

The logo for MOTHERLAND, featuring the word "MOTHERLAND" in a bold, black, sans-serif font. A small blue circle is positioned to the right of the text, partially overlapping the letter "D".

**MOTHERLAND**

A photograph of a smiling man in a light blue shirt and a cap, standing in a field with young plants. He has his arms raised in a gesture of welcome or excitement. The background shows a line of trees under a clear blue sky.

# Welcome to MOTHERLAND

Connecting African startup solutions and farmers to eliminate holistically and sustainably post-harvest losses.

MOTHERLAND Status Report, 31.07.2023



## Introduction

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2. Project Overview
3. Project Implementation
4. Impact Assessment
5. Lessons Learned
6. Next Steps
7. Conclusion & Acknowledgement



## INTRODUCTION

With an initial funding of €170,000 from GIZ under the SAIS program in December 2022, we embarked on our pilot project in **Siaya County, located in West Kenya.**

Today, we present our interim report, which documents the progress and evaluation of our pilot project to connect African startups and their innovative solutions with farmers in Siaya County.

Our objective is to address challenges in the post-harvest value chain holistically and sustainably. Through this presentation, we will provide insights into the achievements, impact, lessons learned, and future plans of the project.

# MOTHERLAND

## HISTORY

**MOTHERLAND** has emerged from a series of online conferences and workshops held across the African continent since 2020, guided by the ultimate objective of connecting African startup solutions and farmers holistically to reduce food loss.

### **Central learnings of this process are:**

- a) Africa has all the solutions she needs
- b) These are often not connected yet
- c) Starting in the post-harvest value chain has the highest potential for change.

## OBJECTIVE

We are simultaneously connecting diverse African startup solutions and farmers to eliminate holistically and sustainably post-harvest losses. We create new opportunities for both by closing gaps in supply chains..

We collaborate with existing startups and communities in Kenya to become self-sufficient. We make our solutions and learnings easy to replicate by anyone in specific communities and beyond..

# GOALS

## Startup effects

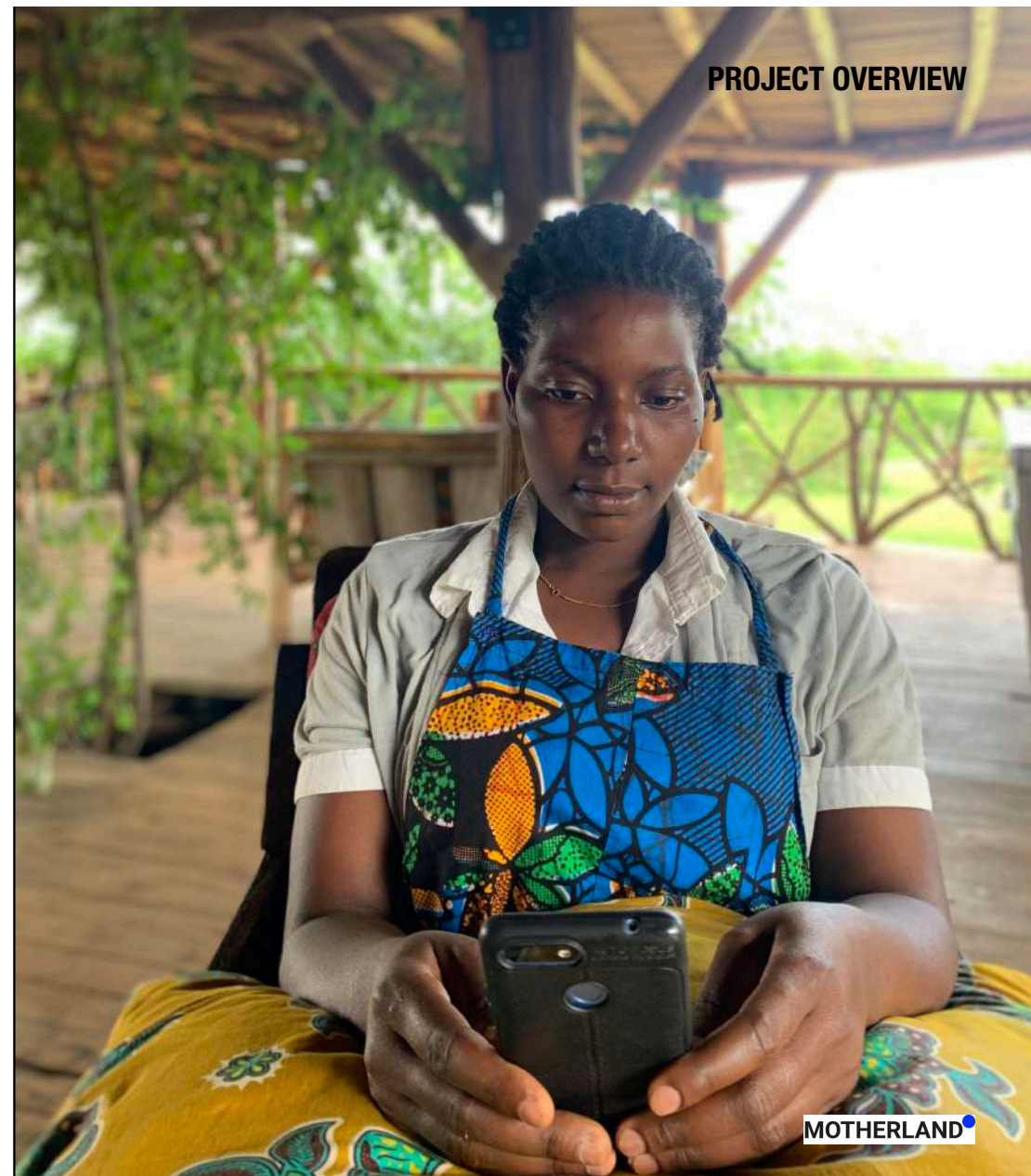
1. Sustainable business development for startups through access to rural farmer communities
2. Adoption rate of startup solution by 100%

