THE PROJECT MOBIQUE

Contents

General Approach.

Mobique was born from the experiences of Vitality onlus: its mission is to build relationships between people and use their diversity as a starting point to innovate the future of communities.

The community to community method

Enabling people moving between two different cultures and countries to express their talents allows them to be development agents in both places.

Using design thinking

Including people with different types of professional background in the creative process, such as entrepreneurs, public bodies, donors, operators, producers, consumers, activists and artists, encourages and facilitates the discovery of solutions.

Social barriers

Facilitating the transnational mobility of people engaged in circular economic processes generates a virtuous circle.

Governance

Mobique is the brand name of the production system that is split into three parts: the mobile factory and its licensing; the distribution of the product in Italy, Europe and Senegal; new mobile factory planning and production consultancy.

Main goals.

Remote farming communities in Senegal

In many internal rural areas, living conditions are worsening. Even where there is an abundance of freshly grown produce, it is difficult to keep, process or sell it all in the marketplace. MOBIQUE supplies these remote rural communities with a mobile factory in order to earn a profit from their surplus production.

POPULATION 15.4 MILLION

42%
FARMING COMMUNITIES

Engage community leaders

The community structure in Senegal dictates that the temporary installation of MOBIQUE is discussed with the community leader who approves it, involves the community, helps to select the farmers and the workers for the factory, which ensures the safeguarding of community relations.

PREFERRED COMMUNITIES

10-20
FAMILY GROUPS

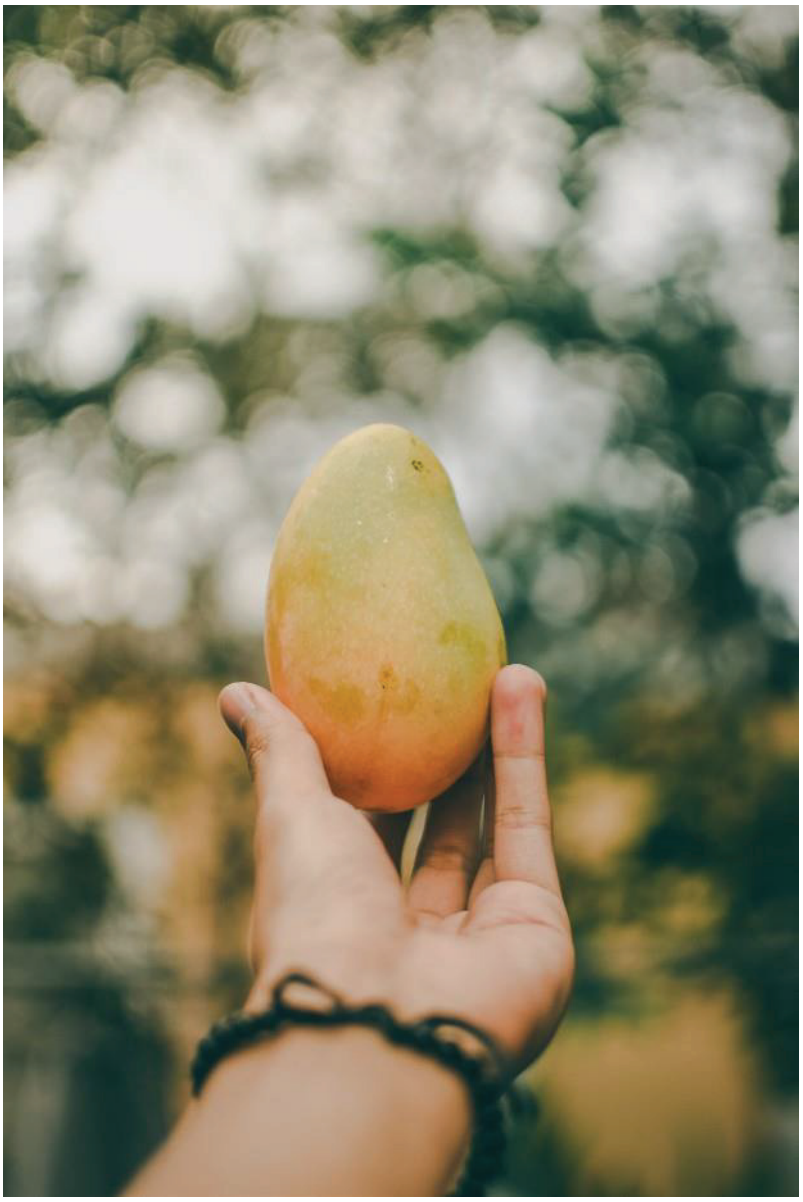
2.5-5
ACRES OF ORCHARDS

Connect micro and macro

MOBIQUE has the best impact in microcommunities of 10/20 family groups, with at least 2/5 acres of orchards or 70/100 mango trees. Its mobility, flexibilty and replicability allow the Mobique system to multiply the scale of its impact.

Supply of the mango harvest

Every day the mangoes, after having been harvested, are brought by the farmers to the transfer area where they are selected, weighed and purchased. The price is set for all communities according to the quality of the product and which is at the highest of the market.



The stages.

The first stage of the process: the preparation of the fruit.

The fruit is washed, peeled, de-stoned and sliced and then is placed on the trays to be put into the dehydrator.

The second stage of the process: waste management

The waste from the preparation (skin and stones) are used to make compost. Possible reuses of other by-products are being studied to make the process 100% circular.

The third stage of the process: the operation of the dehydrator

The dehydrator works like an oven with air forced through at low temperature (50 C ° - 60 C °), with production cycles that vary in duration according to the product to be dried.

