



Solar bakery project

Community development centre | Village of Moamba | Mozambique | 2024

Who we are

Elevate Africa was founded by Brandon and Katie Mushunje, respectively from Zimbabwe and USA. After working many years with the Christian organisation YWAM in Worcester (South Africa), they decided to start their own social project in a poor village of Mozambique.

Elevate Africa is headquartered in the District of Moamba, south of the Province of Maputo, in Mozambique. Work in Moamba began in 2018, with a five-person founding team led by Brandon and Katie. Since its inception, the organization has been involved in community development programs in partnership with affiliated organizations, both international and local, of all sizes, with whom it shares the same vision of combating poverty. The focus is mainly on 2 areas which are the education of girls and the care of elderly people. At the moment there are 18 girls and 8 elderly women at the Elevate Africa centre.

Mozambique

Mozambique was a Portuguese Colony up until 1975. After achieving independence, FRELIMO, a communist-inspired political party, governed the country. Between 1977 and 1992, thousands of people were killed during a violent civil war. Since 1992, the country has been governed by a frail coalition between FRELIMO and the opposition party, RENAMO. Unfortunately, the country is still suffering from poverty. Even though the country has an amazing wealth of mineral resources, the population does not have the opportunity to take advantage of it due to the lack of right equipment and resources. However, even with all those challenges, Mozambique is a country full of beautiful places and warm-hearted people.

Aims and objectives for our new project

The business proposal is the implementation of a solar-powered bakery in Mozambique, aiming at the sustainable production of bread. The project seeks to combine food production with the use of renewable energy sources, contributing to environmental sustainability and offering quality products to the local community. The bakery will not only serve as a convenient source of baked goods but will also play a crucial role in supporting the local economy and creating employment opportunities. Through this project we also aim to train the young girls of our centre to cook. We believe that it is rewarding for them to learn new skills and that it can make a difference for their future. At the same time, selling bread can bring financial self-sufficiency to the centre and therefore have a multiplied impact on the local community as would benefit immensely from the bakery.

Bread in Mozambique

Bread is something that is very important for Mozambicans. Most Mozambicans eat bread every day, sometimes for different meals in the same day. At the same time the population is growing fast and the needs for food are growing as well. Unfortunately, not all families are able to purchase bread due to the prices. In the district of Moamba, where the centre is located, it is even more difficult for the population to have access to bakeries, as there is only one bakery for a population of about 88'000 people. In the villages near Moamba, there are no bakeries at all, and people would be grateful to have resellers selling our bread. It would enable them as well to provide for their families as well as to the population around them.

Advantages of a solar bakery

Convenience

The presence of a bakery in the centre will provide convenience to residents, allowing them to purchase breakfast and snack items without having to travel long distances.

Support for the Local Economy

The bakery will become a point of sale for local products, contributing to the region's economy. Sourcing ingredients from nearby suppliers will ensure that money spent at the bakery stays within the community, benefiting local businesses, residents and the community centre itself.

Employment Opportunities

The creation of the bakery will generate employment opportunities for local residents, including bakers, sales staff and delivery drivers. This initiative will not only reduce unemployment in the region, but also improve the economic well-being of the community and downtown.

Environmental Sustainability

In addition to seeking financial self-sustainability, the bakery will have sustainable practices. Implementing eco-efficient technologies, such as using solar energy and minimizing waste, will demonstrate a commitment to environmental responsibility.

Associated Social Programs

The bakery can be integrated into social programs, such as baking training courses for community members, especially young people and the unemployed. This approach not only creates a source of income, but also contributes to skills development and strengthens social ties.

Our work:

By raising the standard of living of people from less privileged communities through education, training and skills development, we aim to create a social environment where everyone is included and empowered, regardless of color, social status or gender. Our motivation to do our work is founded in our Christian faith, which gives us the strong belief that each life is incredibly precious and that everyone deserves to live in dignity. Our work focuses mainly on:

- **Care of elderly widows:** In the context of Moamba, there is a strong stigma in the population related to old people. Families believe that bad things are happening to them because of the elderly persons in the family. Living in an animist environment, they think that their grandparents are responsible for spiritual practises that bring "bad luck" to them. Therefore, they would attack physically their elderly and starve them out of their home. We feel at our centre that it is our responsibility to offer a home and protection to them.
- **Education of girls:** The girls without parents are welcomed at the centre, where they receive education and a place to live. We make sure that they receive counselling as they have been through a lot of abuses and trauma.