## Startup to farmer services:

1. Overcoming market price volatility through innovative storage capacity
2. Ethical and fair market prices for farmers
3. Paying the farmer 25-50% higher prices and getting their harvest of more than 80% (current average 40%)
4. Consistency in supply through full value chain data traceability
5. Reduction of post-harvest loss from 65% to 10%

## Community effects

1. Engagement of youth in Agritech solutions
2. Creating self-sufficient local job opportunities
3. Self-generated community fund



PROJECT OVERVIEW

MOTHERLAND

# LOCAL IMPACT TEAM



**Catherine Sylvester**  
Psychologist  
Local Community Lead



**Violet Atieno**  
Environmental Scientist  
Head of Data and Research



**Nicholas Siso**  
Agronomist  
Head of Quality Control  
and Farmer Engagement



**Safari Robert**  
Farmer and  
Head of Community Engagement

**PROJECT OVERVIEW**

# FOUNDING TEAM



**Diana Beata Krueger**  
**Co-Founder**  
**Project lead**



**Sebastian Fittko**  
**Co-Founder**  
**Head of Strategy and Scaling**



**Thomas Schindler**  
**Co-Founder**  
**Head of Strategy and Scaling**



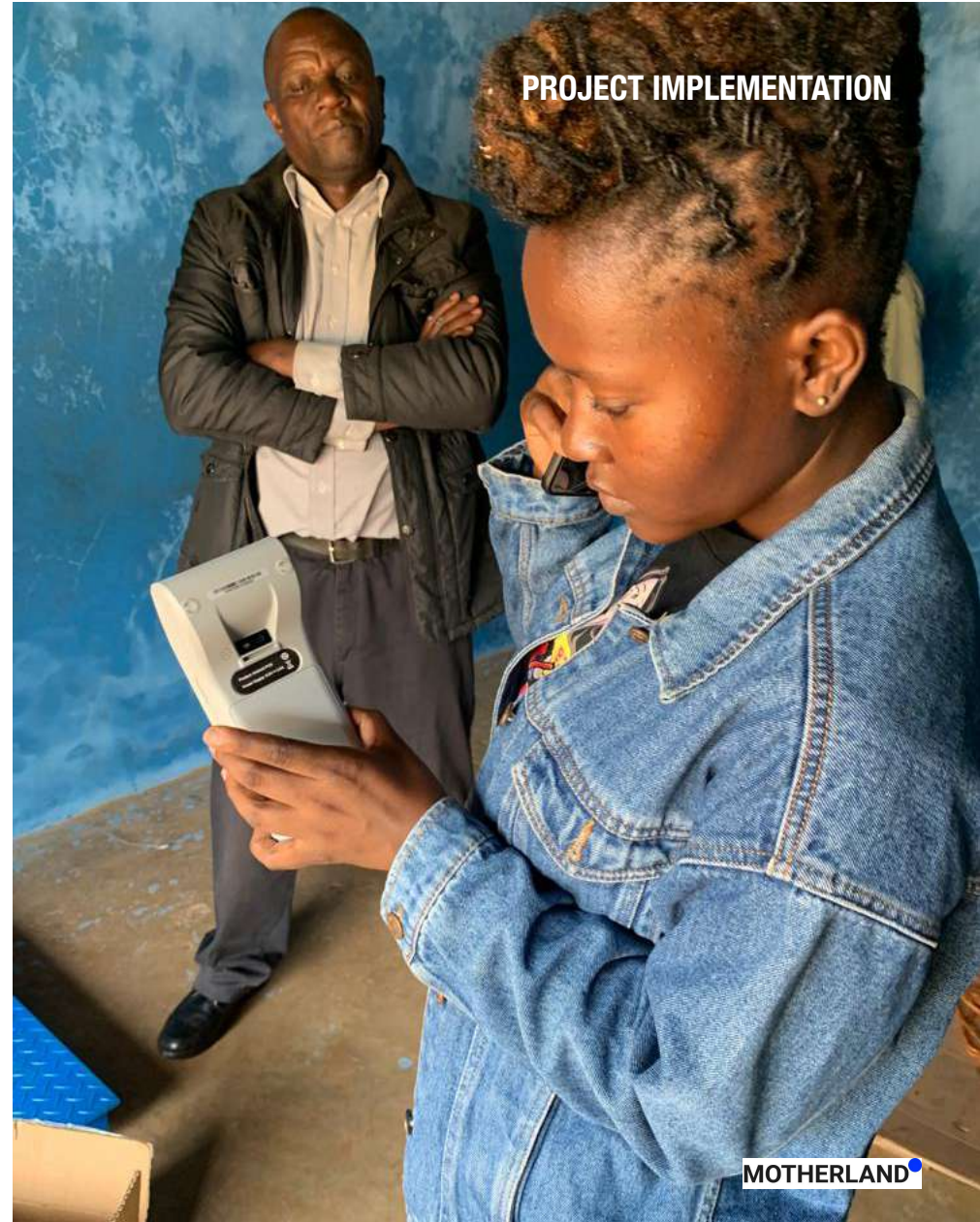
PROJECT IMPLEMENTATION

# OPERATIONS SINCE DECEMBER 2022

**December 2022 to January 2023: Formation of team and setting up local operational infrastructure**

**Jan to March 2023: Intense field visits and trust building and Community Engagement**

- Meeting the three local chiefs
- We presented MOTHERLAND to 32 County Agricultural Sector Steering Committee members, CASSCOM, for full approval to work and engage with farmers in Siaya County.





## PROJECT IMPLEMENTATION

### **Jan to March 2023: Intense field visits and trust building and Community Engagement**

- Meeting 18 farmer groups with 547 farmers and working with 266 farmers as a representative of the three wards.
- Conducting quantitative and qualitative research, including Focus Group Discussions and data collection, to understand the specific needs and need gaps among the farming community with a special focus on crops, planting and harvesting seasons, and a general understanding of all challenges in the ecosystem of the three wards.



PROJECT IMPLEMENTATION

March: Deep understanding of the sweetpotato value chain  
Mapping challenges in every stage from pre-harvest to post-harvest.

Among all the crops, sweet potato farmers are facing up to **65%** post-harvest loss due to lack of market access, logistics, quality, and storage, which became our focus for this pilot.



