has not been significantly changed yet. As these innovations have more time to garner investment and traction, assuming output buyers continue to invest or attract investors and donors to do so, the depth of change may deepen.
Strength of change	Eight output buyers that FTF Inova supported have pursued or formalized commercial relationships with service providers and input suppliers to perform functions that output buyers have traditionally tried to perform in house, like provision of inputs, monitoring of production practices to meet standards for traceability and quality, payments to producers, transport and logistics, and aggregation. These included the following relationships: Olam with CdA, MeTL with Bayer, Novo Madal with Phoenix Seeds and separately with Green Fingers Mobile, ETG with formal spray service providers (as aggregators), KDT with Impere and Majune Women Association, PROP with aggregators and urban retailers, Condor with British Retail Consortium (BRC), and ECA with Novatech and Omnia. The fact that these eight output buyers considered collaborative partnerships, in a thin market system which lacks specialized services and historically is fraught with distrust, was a relevant a meaningful step towards the development vision. <sup>21</sup> In terms of relationship investments, the level of buy-in to these alliances from output buyers in the agricultural system is still low.

<sup>21</sup> Find FTF Inova’s development impact and vision in the MEL plan. [https://pdf.usaid.gov/pdf\\_docs/PA00XCERS.pdf](https://pdf.usaid.gov/pdf_docs/PA00XCERS.pdf)

Analysis of FTF Inova contribution

FTF Inova co-created the design and implementation of the development of the domestic products supply chains with output buyers like KDT and Adicional's PROP, in addition to pursuing similar proposals with Mozambique Good Trade. These businesses via work with 52 aggregators, 3 packaging and transport service providers, 2 wholesalers, and 10 micro and urban retailers have shown that coordinated distribution networks within Mozambique can help meet consumer preferences for Mozambican goods. However, the amount of investment needed for formalized alliance building between output buyers—not just for local consumption, but also for export (like cashew, nuts, and cotton)—is extremely high for the private sector to undertake alone. Despite investment from FTF Inova output buyer partners like Condor, ETG, Novo Madal, Miruku, as well as investments by service sector providers like Appload, Tangerine, Adicional and UBS, the formalization and logistics needed for strengthened supply chains exceeds what national firms can invest on their own.

## Innovative tools used to capture and drive changes

FTF Inova developed and used a suite of tools to measure the slow-moving variables identified at baseline as important to the agricultural market system in Mozambique. Select findings from our use of some of those tools follow below.

### Trust and Cooperation Indices

These two commercial norms drive the behavior of key market actors. We measured them to assess the solution-seeking behaviors necessary<sup>22</sup> to create more collaborative relationships between producers and buyers that could boost production of higher value products and services in the market.

*“It is necessary to collaborate directly with customers, give lectures, make demonstration fields, and provide farming services and, in addition, I also make product discounts.” -Agrodealer, Male, 30+ years old*

**Cooperation improvements.** The cooperation index scores almost doubled from the baseline (up 193%). For example, more providers now believe that consumers will value a relationship with them enough to make determined efforts to maintain it, like expecting SHFs to show customer loyalty to input suppliers.

**Trust improvements.** Trust index scores slightly more than doubled (up 218%). This is most pronounced in “reliability” wherein consumers now expect that providers will do what they promise to do much more than they had prior to FTF Inova. For example, a SHF will only invest in the recommended spraying of quality pesticides on cashew or cotton when he/she believes buyers will pay him/her for better quality produce. Trust is strengthened by cooperative behaviors like both parties investing and benefitting in cultivation and maintenance.

DIMENSIONS OF COOPERATION	Subject of the norm	Score 2018	Score 2020	Confidence level (2018 and 2020)
Belief in importance of relationships	Provider	0.75	1.33	3
	Consumer	0.5	2	3
Belief in mutually beneficial gains	Provider	0.5	1	3
	Consumer	1	1	3
Overall Score		0.69	1.33	3

Figure 9: Cooperation scoring matrix (2018 and 2020)

<sup>22</sup> The importance of these commercial norms not only for enhanced agricultural productivity and value addition, but also for the resilience of the market system is explained in more detail in the system level element discussion of the *Dynamic Systems Resilience index (DSRi)* used by the FTF Inova consortia members (DAI, Marketshare Associates, and Technoserve) in the subsequent FTF Uganda IAM activity.

The improvements in both indices suggest inclusive behaviors have shifted towards smallholder farmers with higher expectations that they be loyal to their suppliers and that they will not side-sell to those who have not invested in them upfront. Investments in time, advice and products by input suppliers and output buyers have built SHFs' expectations from their commercial relationships, including responsiveness to their product concerns.

DIMENSIONS OF TRUST	Subject of the norm	Score 2018	Score 2020	Confidence level (2018 and 2020)
Competence	Provider	1	1.67	3
	Consumer	0.75	1.33	3
Reliability	Provider	0.5	2	3
	Consumer	0.5	1.33	3
Integrity	Provider	0.5	1	3
	Consumer	1	2	3
Overall Score		0.71	1.55	3

Figure 10: Trust scoring matrix (2018 and 2020)

## Business Innovation Index

We used this index to assess competitiveness by monitoring how well market system actors are able to face competition and incrementally innovate their business models to compete successfully. A business innovation or adaptation includes development of new products or services, processes, marketing, and/or organizational functions. The calculations measure changes made to business models on a scale of 0 (no innovation reported) to 1 (five or more innovations reported) during the period.

Low innovation levels, especially in products and services geared towards SHFs, presented a challenge for FTF Inova. We sought to find ways to get agrodealers, input distributors, off takers, insurance providers, transporters, marketing firms etc. to innovate services and products to promote inclusive agricultural growth.

Since FTF Inova's launch, business innovations across the agriculture sector in the zone of influence nearly tripled (up 286%). They were most pronounced in input distribution networks where FTF Inova concentrated its activities. While the shocks and stresses of recurring tropical storms and the pandemic motivated some innovations, almost 90% of the 140 businesses (including some FTF Inova partners) that we interviewed confirmed they had introduced at least one innovation in the prior six months.

2018				2020			
Number of surveyed firms	Number of surveyed firms with an innovation	Average # of innovation in the past 6 months	Average Baseline Index Score	Number of surveyed firms	Number of surveyed firms with an innovation	Average # of innovation in the past 6 months	Average Index Score
Support Services System				Support Services System			
17	7	0.52	0.10	28	23	2.68	0.53
Input Distribution Network System				Input Distribution Network System			
27	21	2.04	0.40	84	80	5.23	1
Supply Chain Management System				Supply Chain Management System			
15	11	1.40	0.28	45	37	2.53	0.51

Interview date	Number of surveyed firms	Number of surveyed firms with at least one innovation	Total number of innovations	Average Bill score	Median Bill score
2018	59	39	85	0.28	0.26
2020	157	140	628	0.80	0.68

Figure 11: Business Index: Innovation by system (2018 and 2020)

"We started to provide a new service, providing credit to farmers so they can buy inputs. "We start[ed] offering this service right now, in a pandemic situation, because we have the resources to implement this and because we think it is the best way for us to face this situation together... because the farmer is highly fragile and if we do not give credit, we will not be able to improve our sales." (Aggregator, Female, 30+ years old)

## Outcome Harvests to Understand Changes

Using the Disrupting System Dynamics (DSD) framework below enabled us to answer the following questions and figure out how to address remaining challenges facing CdA's Rota Certa, address comparable questions on supplier clubs, and maximize the outcomes before the project concluded:

- Are there signs that smallholder farmers may get better inputs over time?
- What percentage of the target groups— agrodealers, smallholder farmers, input distributors and manufacturers—were demonstrably affected by the changes?
- How vested are market actors in changes in the system?
- How relevant are changes towards helping empower and improve the lives of smallholder farmers?
- How connected are the outcomes? Which of them should we prioritize supporting? Why?

Additionally, the insights for specific harvest users encouraged the development of the business case presentation<sup>23</sup> to share with other input supply actors who benefit from collaboration or replication. For example, the business case for CdA's Rota Certa shows a monthly profit margin of over \$10,500 USD. Insights also generated traction for more investment in supporting affiliated agrodealers in helping them understand, share information with, and track smallholder farmers as customers, through a marketing and research firm.