Elevate Africa's goal has always been to train and empower local people to assume leadership of its activities.

Educational Impact

Introducing educational programs on nutrition and healthy eating habits associated with bakery products can be a valuable strategy. This approach not only contributes to the health of the community, but also reinforces the project's educational commitment.

Partnerships with Local Institutions

Establishing partnerships with schools, hospitals, or other local institutions to provide bakery products can widen the impact network. In addition to strengthening the bond with the community, this collaboration demonstrates a comprehensive approach that interacts with different sectors.

Prospective needs

The needs to implement that project are mostly related to the purchase of the solar oven, the delivery of the oven to Moamba and the construction of a bakery building. We would aim to reach excellency in our work, therefore we plan to have a spacious bakery building with all the tools needed and the best hygienic conditions. The building will consist of 4 rooms: one for cooking, one for storing tools and ingredients, one for selling and one for a small office where we can do the accounting work. We will also need to buy some cooking tools and cooking materials. To start the production, we will need to invest in some ingredients as well. All those things are included in the budget attached to this document. A short summary is visible on the next page.



Girls at our centre

Project management

Elevate Africa centre is located 60km from South Africa. As the prices of ingredients are much cheaper in South Africa than in Mozambique, we intend to purchase them there, which will enable us to increase our profit as well as our production.

We are planning to buy the ingredients on a weekly basis. Creating strong relationships with our suppliers, it will lead us to long-term partnerships with them, ensuring the stability of our supply chain.

A professional baker will be employed and will oversee the bakery. He will get help from an assistant baker for his daily work. The girls at the centre will be involved as well, which will be a great opportunity for them to learn.

The main point of sale will be at the centre for practical reasons and because we want the bakery to benefit the local population.

As there are also a lot of needs in the surrounding communities, we are planning to buy a truck to be able to sell our products directly in their villages. It will also give us the opportunity to buy goods to local farmers in order to sell them at our market in Moamba.

As we are sensitive to environmental issues, our aim is to achieve zero waste. Thus, all unsold products will be used at the centre, either for our own needs or to feed our chickens.



Elevate Africa centre, Moamba

Finances and resources

Financial transparency is a priority for us and will be reported through detailed monthly reports highlighting the use of funds and results achieved.

Elevate Africa is currently sponsored mostly by the NGO 4Africa, based in the canton of Aargau, in Switzerland. As 4Africa is decreasing their support in the coming years, it is even more important for Elevate Africa to create more self-sufficiency projects. This solar bakery project fits perfectly with that vision.

The investments budget needed for all this to happen is:

- Solar oven purchase	8,060 CHF
- Bakery building	13,270 CHF
- Cooking tools and materials	910 CHF
- Ingredients to start	1020 CHF
- Unforeseen	1740 CHF
TOTAL :	25,000 CHF

The detailed budget and the estimated cash flow for the coming years can be found in the attached documents.


About the resources, we are relying mostly on Wungana Mozambique and its partners in Switzerland to get the funds for this project.

As Elevate Africa, we truly believe that every human deserves to be loved and that everyone should be able to eat, drink and have a roof over their head. This project fits perfectly in that vision as it will enable people to use their talents and skills to have a positive impact in their community.

As a nonprofit organisation, we guarantee that any incomes that will be made through that project will benefit the community and its people first.

On behalf of our entire team, we would like to thank you in advance for the time you will devote to our project. If you have any question, do not hesitate to contact us.

We invite you to have a look at our Facebook account where you will be able to picture our project, its community and its environment. You can also have a look at Wungana Mozambique blog and website to get to know our partner.

wungana-mozambique.org  @ElevateAfrica2016

Thank you for considering our application.

Brandon and Katie Mushunje,
leaders of Elevate Africa, Mozambique

Sébastien Gilliland, in behalf of
Wungana Mozambique Committee, Switzerland

Attachments

Appendix 1: Location



Location of Moamba. Source: Ecosia, MapBox, OpenStreetMap datas

Appendix 2: Planning

2024:

- January-February: Project presentation document writing + Fundraising
- End of February: Purchase of the oven
- March-July: Construction of the bakery building
- End of June: Installation of the oven in Moamba
- Mid-July: Bakery official opening
- August: Visit on site by Wungana Mozambique team and intermediary report writing
- December: Final project report, assessment of the project results and possible improvements

Appendix 3: Budget

Investments:

Exchange rates

MT/CHF = 71

EUR/CHF = 1.05

	Quantity	Price/unit	Cost [Currency]	Cost [CHF]
1. Solar oven			MZN 572,350	8,061 CHF
1.1 Purchase of the solar oven	1	4,999 €	4,999 €	4,761 CHF
1.2 Delivery to Maputo from Nairobi	1	2,000 €	2,000 €	1,905 CHF
1.3 VAT (16%)	1	MZN 54,084	MZN 54,084	762 CHF
1.4 Importation taxes	1	MZN 25,000	MZN 25,000	352 CHF
1.5 Delivery to Moamba by car or truck	1	MZN 10,000	MZN 10,000	141 CHF
1.6 Installation (floor preparation, assembly tools)	1	MZN 10,000	MZN 10,000	141 CHF
2. Bakery building (selling room, cooking room, storage room and office)			MZN 942,240	13,271 CHF
2.1 Plates in zinc for roof	25	MZN 1,500	MZN 37,500	528 CHF
2.2 Wood beams (long ones)	15	MZN 1,300	MZN 19,500	275 CHF
2.3 Wood beams (short ones)	5	MZN 900	MZN 4,500	63 CHF
2.4 Bricks	5820	MZN 40	MZN 232,800	3,279 CHF
2.5 Bags cement (construction 110 + plastering 68)	178	MZN 450	MZN 80,100	1,128 CHF
2.6 Pit sand (construction 4 + plastering 2)	6	MZN 18,100	MZN 108,600	1,530 CHF
2.7 River sand	6	MZN 14,000	MZN 84,000	1,183 CHF
2.8 Stones	1	MZN 15,000	MZN 15,000	211 CHF
2.9 Steel Iron	50	MZN 900	MZN 45,000	634 CHF
2.10 Nail boxes	100	MZN 350	MZN 35,000	493 CHF
2.11 Doors	4	MZN 3,400	MZN 13,600	192 CHF
2.12 Windows	6	MZN 600	MZN 3,600	51 CHF
2.13 Door frames	4	MZN 2,120	MZN 8,480	119 CHF
2.14 Painting (20l buckets)	3	MZN 4,000	MZN 12,000	169 CHF
2.15 Tiling (10)	18	MZN 1,500	MZN 27,000	380 CHF
2.16 Sink and water pipes	1	MZN 12,000	MZN 12,000	169 CHF
2.17 Electricity (cables, plugs, pins)	1	MZN 18,000	MZN 18,000	254 CHF
2.18 Security cameras	1	MZN 20,000	MZN 20,000	282 CHF
2.19 Shelves	12	MZN 2,500	MZN 30,000	423 CHF
2.20 Aluminium tables	2	MZN 12,500	MZN 25,000	352 CHF
2.21 Water tank (2500l)	1	MZN 17,280	MZN 17,280	243 CHF
2.22 Labor (construction)	1	MZN 78,280	MZN 78,280	1,103 CHF
2.23 Labor (electricity and plumbing)	1	MZN 15,000	MZN 15,000	211 CHF
2.24 Labor (tiling)	1	MZN 12,000	MZN 12,000	169 CHF
3. Cooking tools and materials			MZN 64,800	913 CHF
3.1 Oven pans	9	MZN 800	MZN 7,200	101 CHF
3.2 Dough roller	3	MZN 500	MZN 1,500	21 CHF
3.3 Kitchen scale	2	MZN 2,500	MZN 5,000	70 CHF
3.4 Bowls of various sizes	8	MZN 300	MZN 2,400	34 CHF
3.5 Measuring cups	6	MZN 350	MZN 2,100	30 CHF
3.6 Gloves	6	MZN 400	MZN 2,400	34 CHF
3.7 Gears	6	MZN 1,000	MZN 6,000	85 CHF
3.8 Shoes	6	MZN 1,000	MZN 6,000	85 CHF
3.9 Shower cap	6	MZN 200	MZN 1,200	17 CHF
3.10 Knives, forks, spoons	15	MZN 250	MZN 3,750	53 CHF
3.11 Various containers	15	MZN 150	MZN 2,250	32 CHF
3.12 Kitchen robot (kenhood)	1	MZN 25,000	MZN 25,000	352 CHF
4. Ingredients to start (15 days of baking)			MZN 72,368	1,019 CHF
4.1 Flour 10kg (70kg/day)	105	MZN 550	MZN 57,750	813 CHF
4.2 Yeast 500g (1.5kg/day)	45	MZN 170	MZN 7,650	108 CHF
4.3 Salt 1kg (2.5kg/day)	37.5	MZN 45	MZN 1,688	24 CHF
4.4 Sugar 10kg (4kg/day)	6	MZN 880	MZN 5,280	74 CHF
4.5 Eggs (available on site)	400	MZN 0	MZN 0	0 CHF
SUBTOTAL			MZN 1,651,758	23,264 CHF
Unforeseen (8%)			MZN 123,895	1,745 CHF
TOTAL			MZN 1,775,653	25,009 CHF