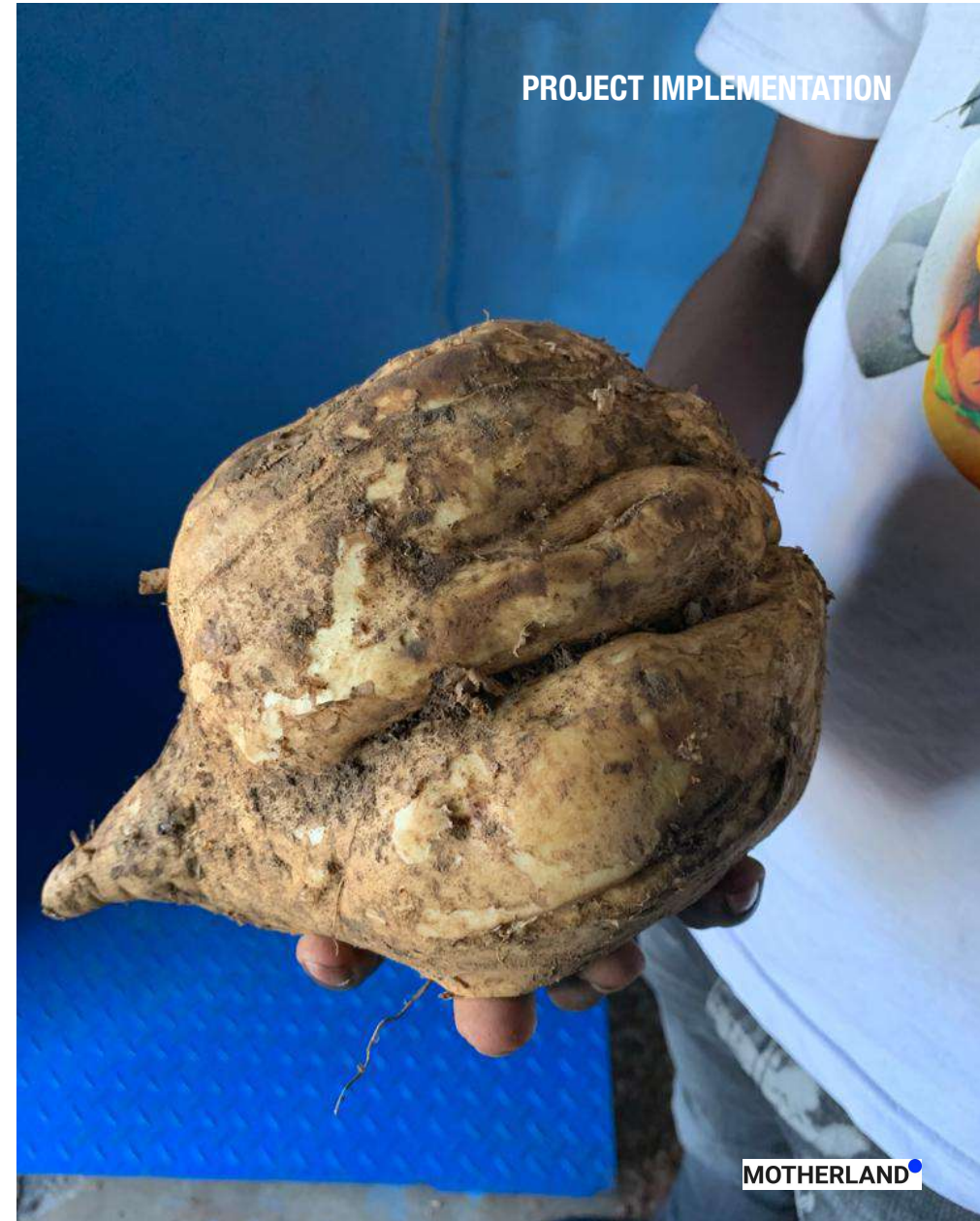
**April-May: MATCHMAKING / Identification of Startups offering solutions to identified challenges.**

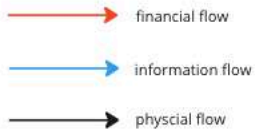
- Opportunities for collaboration with StartUps, approaching and engaging with them.