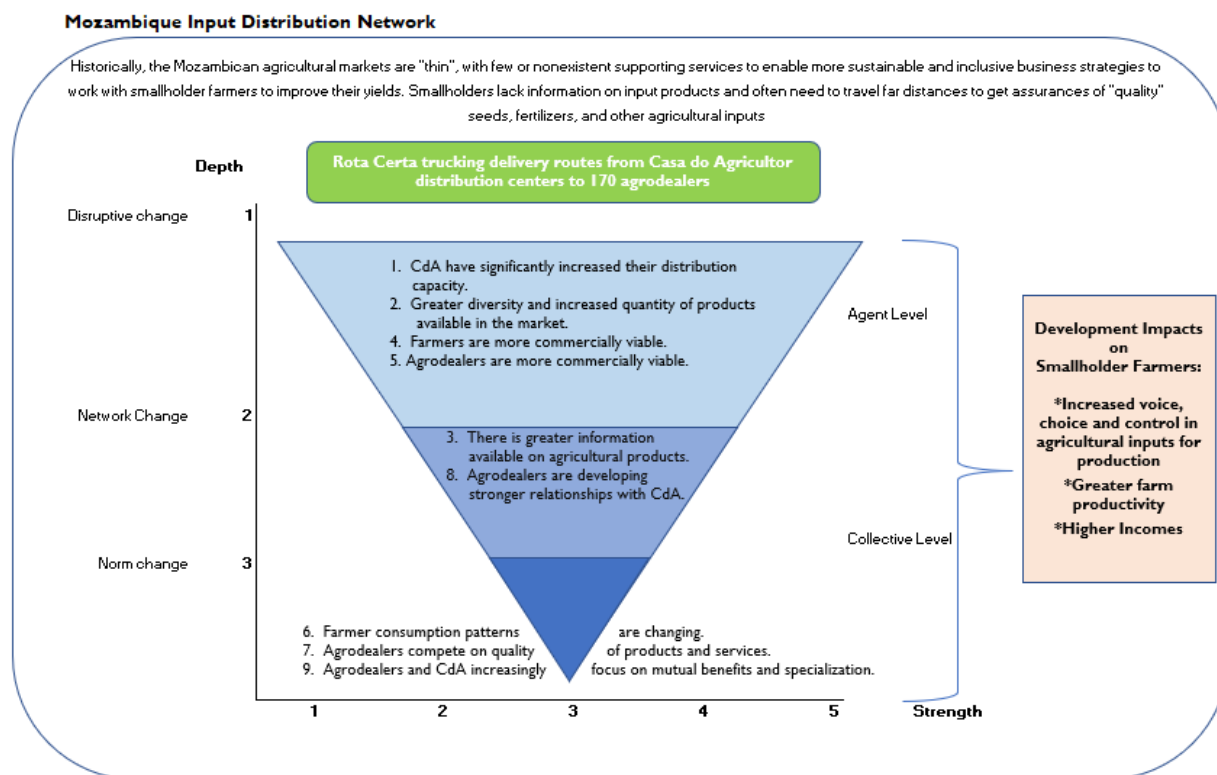


Figure 12: Mozambique Input Distribution Network

## Sociograms

One of the tools we used to identify and measure changes in the agricultural market system were the sociograms that handily complemented other FTF Inova qualitative tools. Sociograms helped each of the players to visualize and thus understand the existing commercial relationships and dynamics involved in the piloted innovations. The agent-level sociograms also helped pinpoint new and improved commercial relationships in the market system that stood to gain from the innovations supported by FTF Inova. See examples below.

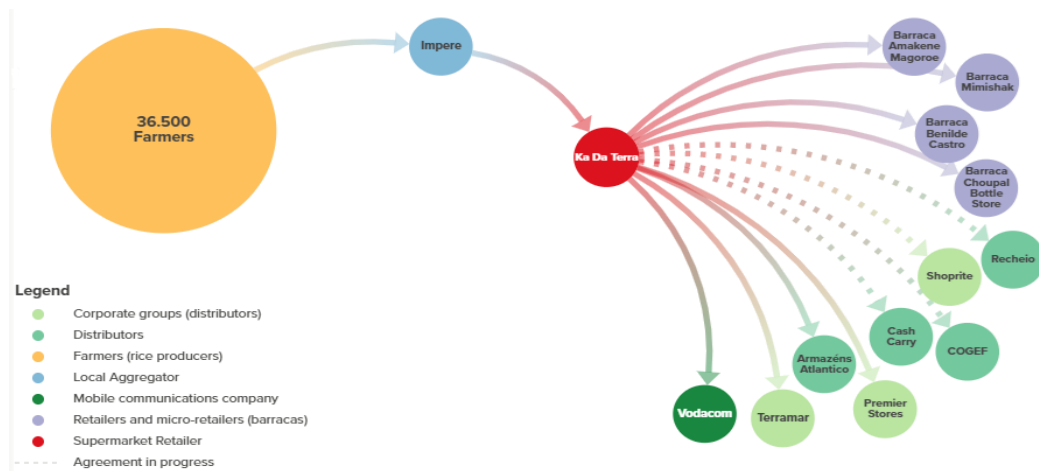


Figure 13: Getting Mozambican rice on supermarket, wholesaler, and retailer shelves in Mozambique

KaDaTerra (KDT) is a retail supermarket that worked with FTF Inova to create commercial connections between producers, aggregators and large-scale retailers. Building this network of relationships, which can be expanded even further, is represented in this sociogram. KDT purchased rice from approximately 36,500 Mozambican farmers through an aggregator (Impere) and sold this product to distributors, retailers and micro-retailers. The sociogram helps FTF Inova and KDT to visualize how each relationship improved at each link in the supply chain allowing us to identify the various market actors involved in the innovation, including those with pending contracts – captured by the dashed connections.

The results from a similar analysis for AICAJU are presented in the text box below:

FTF Inova approached AICAJU—the national cashew association—to gauge whether their members may be interested in piloting a supplier club scheme to improve the quality of cashew nuts produced by loyal suppliers. ETG, which is among the largest cashew exporters in Mozambique, expressed interest in investing in performance supplier clubs with support and promised to share their learning from the experience with the other members of AICAJU. Building on the lessons learned from previous pilots, FTF Inova worked with ETG to get 900 SHFs to use 162 spray service providers to improve the quality of their cashew and to help aggregate the raw cashew at harvest. SSPs offered to spray chemicals, sometimes on credit, since both the SHF and the SSPs would benefit from higher prices to be paid by ETG if the quality met standards. Two other actors involved in this innovation are worth flagging. FTF Inova partnered with UBS (UniLurio Business School) to provide low-cost technical assistance to ETG on how to use supplier scheme incentives and rewards for improved quality cashew. Also, IAM (the government affiliated Mozambique Nuts Institute) was involved in the innovation as they keep records on all “formal” spray service providers and the quality of the cashew produced in the country. IAM had planned to use the performance scorecards to help promote SSPs as aggregators to other cashew exporting firms.

## Customer Centricity and Stakeholder Feedback

Useful tools to measure whether the innovations are delivering value to end customers included stakeholder feedback surveys and customer centricity scorecards, as described in the FTF Inova MEL Plan. FTF Inova stressed that to really promote “inclusive business” companies needed to not only understand their customers



but to make organizational progress towards developing and implementing customer centric business strategies. To this end, FTF Inova worked, especially with input suppliers' company management, as follows:

- **Supported 5 input suppliers (CdA, Phoenix Seeds, Isolmoc, K2, and Cantina 2001) track customer satisfaction using surveys and metrics**, like the Net Promoter Score, as well as site visit reports. This evidence helped companies to assess how likely customers were to recommend the inputs and or services provided (like the Rota Certa trucking routes), gather suggestions for improvement (in providing spray services or using radio programming), and summarizing customer experience (in shops like Cantina 2001's and Casa do Agricultor's locations).
- **Supported a few partners (like Bayer, K2, and Luteari) to incentivize their staff using customer related key performance indicators**. K2 and Bayer developed their own scorecards which tracked and rewarded retailers for being more customer centric (for example, providing technical information on products, facilitating logistics, capturing and sharing feedback on products and experiences, and overall satisfaction with products).
- **Supported K2 and CDA make customer-related business decisions by integrating different data points** (e.g., in-person interactions, surveys, call center data, and sales data) **into a system**, rather than relying on a single source. Both worked, with FTF Inova's support, on improving their company's customer relationship management (CRM) technologies used for tracking interactions with customers and potential customers.

If staff are not expected to intentionally serve the SHF segment and/or are not recognized for doing so, then the quality of the experience of that customer segment is not prioritized by the companies. FTF Inova used customer centricity scorecards to also help understand how employees, VBAs, and other retailers of inputs perceived the importance of customer centricity in their own jobs as well as what they thought their employers or suppliers cared about. This resulted in reflections by staff on feedback from customers in their experiences (like with specific products or ordering processes, for example) that they had not necessarily realized that their employers or suppliers might care to know, so that they could take action to respond to these customer needs. Using customer centricity scorecards, FTF Inova identified for partners (like Luteari, Sitole, and CdA) how mapping the customer experience journeys and sharing feedback within the company and its staff and retailers could prove useful and improve relationships within, and amongst retailers and suppliers of, a company.

As businesses increasingly recognize the need to tailor the customer experience towards SHFs to increase sales, we expect increased investment in the processes, people, and products oriented toward them. Ultimately, for SHFs, a much more concrete result is forthcoming, but needs some incubation time to sustain behavioral changes. Once achieved, a better buying experience should result in greater access to products, lower prices, and improved information. The true shift in dynamics is in having introduced the concept of "customer centricity," seeing firms think about it, and then them taking actions to respond to address customer needs. FTF Inova expects that dramatic systemic changes are still to come, as the investments made in customer centricity gain traction.