Operational phase:

INCOMES

1. Selling of bread

Production days/year (sunny days)		250
Normal production (kg of bread/day)		100
Daily production (#breads)	200.00 g/bread	500
Bread price (per bread)		MZN 15
Bread Price (per Kg)		MZN 75
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Daily Income		MZN 7,500
Monthly Income		MZN 156,250
Annual Income		MZN 1,875,000

RUNNING COSTS

	Quantity	Price/unit	Cost
1. Ingredients (1 day)			MZN 4,825
1.1	Flour 10kg (70kg)	7 MZN 550	MZN 3,850
1.2	Yeast 500g (1.5kg)	3 MZN 170	MZN 510
1.3	Salt 1kg (2.5kg)	2.5 MZN 45	MZN 113
1.4	Sugar 10kg (4kg)	0.4 MZN 880	MZN 352
2. Staffing costs (1 day)			MZN 1,536
2.1	Baker	0.048 MZN 12,000	MZN 576
2.2	Assistant Baker	0.048 MZN 10,000	MZN 480
2.3	Sales Agent	0.048 MZN 10,000	MZN 480
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Daily Cost			MZN 6,361
Monthly Cost			MZN 132,510
Annual Cost			MZN 1,590,125

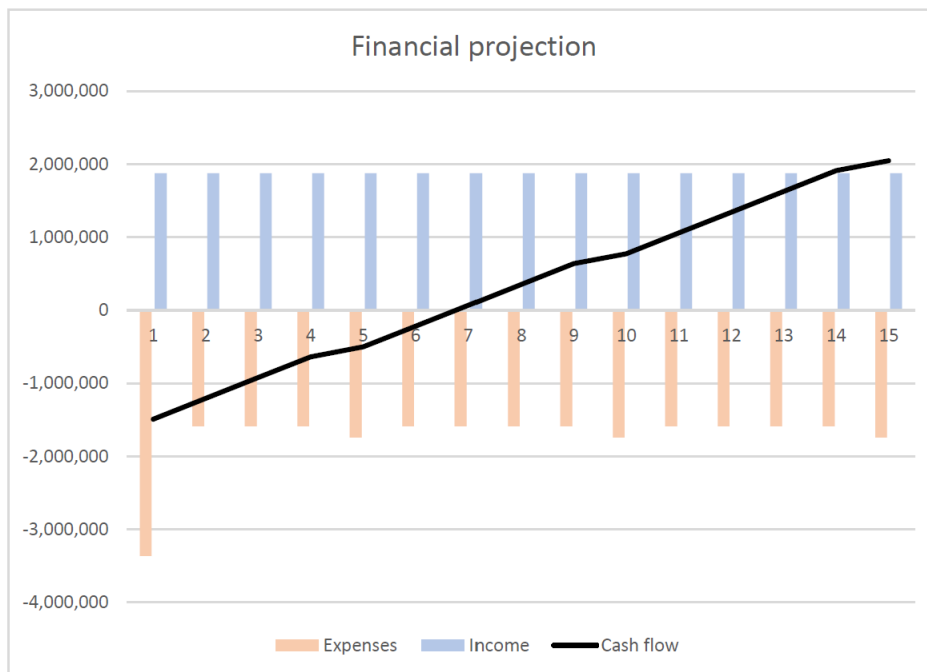
BENEFITS

Daily benefit	MZN 1,140
Monthly benefit	MZN 23,740
Annual benefit	MZN 284,875

Break-even point (years) 6.233

Cash flow:

Year	Expenses	Income	Difference	Cash flow
1	-3,365,778	1,875,000	-1,490,778	-1,490,778
2	-1,590,125	1,875,000	284,875	-1,205,903
3	-1,590,125	1,875,000	284,875	-921,028
4	-1,590,125	1,875,000	284,875	-636,153
5	-1,740,125	1,875,000	134,875	-501,278 (Maintenance : 150'000mt)
6	-1,590,125	1,875,000	284,875	-216,403
7	-1,590,125	1,875,000	284,875	68,472
8	-1,590,125	1,875,000	284,875	353,347
9	-1,590,125	1,875,000	284,875	638,222
10	-1,740,125	1,875,000	134,875	773,097 (Maintenance : 150'000mt)
11	-1,590,125	1,875,000	284,875	1,057,972
12	-1,590,125	1,875,000	284,875	1,342,847
13	-1,590,125	1,875,000	284,875	1,627,722
14	-1,590,125	1,875,000	284,875	1,912,597
15	-1,740,125	1,875,000	134,875	2,047,472 (Maintenance : 150'000mt)



Comment:

A maintenance fee of 150'000mt has been added every 5 years even though the LyteFire company says there are almost no maintenance fees to expect. This could help us to make improvements and expand the bakery.

Pro Forma Offer



By (Seller):

Solar Fire Concentration Ltd
 Business ID: 2474214-8
 P6 Åkerlundinkatu 8
 33100 Tampere - Finland

Date

23. January 2024

Valid until

1.3.2024

To (Buyer):

Sébastien Gilliland
 Mozambique

Key Contact

Urs Riggerbach,
 urs.riggerbach@lytefire.com

Reference Code:

20230907

PRODUCT/SERVICE	Pcs	Price in EUROS	Subtotal in EUROS
Lytefire Pro Oven (solar concentrator with mirrors + oven) made in Kenya and also including: 3 baking grids (adjustable in height), 1 set of 12 extra mirrors (60 mirrors total) + 1 heat thermometer + 1 year warranty. <u>HS Code: HS 84198180</u>	1	4999	€4 999
Installation manual (in French)	1	included	included
Safety Instructions (in French)	1	included	included
Installation on-phone support (1h)	1	included	included
Lytefire Hub: acces to the dedicated users forum where you can share and get tips in English and in French	1	included	included
No Transport * No transport included. Product is provided INCOTERM "Ex Works"	0	€0.00	€ 0
Payment information of Solar Fire Concentration Oy: IBAN: FI89 1783 3000 0062 91 Bank: Nordea Bank PLC, Kauppakatu 7 - 33200 Tampere, Finland Swift Code (BIC) : NDEAFIHH			VAT 0% **
TOTAL			€4 999

Solar Fire Concentration Ltd

Address:
 P6 Åkerlundinkatu 8
 33100 Tampere - Finland
 FINLAND

Company ID: 2474214-8
 VAT-Number: FI24742148
 Phone: +358 457 835 86 30
 Email: info@lytefire.com
 Website: <https://lytefire.com>



Optional:

Upon request, Educational services are available. Please visit <https://lytefire.com/education> for more information.

Offer Terms:

The payment terms are 90% at signature of this document, 10% when the material is delivered by the transport company of your choice (e.g. ex works).

Warranty 1 year on manufacturing defects.

After sales service for long-term maintenance is included and involves: Instructions to local metalworkers for maintenance works. Local metalworkers need to be identified by client. Replacement parts available to clients. All after sales services are offered at-cost.

HS Codes are provided without liability, as product may in rare cases be reclassified by local agencies.

The pricing of our material and service is directly connected to the pricing of materials and transportations. We are following the inflation's evolution and we do our best to adjust so please note that pricing may vary in future.

*Import tariffs, customs clearance, needs to be borne by and handled by the client (or by the client's shipping company / consignee).

Transport is not included in this offer.

Please consult separately available document "Lytefire Pro Oven - Shipping Information" containing weight and dimensions of product(s) to organize shipping with your freight forwarder or shipping company of your choice.

** This offer is excl. VAT as sales volumes to destination country have not exceeded the threshold for local VAT. If in spite of this VAT should be found to be applicable it shall be borne by customer.

Our general Terms and Conditions Apply.

Appendix 5: Pictures of Elevate Africa community development centre



Some of our girls, elderly and staff members



Vovo Ana and Madelina



Christmas party at the Elevate Africa centre



Vovo Madelina and her craft



Vovo Madelina



The dining hall for the girls



The Elevate Africa centre and its neighbourhood in Moamba.



With the Swiss team that came to our centre in 2021. A trip organized by Wungana Mozambique.
Brandon, founder of Elevate Africa, is at the center in the back.