**May: Agreements with 3 StartUps**

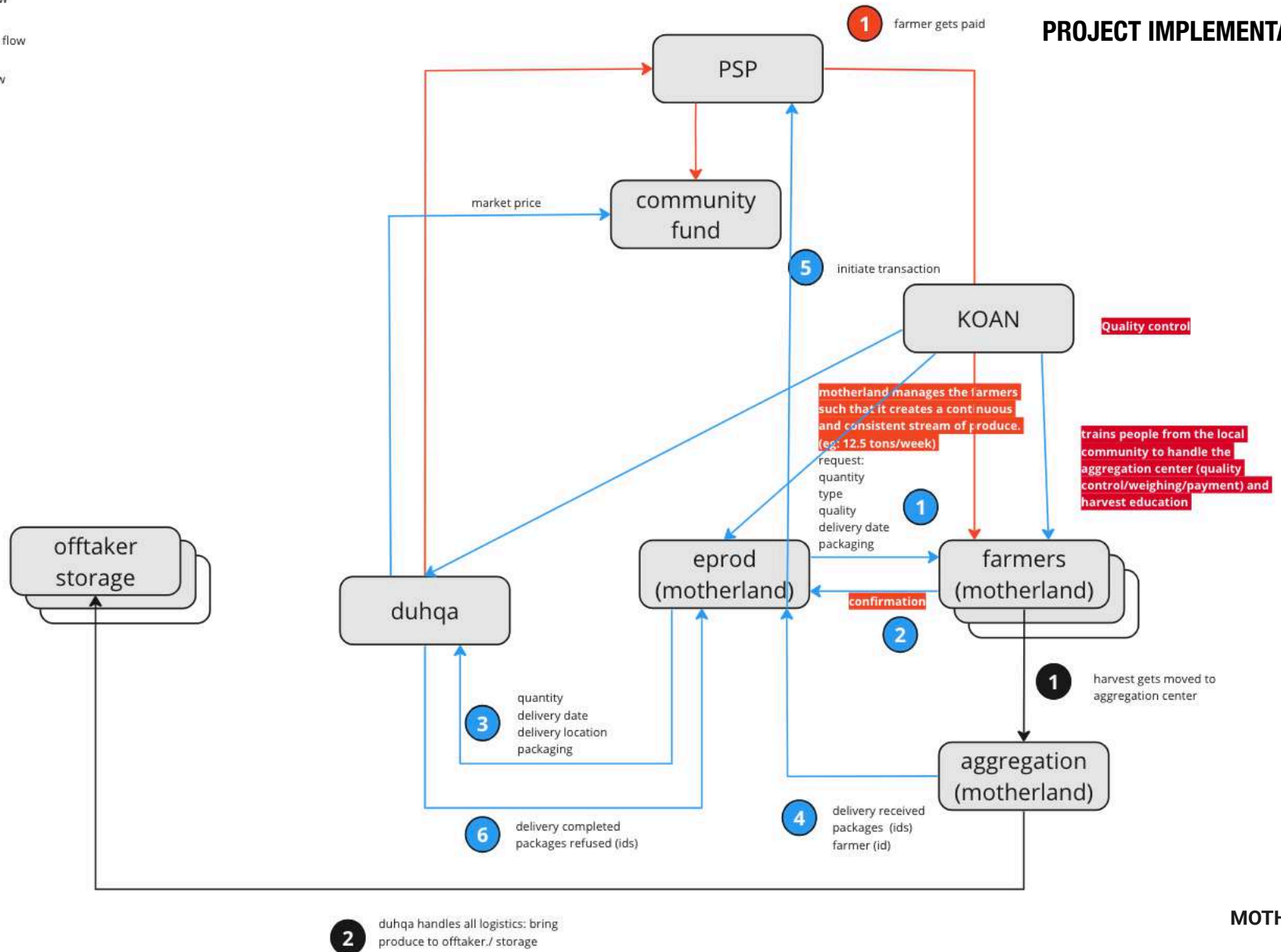
- Duhqa (logistics and market access in the capital), Eprod (full value chain data traceability), and Kenyan Organic Agriculture Network, KOAN (Organic and Quality control)
- Full training on the eProd System for the local impact team

**AGREEMENT: OFF-TAKING OF 250.000 tons of sweet potatoes**





## PROJECT IMPLEMENTATION



**June: Collection of baseline data**

- Collecting data (75 data points) of 547 sweet potato farmers and feeding it into the eProd system
- Sense-making of data into a harvest and dispatch plan for the 250.000 kgs of sweet potatoes
- Set up our physical aggregation center equipped with digital tools at a strategic point to enable access to all farmers.
- Test run of 1 tone of sweet potatoes at the aggregation center
- Harvesting training by KOAN with 32 farmers in Siaya around quality control and sustainable harvesting practices

**July: Farmer training and harvest plan**

- Improvement of Aggregation Center to guarantee high-quality interims storage conditions for sweet potatoes
- Implementation of new innovative curing method to extend shelf life up to 4 to 6 months
- Harvest and Dispatch plan from July to November with an off-taking of 20 tons/week