## **Impact**

FTF Inova co-created several pilot activities aimed at commercial sustainability while also delivering inclusive value to smallholder farmers and other groups traditionally excluded from agriculture market systems, primarily women and youth. An important part of our co-creation was deciding with partners and other organizations if/when to pivot or walk away from innovations that did not get sufficient traction. For FTF Inova, even when there was traction with business partners, if the innovation did not prove it could alleviate the pain points experienced by poor smallholder farmers or did not indicate potential impact at scale, the FTF Inova support for the innovation was discontinued. Below we list those innovations that got traction on all three key metrics—business sustainability, inclusive value, and potential for scale.

Development Impact for Smallholder Farmers	How many SHF directly impacted?	What innovations contributed to impact?	Importance of impact
Increased SHF voice, choice and control of inputs	108,160 SHF	<ul style="list-style-type: none"> <li>• Trucking on rural routes (CdA)</li> <li>• Pre-ordered inputs (K2, Bayer, Oruwera, Luteari)</li> <li>• Customer Centric product(s)/Services (Oruwera, Novatech, K2, CdA)</li> <li>• Tailored marketing, workforce development and business services towards the SHF segment (Tangerine and UBS)</li> <li>• Recognition of good business practices in the form of public awards and rewards (APROSE)</li> </ul>	The decision-making power of smallholder farmers over the inputs they can buy is increasing. An outcome harvest revealed and validated that the power dynamics in the agricultural market system are beginning to shift as farmers are not stuck between what is stocked on the local shelf versus traveling to a larger retail/distributor store several kilometers and hours away. They can place orders, close to home, without a markup. Also, the expectation from smallholder farmers that input buyers see value in being responsive to their needs has increased, as seen in surveys.
Increased productivity (between 25% and 35%)	44,500 SHFs on 58,000 hectares	<ul style="list-style-type: none"> <li>• Trucking on rural routes (CdA)</li> <li>• Pre-ordered inputs (K2, Bayer, Oruwera, Luteari)</li> <li>• Transparent performance suppliers' network schemes (Miruku, Novo Madal, Olam, and ETG)</li> </ul>	The adoption of improved inputs, practices and technologies (like improved seeds, fertilizers, tractors, production plans, etc.) increases productivity and profitability in terms of human and physical resources. Outcome harvests with supplier club participants revealed that smallholders were better able to meet off taker standards by improving production practices and gaining increased access to inputs.
Increased income (ranging from 116% to 300% in previous seasons)	85,000 SHFs	<ul style="list-style-type: none"> <li>• Transparent performance suppliers' network schemes (Miruku, Novo Madal, Olam, and ETG)</li> <li>• Domestic produce supply chain development (KDT and PROP)</li> <li>• Trucking on rural routes (CdA)</li> <li>• Pre-ordered inputs (K2, Bayer, Oruwera, Luteari)</li> </ul>	Supplier club affiliated farmers received incentives (inputs, mechanized crops, and technical assistance) from companies like Miruku, which contributed to an increase in productivity and quality. Miruku paid farmers 16% higher for higher quality maize, because of the reduced cost of selecting grains and potential for improved profits, thus improving the income of these producers. Comparably, Olam paid farmers 19% higher for higher quality cotton. Most of the ETG spray service provider-affiliated SHF tripled their income in the 2021-2022 season. Additionally, in outcome harvests, farmers consistently attributed increased incomes to the improved access to inputs they receive from Rota Certa, which reduced costs and increased productivity. Findings from customers of pre-ordered inputs were similar.
Transportation savings	85,000 SHFs	<ul style="list-style-type: none"> <li>• Trucking on rural routes (CdA)</li> <li>• Pre-ordered inputs (K2, Bayer, Oruwera, Luteari)</li> </ul>	Transportation costs as well as the opportunity costs of time spent traveling are extremely important to smallholder farmers. In the outcome harvest, we were informed that it was not uncommon to

		<ul style="list-style-type: none"> <li>• Transparent performance suppliers' network schemes (Miruku, Novo Madal, Olam, and ETG)</li> <li>• Domestic produce supply chain development (KDT and PROP)</li> </ul>	<p>travel over 100 km to obtain inputs before the CdA Rota Certa routes were running. Travel time from smallholder plots of cotton, maize, soy, guar beans, and nuts to more urban centers can easily take more than 3 hours one way and cost 100 MZN.</p>
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It is worth noting that not all innovations that proved a sustainable business case and inclusive value- in terms actual and potential impact for smallholder farmers - were sustained by FTF Inova partners. In some cases, partners faced financial challenges during the onset of the COVID-19 pandemic (KDT and Miruku, for example). In other cases, the business decided to pursue other endeavors in other markets or crops (for example Olam).

## 6 Lessons Learned

Over five years promoting innovations and inclusive growth in Mozambique's agricultural market system, we learned how to co-create and implement activities with private-sector partners to deliver on *our* objectives *while* growing sustainable business *for them*. We did this by developing 'probes' - potentially transformative innovations with built-in learning objectives, that we tested and refined across a diverse portfolio of partners and market systems.

The key lessons learned from our experience partnering with the private sector are:

### 1. Lay the groundwork upfront

For a market system program like FTF Inova that did not work directly with SHFs, engaging the private sector is a make-or-break function. Experience shows that it can at first be unfamiliar and even seem 'unnatural' or counter-intuitive for traditional agriculture development staff to understand the benefit of engaging companies. That can in turn, make it difficult to know *how* to approach and engage them to co-invest with us. What is the value proposition that we offer and how can we help firms make more money? Core project staff should include development practitioners as well as people with private sector experience who can:

- relate to larger firms and trade associations working across the agribusiness sector;
- think through what makes business sense, what is "innovative" and appealing for companies to test;
- 'Connect the dots' to ensure companies see the value in investing in the SHF segment as customers or suppliers.

### 2. Promising partners can be hard to find in thin markets

Markets are thin – and the pool of potential partners small - when competition and diversity are limited, high margin/low volume business models predominate, unreliable supply chains incline companies to vertically integrate rather than buy from specialized suppliers. Some companies were invested in buying low grade produce from SHFs at rock-bottom prices. There were few ideal partners.

Before engaging the few players in each market, we had to do our homework to understand their business and how we could bring relevant ideas to interest them - without offering money. Even when we found promising partners, keen to innovate with us, we took a cautious, but persistently ambitious approach. We also operated like a business, e.g. using Deal Notes rather than MOUs or other typical development program tools.

### 3. Facilitative MSD partnerships rely on ideas first, then trust and credibility. It takes time to earn them, and focused effort to keep them.

As facilitators rather than interveners, FTF Inova relied on its intellectual capital rather than its financial resources. Partnerships catalyzed by ideas must be built on trust but establishing credibility can take time, especially in thin markets. We found that the path to earning companies' confidence as co-investors required showing, not telling. For us that meant taking calculated risks, 'bought down' by co-creation and co-investment. We then had to curate the partnerships to endure - amid the turbulence of cyclones, COVID and more common problems. We did this via empathy for our partners' challenges and priorities, patience in working at their pace rather than forcing 'progress' to meet program timelines, agility in finding solutions and business-minded resolve to jointly walk away from innovations that did not justify further investment. Getting our partner companies to shift to relationships based on thought leadership, feedback, and learning rather than typical ones based on extraction of funds was one of the ways we solidified our partnerships. It was also a way we knew we had catalyzed changes to market systems that would last, transcending not only Mozambique, but thin markets generally.

#### 4. Not everything gets traction or scale

Each "probe" (innovation) that we co-invested in was only launched after serious analysis, vetting and planning to minimize risks and maximize the likelihood of success. Once underway, our MEL systems/tools monitored progress to stay on track. Despite our earnest efforts, we had a few disappointments or outright "failures". The first pilot with Olam and Isolmoc did not generate the desirable results: farmers did not achieve high yields, failed to repay the input credit to Olam, and therefore could not pay in full the inputs supplied by Isolmoc for the pilot. This was due in part to unclear risk sharing for piloting a new innovation among Olam and Isolmoc. In addition, the cropping season was poor due to climate shocks (drought and excessive rains in the middle of the season) and the performance of the agrochemical used. The other example is Ecotri, a company selling small motorized equipment. After dedicating time to co-creation to expand their client base by providing reasonable payments terms on their equipment, the company was offered a large tender by the government to provide hundreds of tricycles to another development program. As a result, the firm did not continue its partnership with Inova.

#### 5. Including Government Players

At the outset, FTF Inova focused primarily on private sector players seeing them as better positioned than government to effect sustainable changes to the market systems. However, we later understood that it was important to be inclusive in our engagement with provincial and local government officials as well as relevant national level decision-makers to inform them of our activities and learning, seek their support where useful and, above all to ensure that our innovations aligned with current and emerging policies. Local officials in particular operate at the inflection points of many innovations, especially in sensitive commodities like cotton and cashew because they are export crops that contribute significantly to GDP. Local officials interacted regularly with key FTF Inova stakeholders and in some cases were involved in subsidy initiatives that ran counter to our market-led innovations.