# SUCCESSSES



## Successes

1. **Three startups fully integrated** (eProd, duhqa, KOAN) with the farmers, showing that the core thesis of connecting startups with farmers is possible and beneficial for both sides.
2. Several other startups in negotiation to broaden the spectrum of off-taking.
3. Setup and operations of the aggregation and distribution process
4. **Community buy-in and trust.** The perceived ownership of the project is “locals for locals
5. Registered 537 farmers on the eprod system and issued to each of them a personalized MOTHERLAND ID card
6. We receive active **requests from other communities** and farmers
7. **Secured funding from Knodel foundation** with 50.000€/year until December 2025 to secure local operations on a minimum level
8. **Growing number of farmers** registering on the eprod system within the Motherland ecosystem
9. Full approval of local authorities to operate in Siaya County.
10. Clear harvest and dispatch plan for sweet potatoes until November 2023
11. Have kick-started a children and youth program, „**Young Earth Guardians**“ with 180 pupils toward the innovation in the agricultural sector via startups, the importance of regenerative agriculture, and climate resilience.

## Successes

12. **Successful running of the pre-test:** Learned that farmers are in dire need of quality training (safe harvest techniques)
13. Registering of the **MOTHERLAND Community Based Organisation, CBO** and obtaining a certificate of operations on the ground
14. **Understanding and analyzing farmer challenges in the wards** (North Alego, West Alego, and Siaya Township) via our research phase in February
15. Setting up the **Aggregation Center, AC**
16. **Active involvement of the farmers** in every activity we engage them in.
17. Creation of a vibrant ecosystem supporting agricultural innovation and development.
18. **Resilience and adaptability** in overcoming challenges.
19. **Achievement of planned project objectives and milestones**

LESSONS LEARNED

# LESSONS LEARNED



## Learnings

1. Startups depend on market price, and they often need more capacity to buy the produce for a fair price from the farmer.
2. Diversify off-taker dependency
3. A Farmer-centric approach is crucial to co-create community buy-in from day one
4. Consistency in quality and quantity to overcome the vicious cycle of farmer exploitation and to bridge market price volatility.
5. With the identified curing innovation, we can extend shelf life up to 2 months.
6. Expectation management toward farmers. Farmers creating their wealth.
7. MOTHERLAND acts as a super agent on behalf of the startups in rural areas.
8. The children and youth of Siaya feel not compelled to become active in the agricultural sector due to low-income perspectives and climate threats.
9. Farmers lack understanding of safe harvest practices.

## Learnings

10. Operations of Agricultural startups in the rural regions depend on mobile internet penetration and connectivity and digital payment solutions like Mpesa.
11. Conditions of the road networks(transport) are crucial for logistic planning
12. Farmers only invest in their farms with a link to a profitable source of market demand.
13. Challenges are unavoidable during project implementation, and adaptive management is critical to address them successfully.
14. Regular assessment of commitment and responsiveness of partners.
15. To maintain alignment and project progress, address any rising concerns from partners immediately.
16. Maintaining a positive mindset, seeking alternative solutions, and adapting to new circumstances are vital to navigating unforeseen challenges.
17. Farmers need a lot of help and support to meet quality standards and obtain certifications that can command higher prices in the market.
18. Continuously monitor the pricing dynamics and market trends to identify potential exploitation or unfair practices.
19. Unforeseen circumstances may arise, requiring modifications to the initial timeline.

NEXT STEPS

NEXT STEPS

**NEXT**

**Local:**

1. Finalise the pilot
2. Identify more startups to collaborate with in aggregation, storage and off-taking
3. Signed agreement, MOU/LOI, by partner startups to continue collaboration after pilot
4. Identify other value chains
5. Identify startups to set up governance around the community fund
6. Add more farmers to the local community in Siaya (4500 by 2026)
7. Learn how MOTHERLAND's function as a super agent on behalf of the startups in rural areas could contribute to MOTHERLAND's business model and can additionally lead to self-sufficiency and -reliance.