## 7 Performance of the Last Quarter

In February 2022, USAID approved a no-cost extension (NCE) for the project due to challenges arising from the COVID-19 pandemic and the Ukraine-Russia war, resulting in a shift in FTF Inova's contract end date from February 21, 2022 to June 30, 2022. As such, over these last few months of implementation, FTF Inova focused on completing NCE activities, the achievement of which are outlined below.

### Technical Activities

**Provide direct support to interventions that curtail the effects of COVID-19.** The NCE allowed FTF Inova to see through commitments to beneficiaries around various interventions that address the impact of COVID-19 on Mozambique's agricultural system and build resilience to future shocks. These interventions --

all under FTF Inova's Challenge Fund initiative -- were, namely: developing a traceability system to improve the supply chain management for the supply of domestic agricultural products and expanding the Product Distribution Network of locally grown products.

- **Developing a traceability system to improve the supply chain management for the supply of domestic agricultural products.** FTF Inova grantee, Agrimel, leveraged matrix barcode technology to develop a system for tracing products while simultaneously adding value through personally connecting customers to the people benefitting from their purchase. Under Agrimel's system, beekeepers are assigned an individual QR code that is then attached to a bottle of honey. Upon scanning the code, customers are directed to a [web page](#) that provides information about the beekeeper such as how much honey s/he harvested for the season and what his/her direct income was from the honey. Currently, Agrimel has engaged 232 beekeepers under this initiative and expects to expand to 450 in the next five years.

Now fully completed, the system is now being actively promoted. Agrimel reports an exceptionally positive response from customers and is now negotiating a distribution agreement with Mozambique Honey Company (MHC) for market access such that MHC's new production comes from Agrimel's beekeepers. Because MHC is looking for a honey supplier in northern Mozambique, the agreement will allow Agrimel to take advantage of the opportunity while simultaneously optimizing an existing MHC distribution channel.

- **Expanding the Product Distribution Network of the locally grown products.** FTF Inova grantees So Soja and Agro Servicos, two processing firms facing similar product distribution challenges, each acquired 3-ton refrigerated trucks with direct FTF Inova support to facilitate distribution of their products and to expand into more locations including other provinces. With these trucks, SoSoja expects to double its production and reduce its losses (So Soja had been reporting losses at 25% mark with limited transportation equipment) while Agro Servicos expects to triple its production; overall, both SMEs now have the capacity to expand their distribution network, thereby increasing sales while strengthening the processing and consumption of locally produced products. Ultimately, this new capacity would contribute to reducing the negative impact on food value chains brought on by the pandemic while enabling Mozambicans to access organic/natural food products for which there is a growing demand among average to high income groups.

**Amplify the successful innovations promoted by FTF Inova, particularly related to the Challenge Fund.** In addition to delivering on the Challenge Fund, FTF Inova also directed significant efforts during the NCE period towards amplifying successful innovations identified throughout the life of the project, particularly those achieved under the Challenge Fund, in order to drive replication across Mozambique's agricultural system and disseminate learning for stakeholders.

- **Challenge Fund video.** FTF Inova produced a video elucidating how a challenge fund, like FTF Inova's Challenge Fund, can benefit enterprise development while also strengthening private sector resilience to shocks and stresses. As the amplification and dissemination of lessons learned throughout the project are an important implementation strategy for FTF Inova to catalyze changes in Mozambique's market systems, much like FTF Inova's efforts developing businesses cases, producing the video is an important achievement.
- **Challenge Fund workshop.** FTF Inova held an experience exchange workshop that created space for Challenge Fund grantees to share their own journey, experiences, and practical recommendations for similar future initiatives and for stakeholders to access Challenge Fund grantees and gain first-hand insights on challenge fund mechanisms. Participants learned about the usefulness of FTF Inova's Challenge Fund with respect to making funds quickly available for SMEs to develop their own innovative ideas to face immediate shocks and stresses; the need to establish constant communication among Challenge Fund participants to enable them to explore synergies and exchange market information and products; and the need for future programs to focus on developing start-ups,



particularly those that are women-owned. In an approximately ten-month period, alongside the direct funding available through the Challenge Fund, grantees have made their own significant investments to boost their innovations resulting in a return on the investment from the Challenge Fund of about 21 percent so far. With this profitability level, FTF Inova is convinced that investments in challenge fund mechanisms are worth making.

- **MSDN Workshop: Tailoring workforce and business development services in Mozambique.** To demonstrate not only the innovation of leveraging the educational system as it pertains to Mozambique’s agricultural system, but to also show the benefits of doing so, FTF Inova organized an MSDN workshop, entitled “*Strengthening agriculture support services in Mozambique through the academic curriculum*”. At the workshop, FTF Inova shared its experience with tailoring academic curriculums to better serve the agriculture sector, investing in coaching student interns, showing the value of integrating agriculture-oriented practical training modules, and demonstrating the potential for simultaneously generating income for universities while expanding students’ skills and their career opportunities. There are opportunities for developing tailored, sustainable, market-driven, and low-cost support services to the agriculture sector with limited investment -- for example those leveraging the education sector -- and the agriculture sector is willing to engage with higher education institutions. This is a win-win situation. Moreover, general support services should not only cater to medium or large firms but also micro and small businesses that have limited capacity to grow but a voracious appetite to do so. Finally, support services can and should go beyond businesses, targeting the smallholder as well. Support services can teach smallholders production economics that lead to better farming decisions. In three years, more than 100 students have benefitted from the internship programs at three universities that have partnered with FTF Inova. 32 are now employed, of which 13 have become entrepreneurs.

#### **Monitor and gather evidence and assess early signs of impact from the Challenge Fund initiative and mainstream activities.**

- **VBAs contribute to increasing sales volumes through input distribution.** FTF Inova continued to track the impact of its interventions during the NCE period and data has shown that some interventions have the potential to continue increasing sales volumes for input distributors and increasing access to certified seeds and inputs to SHFs. For example, through investments made by K2 in partnership with FTF Inova, the following changes have been realized: 1) Whereas K2 mainly relied on winning tenders in order to sell its seeds prior to partnering with FTF Inova, after partnering with FTF Inova, K2 is enjoying a more diversified distribution with VBAs and agrodealers now accounting for 45-55 percent of its sales of seeds; 2) There is evidence of some VBAs having developed to the level of agrodealers, establishing their own VBAs. For instance, in Manica Province, K2 established a network of 30 agrodealers with each having about ten VBAs, a position K2 was not in before its partnership with FTF Inova. Moreover, the success of this structure established in Manica is encouraging K2 to expand it to Nampula Province.
- **A Mozambican ICT-based Logistics Management System has gained international recognition.** AppLoad was among 20 start-ups selected for the Norrsken Impact Accelerator program in Switzerland, which aims to find the most promising impact start-ups to invest in and help scale. AppLoad has now managed to establish operations in the Mozambican and South-African logistics corridors, working with 250 different transporters. Successful access to the Norrsken Impact Accelerator program signals to other Mozambican start-ups that they too can successfully grow their businesses and galvanize outside investments and recognition on a global scale for their innovative ideas. The case of AppLoad proves that locally tailor-made solutions can not only be recognized globally, but can bring investment into the local market. For further reading please refer to <https://clubofmozambique.com/news/mozambiques-appload-among-20-startups-selected-for-norrsken-impact-accelerator-218438/>
- **VBAs and buyers’ clubs expand the seed distribution network.** Improving relationships and strengthening input distribution through VBAs and buyers’ clubs is a tactic FTF Inova and its input

distribution partners have used to guarantee access to inputs at the last mile. FTF Inova partner Oruwera continued to invest in these tactics during the NCE period and even marketed the business case with a special target on the women's market segment. Oruwera sourced funding to support four women's groups with receiving post-harvest processing machines for shelling maize and groundnuts to increase women's incomes. With Oruwera's ultimate goal as strengthening its distribution network through improving relationships with its customers at the last mile, SHFs will be exposed to more and more certified seeds from Oruwera.

- **Conduct FTF Inova's final performance evaluation of the project.** FTF Inova conducted its final performance evaluation, which aimed at investigating what mechanisms of change FTF Inova and its partners facilitated as well as how and why they worked (or did not). The goals of the evaluation were to determine the relevance and level of achievement of project objectives, understand what worked, and why and how, inform new USAID activities like RESINA and PREMIER, and share learning with other stakeholders, including donors and the Government of Mozambique to influence decision-making processes.

## **Management and Operations**

During the NCE period, the operations team continued supporting project implementation by providing the following procurement support, outline below.

### **Agro Servicios In-Kind Grant**

- *Purchase of Refrigerated truck.* FTF Inova purchased and delivered a refrigerated truck to Agro Servicios, which will enable the partner to transport increased volumes of its frozen products.
- *Purchase of Refrigerated Container.* FTF Inova purchased and delivered a refrigerated container to support the partner in its productive processes.

### **So Soja In-Kind Grant**

- *Refrigerated truck.* FTF Inova purchased and delivered a refrigerated truck to So Soja that will enable the partner to expand its distribution network outside Chimoio and therefore increase sales.

### **Agrimel In-Kind Grant:**

- *Website and traceability system.* FTF Inova concluded the procurement and delivery of the website and traceability system.

## **Performance Indicators**

Overall, FTF Inova has met the majority of its targets set for FY 2022. Progress on key performance indicators from Q1 to Q3 FY 2022 is summarized in the table below. However, it is worth noting that the access to finance has always been one of the critical areas in agricultural development. Only AgroServicos has secured 600,000 MZN from other sources. While other firms are in the process of accessing finance. Prodeca is expecting to secure 197,809 Euros from the King Baudouin Foundation and 13,650,581.50 MZN from MozaBanco. The expected financial support to Adicional, ETG and Prodeca has not happened yet and consequently, this target was not met in the reporting period.

Number	Indicator	Target FY 2022	Q1-Q3 Results FY 2022 (cumulative)	% Achievement
GNDR-2	Percentage of female participants in USG-assisted programs designed to increase access to productive economic resources	39%	36% 4,462 female/12,394 participants	92%
YOUTH-3	Percentage of participants in USG-assisted programs designed to increase access to productive economic resources who are youth (15-29) [IM-level]	30%	31% 4,255 youth/12,394 participants	+102
EG.3.1-14	Value of new USG commitments and private sector investment leveraged by the USG to support food security and nutrition [IM-level]	145,408	144,885	100%
EG.3.2	Number of individuals participating in USG food security programs.	109,235	107,924	99%
EG.3.2-24	Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance	65,758	67,146	+102%
EG.3.2-25	Number of hectares of land under improved technologies or management practices with USG assistance	72,045	70,852	98%
EG.3.2-26	Value of annual sales of farms and firms receiving USG assistance [IM-level] -Value	11,983,777	10,871,546	90%
EG.3.2-27*	Value of agriculture-related financing accessed as a result of USG assistance [IM-level]	402,251	11,393	3%
Custom Indicator #3	Number of farmers who have a new/improved commercial relationship with partner firms	106,577	103,311	97%
Custom Indicator #4	Number of FTF Inova partner firms who have new/improved commercial relationships with other firms	25	23	92%

\*Not Achieved

# 8 Looking Ahead: “After Inova”

## *Where FTF Inova leaves things, and the evolutionary path forward*

A variety of our agribusiness partners have embedded tactics for long-term growth into their business models, though the results of those investments may be evident only in two to three years with a potential to reach about 250,000 farmers. At the same time, FTF Inova leaves when the project is most needed, i.e. when the partners now understand the importance of being inclusive and customer centric - seeing for themselves why the MSD approach works and how they can grow and change with it. The performance of FTF Inova throughout the years is summarized in the Annex 1. Some FTF Inova partners may benefit from supplemental support to fully and more quickly realize the benefits of their innovations and reach the “tipping point” where firm-level changes catalyze system-level change and sustain over time. In any case, we leave fertile ground for replication by others.

## **Opportunities**

There remain some promising opportunities going forward. Indicative ideas where bespoke technical assistance could be useful include:

- Input distributors create or expand networks within communities using VBAs, agrodealers and buyer’s clubs. TA support via communication and promotion of incentives to facilitate access of inputs by the smallholder farmer at the last mile.
- Replication of proven innovations if new programs entrants do not ‘intervene’, but continue acting as facilitators, leaving the private sector to lead and own the process.
- Support companies that have shown willingness to adopt innovations and adapt to access the expertise/investments they need to go to the next level.
- Continue work with support service providers as they are still shy to invest in agricultural sector - marketing, academia, logistics and finance - to testing affordable services to the agriculture sector and demonstrate how profitable the sector can be.
- Continue to support companies/leave them with internal capacity to monitor the investments they made and understand customer feedback

## **Recommendations for future programming**

- **Embed co-creation** (design, implement, monitor, learn) with key market actors in agricultural system.
  - FTF Inova’s Partnership Facility encouraged innovation by agribusinesses
  - Deal notes were more flexible/appropriate than subcontracts/grants in many cases.
- **Continue applying the flexible Probe-Measure-Respond MEL approach**, which enabled us to adapt and scale where there was traction; freed us from focusing on proving an upfront TOC, but challenged us to reflect on the portfolio and learn with USAID and our partners and provided evidence to justify ‘walking away’ from disappointing probes.
- **Build business cases for innovations grounded in evidence of sustainability**, that got our partners to not only reflect on the skin they put in the game but helped inform how they and others could transform/scale their business.
- **Consider the norms and networks** that influence how market actors operate **and the drivers of innovation**. Monitor norms and networks you hope to shift positively (like trust, cooperation, innovation, commercial relationships, etc.) for intended and unintended consequences.

## Risks

### 1. Overlooking symbioses between grassroots and large businesses

There is an impulse in some circles to put greater focus of development sector programming on local, grassroots businesses for sustainability, inclusiveness and deeper economic growth. How that is done is important as it raises risks (associated with capacity, business management skills, access to finance, etc.) along with questions of scaling, value for money and others. Impact at scale is expensive and we found that securing the sustainability of impact over time lies in mutual incentives, co-creation and investment. Large local and international companies are not *by definition* the ‘enemy’ of grassroots businesses. Our experience shows that bigger players have more capital, have scale ‘built in’ across their businesses and seek to grow their supply chains. Grassroots players can help them do that. Neglecting or overlooking that symbiosis is a risk to any future program focusing on grassroots business. Facilitating co-creation - where both ‘sides’ devise and invest in innovations - buys down the risk and increases the likelihood that the innovations/market changes will persist over time.

“Smaller firms may not have the leverage to impact hundreds of thousands of households, but they may be nimbler, and swifter to innovate. Larger firms are sometimes more bureaucratic and slower to change, but they also have more resources at their disposal and greater influence on other market actors. The partnerships where we spend most of our money can still fail, and light-touch activities can lead to unexpected impact. Failures can open new doors with partners we couldn’t access before.” – Partnering with the Private Sector to Solve Complex Problems: Some observations about private sector engagement in Thin Markets, DAI blog Feb 6, 2021

### 2. Treating SHFs only as farmers, not as small businesses is a risk to inclusivity and sustainability

Historically, SHFs in Mozambique have farmed for subsistence. This is at least in part because they have been excluded from many market systems. We found that when SHFs come to see farming not only as a necessity, but as an *enterprise* that can improve their livelihood, they operate differently. By doing so, input suppliers and output buyers then are more willing to treat SHFs as viable partners and customers. Subsidy or giveaway approaches often used by development projects and government can put in jeopardy FTF Inova hard-won achievements by removing sustainable commercial incentives for SHFs and companies, deleveraging partners’ investments of time and capital.



# Annex I – Performance Indicator Table

During FY 2022, FTF Inova has met most targets set for the project. The progress on key performance indicators in FY 2021 is summarized below.