**General:**

1. Replicate in other regions
2. Find more and other fitting startups
3. Identify a startup to run a train-the-trainer program for scaling
4. Attract further funding

EARNINGS AND COSTS

**EARNINGS AND COSTS**



# COST MODEL

## COSTS

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
year											
communities	1	1	3	9	27	81	243	729	2187	6561	19683
farmers	500	500	1500	4500	13500	40500	121500	364500	1093500	3280500	9841500
individuals / year	2500	2500	7500	22500	67500	202500	607500	1822500	5467500	16402500	49207500
individuals / aggrate	2500	2500	10000	32500	100000	302500	910000	2732500	8200000	24602500	73810000
African team	4	4	10	22	58	166	490	1462	4378	13126	39370
European team	0.5	3	4	5	7	10	14	14	20	26	32
Total kg	30000	540000	3240000	9720000	29160000	87480000	262440000	787320000	2361960000	7085880000	21257640000
<b>Total Cost</b>	<b>€500,000.00</b>	<b>€369,600.00</b>	<b>€600,000.00</b>	<b>€1,012,800.00</b>	<b>€2,155,200.00</b>	<b>€5,294,400.00</b>	<b>€14,232,000.00</b>	<b>€39,892,800.00</b>	<b>€117,451,200.00</b>	<b>€348,974,400.00</b>	<b>€1,042,392,000.00</b>
Cost / Individual	€200.00	€147.84	€80.00	€45.01	€31.93	€26.15	€23.43	€21.89	€21.48	€21.28	€21.18
<b>Outside Donations</b>	<b>€220,000.00</b>	<b>€50,000.00</b>	<b>€50,000.00</b>	<b>€0.00</b>	<b>€0.00</b>	<b>€0.00</b>	<b>€0.00</b>	<b>€0.00</b>	<b>€0.00</b>	<b>€0.00</b>	<b>€0.00</b>
GIZ	€170,000.00										
Knodel	€50,000.00	€50,000.00	€50,000.00								
<b>Revenues</b>											
farmer	€5,700.00	€102,600.00	€615,600.00	€1,846,800.00	€5,540,400.00	€16,621,200.00	€49,863,600.00	€149,590,800.00	€448,772,400.00	€1,346,317,200.00	€4,038,951,600.00
sharable profit	€1,500.00	€27,000.00	€162,000.00	€486,000.00	€1,458,000.00	€4,374,000.00	€13,122,000.00	€39,366,000.00	€118,098,000.00	€354,294,000.00	€1,062,882,000.00
cash	-€278,500.00	-€292,600.00	-€388,000.00	-€526,800.00	-€697,200.00	-€920,400.00	-€1,110,000.00	-€526,800.00	€646,800.00	€5,319,600.00	€20,490,000.00
community fund	0	0	0	0	0	0	0	0	€452,760.00	€3,723,720.00	€14,343,000.00
community salaries	€48,000.00	€48,000.00	€120,000.00	€264,000.00	€696,000.00	€1,992,000.00	€5,880,000.00	€17,544,000.00	€52,536,000.00	€157,512,000.00	€472,440,000.00
community service (fund+salaries)	€48,000.00	€48,000.00	€120,000.00	€264,000.00	€696,000.00	€1,992,000.00	€5,880,000.00	€17,544,000.00	€52,988,760.00	€161,235,720.00	€486,783,000.00
MOTHERLAND	-€278,500.00	-€292,600.00	-€388,000.00	-€526,800.00	-€697,200.00	-€920,400.00	-€1,110,000.00	-€526,800.00	€194,040.00	€1,595,880.00	€6,147,000.00

CONCLUSION AND ACKNOWLEDGEMENT

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**MOTHERLAND's** pilot project, supported by the Scaling digital Agriculture Innovations through StartUps, SAIS, implemented by the German Agency for International Cooperation/Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ GmbH) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) proves to be a transformative journey towards strengthening the agricultural ecosystem by connecting various startups to uplift farmers in Siaya County and setting the stage for scaling these operations to other regions.

By leveraging digital innovations, we have connected three startups with farmers, creating a dynamic and sustainable model that addresses agricultural challenges. We are onto something more significant and need to implement it in other regions to solidify our pilot learnings and findings.

This pilot has empowered farmers, improved their market access, and proven that livelihoods will be enhanced.

We immensely thank SAIS and GIZ and the knodel foundation for their unwavering support, financial backing, technical expertise, and guidance. Their commitment to nurturing African startups and promoting digital innovations in agriculture has fueled our progress and strengthened the ecosystem.



# ASANTE SANA!

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