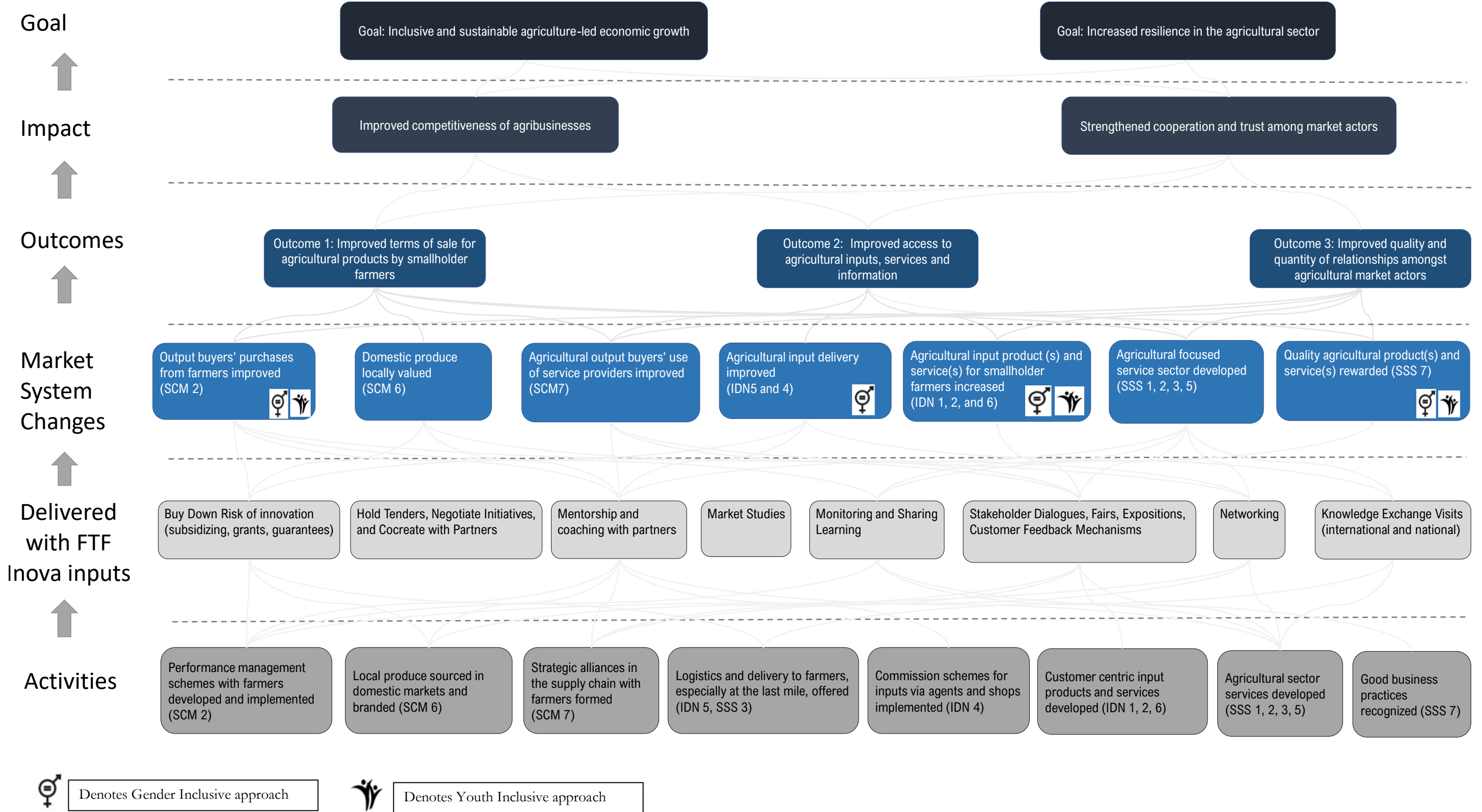
Number	Indicator	FY 2018	FY 2019	FY 2020	FY 2021	Q1 FY 2022	As of FY 2017 Cumulative Achieved
GNDR-2	Percentage of female participants in USG-assisted programs designed to increase access to productive economic resources	N/A	33% 280 females / 851 total participants	28% 1,792 females 6,387 participants	37% 1,997 females/5,440 participants	36% 4,462 female/12,394 participants	34% 7,277 females/21,402 participants
YOUTH-3	Percentage of participants in USG-assisted programs designed to increase access to productive economic resources who are youth (15-29) [IM-level]	N/A	20% 169 youth/ 851 total participants	15% 965 youth 6,397 participants	20% 1,093 youth/5,455 participants	31% 4,255 youth/12,394 participants	22% 1,708 youth/21,402 participants
EG.3.1-14	Value of new USG commitments and private sector investment leveraged by the USG to support food security and nutrition [IM-level]	N/A	\$1,227,242	\$3,063,462	\$769,755	\$144,885	\$5,782,918
EG.3-2	Number of individuals participating in USG food security programs.	N/A	19,132	24,289	116,561	107,924	175,357
EG.3.2-24	Number of individuals in the agriculture system who have applied improved management practices or technologies with USG assistance	3,789	13,713	22,291	68,852	67,146	109,396
EG.3.2-25	Number of hectares of land under improved technologies or management practices with USG assistance	2,215	16,867	23,322	58,131	70,852	103,250

Number	Indicator	FY 2018	FY 2019	FY 2020	FY 2021	Q1 FY 2022	As of FY 2017 Cumulative Achieved
EG.3.2-26	Value of annual sales of farms and firms receiving USG assistance [IM-level] - Value	N/A	\$28,934,173	\$17,212,229	\$9,746,235	\$10,871,546	\$66,764,183
EG.3.2-27	Value of agriculture-related financing accessed as a result of USG assistance [IM-level]	N/A	\$210,650	\$6,445,901	\$680,799	\$11,393	\$7,138,093
Custom Indicator #3	Number of farmers who have a new/improved commercial relationship with partner firms	N/A	N/A	15,850	65,442	103,311	184,603
Custom Indicator #4	Number of FTF Inova partner firms who have new/ improved commercial relationships with other firms	69	28	54	88	23	139

## Annex 2 – Emergent Theory of Change

On the following pages, FTF Inova presents the theory of change graphics developed to explain the emergent causal linkages related to partnership innovations. The first graphic presents probe intervention activities, what FTF Inova contributed as part of co-creation with partners to the innovations, the market system changes (rather than intermediate results), and the overall outcomes and related impacts. The second graphic is the theory of change narrative, which explains the logical connections in FTF Inova’s theory of change, given its use of an MSD approach. The presentation and format of the narrative draws on [USAID LEO’s guidance for understanding system dynamics and change](#), as well as theory of change narratives used by other MSD programs for other donors.

FTF Inova's Emergent Theory of Change Graphic with Market System Changes



# FTF Inova's Emergent Theory of Change Narrative

Boundary: Agricultural Market System in Mozambique

## History & Conditions

Dispersed and remote farmers in the agricultural market system have meant that smallholder farmers have little choice of whom to sell their products to. These farmers also have little or no market intelligence and often have low use of inputs, low volumes of the right quality produce, receive low farm gate prices, and ultimately make little profit. Meanwhile, business practices of output buyers have tended to be exploitative with traders negotiating exclusively on prices (not on quality of produce or supplier loyalty). Therefore, smallholder farmers do not invest in improving yields and quality produce because there is limited to no formalized, stable market relationships with them that enable or incentivize them. Mozambique is also routinely affected by natural climatic disasters, like cyclones and flooding. Finally, the Mozambican agricultural markets are also "thin", with few or nonexistent supporting services to enable more sustainable and inclusive business strategies to work with smallholder farmers.

## Activities (What FTF Inova Supports)

FTF Inova engages with potential partners to identify and refine innovative business ideas that have the potential to transform the market system, as well as identify entry points for women and youth for opportunities in selected markets. With market actors, we identify opportunities for upgrading agricultural products and services and analyze the risks perceived by the participants in the market systems. Activities are organized by the three portfolios below.

**Supply Chain Management (SCM):** FTF Inova engages with output buyers (like international exporters of agricultural produce and products and domestic retailers like supermarkets) to strengthen the quality and quantity of ag produce through relationships with smallholder farmers and service providers.

**Input Distribution Network (IDN):** FTF Inova engages with input supply manufacturers, distributors, and retailers to improve delivery of agricultural products and services, tailored to the needs of smallholder farmers.

**Support Service Systems (SSS):** FTF Inova engages with supporting actors (ie, marketing firms, Universities, logistics, ICT firms, radios, etc.) to develop options for delivering services to the agricultural sector.

## Inputs (How FTF Inova Supports)

FTF Inova facilitates change primarily through co-creation activities with market actors. This entails co-investment of time and resources from partners. Some partners receive support from FTF Inova for their activities through the buying down of risks of innovation (either through subsidies, grants or guarantees). Other partners receive support from FTF Inova in the form of contracting specialized assistance for them, mentoring or coaching them, conducting market studies for them, helping them monitor and share their learning or improve customer feedback, facilitating their networking, or encouraging knowledge exchange visits for them (within and outside of Mozambique). FTF Inova also invests in stakeholder dialogues, fairs, and expositions as public means of improving collaboration and trust between market actors.

## Market System Changes (The Disruption in the Market System Dynamics facilitated by FTF Inova)

FTF Inova measures progress of innovation by the changes in norms, rules, linkages between actors and access to infrastructure or services facilitated in the system. These market system changes are often driven by improving incentives, capacity, relationships and ownership of FTF Inova partners and smallholder farmers. Significant systemic changes achieve scale through either depth (important changes in norms or networks) and/or strength (number of people changing their behavior or attributes, number of system actors buying in, or relevance of changes to the goal). Below we summarize the hypotheses for scale of market system changes shown in our TOC.

SCM: Output buyers will begin to invest in sourcing systems from suppliers to aggregation to transport to retail. Output buyers will reward performance, quality, traceability and loyalty from farmers. Output buyers will also invest in purchase systems from farm-gate to retailers that match quality specifications per standards and rules.

IDN: Input supply manufacturers, distributors, and retailers will change their business strategies to be more customer-oriented and invest in delivering increased volumes of inputs, especially at the last mile with remote farmers.

SSS: Service providers effectively will develop, market, and brand their products and services tailored for the needs of the agricultural sector. The "thin" agricultural market becomes more robust.

## Impact: Improved competitiveness of agribusinesses

Market systems are more competitive when market actors can adapt effectively to sell products that meet demand requirements (price, quality, quantity) and, at the same time, ensure profits over time that enable market actors in the system to thrive. We do not define competitiveness simply by the number of market actors, but by how well the market actors are able to face competition, incrementally innovate their business models, and be successful when facing competition.

The competition that entrepreneurs face may be within local or domestic markets (in which case firms, or sectors, in the same districts or country are compared with each other) or within more international markets (in which case Mozambique would be compared with other countries in the region or across the globe). In Mozambique this is primarily related to price, with other areas of competition (for example customer service, or quality of product) are less prevalent.

FTF Inova posits that as market actors employ more customer-centric approaches—thereby strengthening their commercial relationships by deeply understanding customer needs and fulfilling them better than others—they will gain more of a competitive advantage, and importantly this will be in areas other than purely price. This will encourage other market actors to copy and crowd in, and will drive competition within product quality and customer service levels.

## Impact: Cooperation and Trust Among Market Actors

Mozambican commercial relationships are primarily driven by price. This is a low risk strategy, but does not encourage investment in value addition within the market. FTF Inova works to increase trust as a way of incentivizing investments in relationships which are driven by belief in another's competency, integrity, and reliability. FTF Inova also seeks to create more cooperative relationships between producers and buyers to increase value in the market, and therefore incomes and profits for businesses and farmers.

This is particularly important, given that most agricultural products in Mozambique are low value. There are a few medium-size and large traders who compete with producers solely over price. However, they do not invest in producers to get higher value products that could increase profits because of the inherent risk of the relationships based on the lack of trust and cooperation, for example the prevalence of side selling.

FTF Inova is seeking durable, increased cooperation between functional levels of the selected agricultural market systems to increase the production of higher value products and services that will increase incomes for both producers and output buyers. As innovations occur and commercial relationships strengthen, FTF Inova posits that market actors will increasingly upgrade their operations by using improved products, services, and practices.

## Development Impacts on Targets Populations

FTF Inova targets facilitating change for smallholder farmers and, in particular, females and youth in the Agricultural Market System.

At the agent level, the capacity building of market actors to improve their services, their quality of products, and prices will directly benefit SHFs.

At the collective level, higher competition will lead to greater diversity of business models, which will increase diversity of products, price-points and levels of service. Improving trust and cooperation will facilitate investment in relationships between market actors, again improving services and products, but also improving the relationships market actors have with SHFs directly.

## Outcomes

As a direct result of agent level interventions, FTF Inova expect the following three outcomes linked with farmers and firms.

Smallholder farmers will have access to markets, know the demand, meet quality and quantity expectations, and reliably sell to off-takers investing in them (not side-selling). This results in improved terms of sale for agricultural products by smallholder farmers.

Agribusiness improvements (in logistics, transport, finance, marketing, and ICT) will improve smallholder farmers' access to agricultural inputs, services and information. The improved access will improve the productivity of smallholder farmers.

An increase in formalized relationships of agribusinesses with smallholder farmers, in business orientation towards the smallholder farmer segment, and in loyalty between buyers and sellers, will improve the quality of relationships amongst agricultural market actors, as opposed to spot transactions. In the thin agricultural market system, the quantity of relationships (in terms of connections between market actors especially in the service sector supporting agribusiness) is also key for achieving transformative scale in the agricultural system for smallholder farmers.

## Goals

At a systems level, FTF Inova seeks to promote systemic evolution towards two goals (inclusive growth and resilience). Agriculture-led economic growth in Mozambique is critical to reducing poverty and hunger. As market actors become more productive and competitive, market system functions will expand and generate opportunities to integrate new market actors and improve the terms in which existing actors participate. As market systems become more inclusive, FTF Inova posits that strengthened relationships in the agricultural market system (both new and improved) with traditionally marginalized actors will endure, even in the face of shocks and stresses, if they are formed on mutually beneficial gains.

Depth of changes

Strength of changes

## Annex 3 – Reports and Information Products

#	Document Title	Document Type	Publication/USA ID Approval Date	DEC Submission Date	Document ID	Record URL
1	Feed the Future Mozambique Agricultural Innovations Activity - Quarterly Report (February 22 through June 30, 2017)	Periodic (Quarterly) Report	July, 2017	8/30/2017	PA-00M-XPC	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk0MTEw">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk0MTEw</a>
2	Feed the Future Mozambique Agricultural Innovations Activity - Year I Work Plan	USAID Program Planning Document	May, 2017	8/30/2017	PA-00M-XPB	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk0MTA5">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk0MTA5</a>
3	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - VALUE CHAIN WORK PLAN, August 2017	Project/Program/Activity Design Document	10/2/2017	10/6/2017	PA-00N-214	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTIz">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTIz</a>
4	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Cashew Strategy Summary	Project/Program/Activity Design Document	9/27/2017	10/6/2017	PA-00N-215	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI0">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI0</a>
5	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Groundnut Strategy Summary	Project/Program/Activity Design Document	9/27/2017	10/6/2017	PA-00N-216	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI1">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI1</a>
6	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Input Market Strategy Summary	Project/Program/Activity Design Document	10/2/2017	10/6/2017	PA-00N-217	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI2">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI2</a>
7	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Sesame Strategy Summary	Project/Program/Activity Design Document	9/27/2017	10/6/2017	PA-00N-218	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI3">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk1OTI3</a>



8	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Pigeon Pea Strategy Summary	Project/Program/Activity Design Document	10/18/2017	10/23/2017	PA-00N-2XZ	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk2Njcl">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk2Njcl</a>
9	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) – Collaborating, Learning, and Adapting (CLA) Plan	Project/Program/Activity Design Document	11/6/2017	11/6/2017	PA-00N-3VD	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk3Mzg3">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk3Mzg3</a>
10	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Manica-Sofala Rapid Market Assessment	Assessment	11/14/2017	11/14/2017	PA-00N-4CI	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk3NzY4">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk3NzY4</a>
11	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Value Chain Analysis	Assessment	11/14/2017	11/15/2017	PA-00N-4DT	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk3ODE5">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk3ODE5</a>
12	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Year One Annual Report (FEB. 22 – SEP. 30, 2017)	Annual Report	12/4/2017	12/5/2017	PA-00N-5J6	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk4Njk3">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk4Njk3</a>
13	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Year I Gender Action Plan	Project/Program/Activity Design Document	12/21/2017	12/22/2017	PA-00N-6TK	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk5NzE2">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=Mzk5NzE2</a>
14	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova): Monitoring, Evaluation, and Learning (MEL) Plan	Project/Program/Activity Design Document	1/31/2018	2/1/2018	PA-00S-RSB	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTAwMDMz">https://dec.usaid.gov/dec/content/Detail.aspx?ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTAwMDMz</a>
15	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Quarterly Report: October 1-December 31 2017	Periodic Report	2/2/2018	2/8/2018	PA-00S-S9I	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTAwNDE2">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctlID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTAwNDE2</a>

16	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Quarterly Report: January 1-March 31 2018	Periodic Report	5/7/2018	5/8/2018	PA-00T-21S	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTAI NzAy">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTAI NzAy</a>
17	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Baseline Report May 2018	Project/Program/Activity Design Document	6/4/2018	6/7/2018	PA-00T-4M9	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTA3 NzMy">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTA3 NzMy</a>
18	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Grants Under Contract Manual June 2018	Project/Program/Activity Design Document	6/26/2018	7/18/2018	PA-00T-72P	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTA5 NjQ3">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTA5 NjQ3</a>
19	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Quarterly Report: April 1-June 30, 2018	Periodic Report	9/21/2018	9/21/2018	PA-00T-BC2	<a href="https://dec.usaid.gov/dec/content/Detail_Presto.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTEyMjMz">https://dec.usaid.gov/dec/content/Detail_Presto.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTEyMjMz</a>
20	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova): Findings from a Qualitative Study on Gender Norms in Farming, Input Use, and Distribution in Manica Province	Assessment	8/28/2018	11/6/2018	PA-00T-D59	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTEz NjQw">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTEz NjQw</a>
21	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova)- Annual Report (October 1, 2017–September 30, 2018)	Annual Report	11/21/2018	11/21/2018	PA-00T-DMX	<a href="https://dec.usaid.gov/dec/content/Detail_Presto.aspx?ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE0MDly&amp;inr=VHJI ZQ%3d%3d&amp;dc=YWRk&amp;rrtc=VHJI ZQ%3d%3d&amp;bckToL=">https://dec.usaid.gov/dec/content/Detail_Presto.aspx?ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE0MDly&amp;inr=VHJI ZQ%3d%3d&amp;dc=YWRk&amp;rrtc=VHJI ZQ%3d%3d&amp;bckToL=</a>

22	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova)- Annual Work Plan (October 1, 2018–September 30, 2019)	USAID Program Planning Document	1/16/2019	1/17/2019	PA-00T-H57	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE1OTkw">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE1OTkw</a>
23	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Quarterly Report (October 1, 2018–December 31, 2019)	Periodic Report	2/4/2019	2/7/2019	PA-00T-HWV	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE2NTk2">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE2NTk2</a>
24	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova): Final Technical Report on the Assessment of Consumer Demand for Raw Peanuts	Assessment	4/3/2019	4/4/2019	PA-00T-MJI	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE4NjQ0">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE4NjQ0</a>
25	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Quarterly Report (January 1, 2019–March 31, 2019)	Periodic Report	5/6/2019	5/6/2019	PA-00T-NWF	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE5Nzlw">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTE5Nzlw</a>
26	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova): Monitoring, Evaluation, and Learning (MEL) Plan (June 4, 2019)	Project/Program/Activity Design Document	6/4/2019	6/4/2019	PA-00T-QF4	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTIwOTEI">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTIwOTEI</a>
27	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Quarterly Report (April 1, 2019–June 30, 2019)	Periodic Report	28-Aug-19	9/4/2019	PA-00T-XRZ	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTIiODkI">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTIiODkI</a>
28	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Annual Report (October 1, 2018–September 30, 2019)	Annual Report	12/26/2019	12/26/2019	PA-00W-9SN	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTUjNzA2">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTUjNzA2</a>

29	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova)- Annual Work Plan (October 1, 2019–September 30, 2020)	USAID Program Planning Document	1/9/2020	1/30/2020	PA-00W-CMB	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTU3MTII">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTU3MTII</a>
30	Expanding the Agri-Inputs Market By Targeting Female Farmers	Miscellaneous Document		2/10/2020	PA-00W-DSS	<a href="https://dec.usaid.gov/dec/content/Detail_Presto.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTU4MDYy">https://dec.usaid.gov/dec/content/Detail_Presto.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTU4MDYy</a>
31	EXPANDINDO O NEGÓCIO DE INSUMOS ATRAVÉS DA INCLUSÃO DE MULHERES AGRICULTORAS	Miscellaneous Document		2/10/2020	PA-00W-DST	<a href="https://dec.usaid.gov/dec/content/Detail_Presto.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTU4MDYz">https://dec.usaid.gov/dec/content/Detail_Presto.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTU4MDYz</a>
32	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - AID-656-C-17-00001BRANDING AND MARKING PLAN	Miscellaneous Document	4/20/2020	4/22/2020	0dba53e9-8fbe-4cdd-841b-47ff17f44edc	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYxMDQx">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYxMDQx</a>
33	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) Quarterly Report (October 1–December 31, 2019)	Periodic Report	6/1/2020	6/10/2020	PA-00W-P9G	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYzOTMz">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYzOTMz</a>
34	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova)- Annual Work Plan (October 1, 2019–September 30, 2020) (REVISED)	USAID Program Planning Document	6/7/2020	6/10/2020	PA-00W-P9J	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYzOTMI">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYzOTMI</a>

35	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) Quarterly Report (January 1–March 31, 2020)Maputo, April 2020	Periodic Report	Jul-20	21-Jul-20	PA-00W-QQV	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYlMDY0">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTYlMDY0</a>
36	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) Quarterly Report (April 1-June 30, 2020)	Periodic Report	7/30/2020	12/29/2020	PA-00X-5R6	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc0NDgx">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc0NDgx</a>
37	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) Annual Work Plan (October 2020 - September 2021)	USAID Program Planning Document	11/29/2020	12/31/2020	PA-00X-5VF	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc0NTcy">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc0NTcy</a>
38	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Annual Report (October 1, 2019–September 30, 2020)	Annual Report	12/3/2020	3/11/2021	PA-00X-BN7	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc4MzE4">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc4MzE4</a>
39	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) FY2021 Q1 Quarterly Report (October 1 – December 31, 2020)	Periodic Report	3/13/2021	3/15/2021	PA-00X-BV7	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc4NDg2">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc4NDg2</a>
40	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova): Monitoring, Evaluation, and Learning (MEL) Plan (Revised October 2020)	Project/Program/Activity Design Document	3/2/2021	3/31/2021	PA-00X-CRS	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc5MjAy">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTc5MjAy</a>



41	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) FY2021 Q2 Quarterly Report (January 1 - March 31, 2021)	Periodic Report	6/7/2021	6/18/2021	PA-00X-JBT	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTgyNzg3">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTgyNzg3</a>
42	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) FY2021 Q3 Quarterly Report (April 1-June 30, 2021)	Periodic Report	9/18/2021	9/28/2021	PA-00X-TQI	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTg5MzQ0">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTg5MzQ0</a>
43	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) - Annual Report (October 1, 2020–September 30, 2021)	Annual Report	11/29/2021	12/23/2021	PA-00Z-3DV	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk0NjA0">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk0NjA0</a>
44	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) FY2022 Work Plan	USAID Program Planning Document	11/29/2021	2/8/2022	PA-00Z-66X	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk2Nzkw">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk2Nzkw</a>
45	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) Closeout Flyer	USAID Project/Program Overview	1/26/2022	2/21/2022	PA-00Z-6XT	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk3Mzc1">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk3Mzc1</a>
46	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) Closeout Presentation	USAID Project/Program Overview	1/26/2022	2/21/2022	PA-00Z-6Z2	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk3Mzgx">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NTk3Mzgx</a>
47	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) FY2022 Q1 Quarterly Report (October 1 - December 31, 2021)	Periodic Report	4/6/2022	5/6/2022	PA-00Z-BMT	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAwMjU5">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAwMjU5</a>

48	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova): Monitoring, Evaluation, and Learning (MEL) Plan (Revised April 2022)	Project/Program/Activity Design Document	4/30/2022	5/6/2022	PA-00Z-BNB	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAwMjcz">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAwMjcz</a>
49	Work Plan for the Non-Cost Extension Period (February 22 - June 30, 2022)	USAID Program Planning Document	1/31/2022	6/23/2022	PA-00Z-DWH	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAyMDOy">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAyMDOy</a>
50	Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova) FY2022 Q2 Quarterly Report (January 1 – March 31, 2021)	Periodic Report	5/24/2022	6/23/2022	PA-00Z-DWJ	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAyMDOz">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAyMDOz</a>
51*	Stocktaking Report on FTF Inova Mozambique: Progress in Achieving Impact at Scale	Analytical Report	12/1/2019	6/23/2022	PA-00Z-DWK	<a href="https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAyMDQ0">https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&amp;ctID=ODVhZjk4NwQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&amp;rID=NjAyMDQ0</a>

\*Not a contractual deliverable

# Annex 4 – Financial Report

# Annex 5 – Glossary of Terms

**Agricultural market system** – a market system is an interconnected set of actors (individuals and organizations) that exchange products, goods, or services. In an agricultural market system, actors are involved in producing, transforming, distributing, and/or consuming products and goods or providing services that enable their ability to do so.

**Business innovation** – a new or changed practice, product or service used by partners.

**Deal Notes** – Deal Notes are the instruments used to progressively reach shared strategic objectives and come complete with intervention monitoring plans (IMP), learning objectives, a budget, and an implementation plan. FTF Inova used each Deal Note to structure the operational and administrative actions—such as procurement, consultancies, subcontracts, and grants—it used to implement its activities. When potential partnerships become more complex (needing more than our technical assistance) and require co-investment from the partner, FTF Inova and its partners formalize these activities through Deal Notes.

**Market actors** – principally input suppliers, output buyers and service providers. There are many subcategories and additional characterizations of market actors as shown in our mapping of the roles of actors in the agricultural market system.

**Market Actor Partner Agreements (MAPA)** – All partnerships with market actors are governed by a memorandum of understanding (MOU) that articulates collaboration on an activity related to market systems change and include probes. An MOU is sufficient for testing partners and probes for quick activities that only include technical assistance. FTF Inova called them “MAPAs” to stress the partnership.

**Partners** – firms or organizations that signed a memo agreeing to co-create with FTF Inova.

**Portfolio** – the collection of innovations FTF Inova invested in, organized by sub-system for management and achievement of FTF Inova development goals.

**Probe** – a rapid and flexible way to explore possible pathways to improving market system performance.

Each probe is both a concrete change, as well as an opportunity for structured learning. More specifically, a probe is comprised of three elements: 1) a potentially catalytic innovation, such as a new product, service or business practice adopted by a market actor; 2) a co-creation process of how FTF Inova defines and adapts the innovation together with the partner market actor; 3) the learning objective attached to the innovation, geared towards measuring sustainability over the long-term, the value delivered to SHFs, and potential to scale in the market.

**Sub-systems** – these per the Agricultural Market Systems Change Wheel are five. Core market sub-systems include: (1) Input Distribution and (2) Supply Chain Management. Sub-systems that act as counterbalances & reinforcements to change that takes place in the core market sub-systems include (3) the agricultural support services systems, (4) business services systems, and (5) other interconnected systems). FTF Inova in year 3 consolidated the latter (3, 4, and 5) into one sub-system “Supporting Services”.

**Scale Agents** – A scale agent is an organization that mobilizes, supports, aligns, and/or coordinates the efforts of individuals, firms, and institutions across a market system.