The fourth stage of the process: weighing, labelling andd packaging.

Once dehydrated, the product is packaged in 5kg vacuum packed bags, labelled with the following information; weight, % of humidity, date and place of production.

5 kg
VACCUM PACKED BAGS

Hygiene and sanitary certifications

These are carried out following regulations and processes of absolute quality, codified by international standards and affect every aspect of the process: from collection to marketplace.
In particular:

Quality: MOBIQUE mango is a product of organic agriculture according to EC Reg. 834/07

Fairness: MOBIQUE mango conforms to the ethical certification regulation Fare Trade

Safety: the production processes comply with the most restrictive regulations on workplace safety even when not explicitly requested by Legislative Decree 81/08 of the Italian Republic.

Hygiene: the hygienic safety of MOBIQUE's mango production process is guaranteed by following the standards of Italy's food safety regulation.

Average nutritional characteristics per 100 g of product

AR: % of daily suggested consumption of an average adult

Energy	KJ Kcal	1257 297	14,85%
Fat	g	0,02	0.03%
saturated	g	0,05	0,25%
Carbs	g	67,10	25,81%
sugars	g	46	51,11%
Fibre	g	7,3	
Protein	g	3	6%
Salt	g	0,24	4%

VNR: nutritional values

Iron	g	8,04	57,43%
Calcium	g	31	3,88%

Sales and Marketing

Transporting the finished product to Dakar and its storage.

The packaged product is stored on site for the entire duration of the campaign and then transferred to a single solution in Dakar at the end of the season (for the mango season total mango production 5,400 kg at full capacity)

Sales and marketing areas:

- In Senegal
- In Europe
- In the West African region
- In Italy

Possible channels of distribution

- Large retail chains
- Hotels, restaurants, cafés
- Importers with their own brand
- General retail
- Confectionery manufacturing companies
- Fair trade operators

Technical project.

Monobloc

The "mobile factory" is a compact system contained in a 20 feet monobloc that maximizes the functionality of the whole production process. In order to easily load and unload the truck, the platform of the structure has been specially reinforced and equipped with guides to allow lifting by means of the clamps of the forklifts or the belts of the lifting cranes, avoiding the classic lifting from above.

Dehydrator

The essential machinery for carrying out the MOBIQUE process was identified by assessing dimensional characteristics, practical functionality and low energy consumption, given the solar power supply. Mobique has a Palladium Rs model TP20 oven with a production capacity of 14 m2 for drying and 4.1 Kw peak consumption for an average effective consumption of about 2 Kw.

Technical Equipment

Scales and sealing machines were chosen for the purpose of supporting the daily production of 60 Kg - 80 Kg of dried product which must be sealed and labelled. The ergonomic work table is designed to house the product cases as well as the tools for processing and the first aid kit.

Photovoltaic system

It is sized taking into account the overall dimension and the power required. Indicatively, 24 m2 of solar panels are needed to be placed on the outside of the monobloc and power accumulators with the capacity of approximately 10 - 12 Kw/h

Stock

Inside the monobloc, there are housings for consumables as well as uniforms and work tools. The finished product is stored in special pallets which will also be housed inside the structure.

Economic aspects of the start-up phase.

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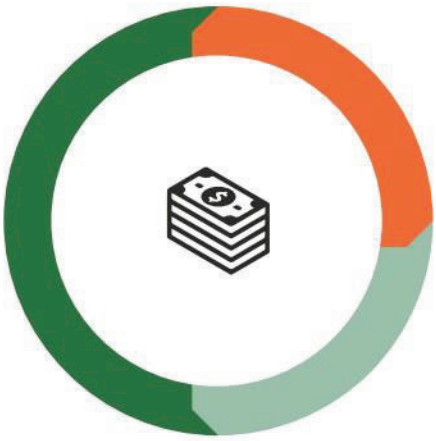
Financial planning to get the product to market must take into account an initial capital distributed as follows:

- Capital account 50% of the investment value
  - •Monobloc
  - •Equipment
  - •Photovoltaic system
- Setup 25% of the investment value
  - •Administration
  - •Design
  - •Transport and logistics
- Start-up of production 25% of the investment value
  - •Raw material
  - •Human resources
  - •Sales and Marketing



Governance allargata

With regards to existing working standards, the MOBIQUE project conforms to the SA 8000 system
that safeguards:

- •Child labour
- •Forced Labour
- •Health and safety
- •Freedom of association
- •Right to collective bargaining
- •Discrimination
- •Disciplinary practices
- •Working Hours
- •Pay
- •Control of the supply chain

Impact assessment.

An essential component of a social innovation project is the "Impact Assessment". MOBIQUE measures the impact of its business by breaking it down into:

Economic Impact
- •Local work created
- •Work experience gained
- •Wealth distributed in the community

Social Impact
- •Including jobs for women
- •Less young people migrating
- •Improving the local quality of life

Environmental Impact
- •Utillising produce that would otherwise rot
- •Reduced transporation of product
- •Ecological footprint almost zero

Changing the system
- •Set up the community to community system
- •Facilitating an innovation culture
- •Improve the culture of design thinking

Design Thinking is the set of cognitive, strategic and practical processes in which the design of products, buildings and machinery is developed by a design team. Design Thinking is configured as a design model aimed at the resolution of complex problems through vision and creative management.

The numbers of Mobique.

Surface area of the dehydrator (cm2)

140 000

Total weight of fruit to dehydrate (g)

182 000

Area of each tray in the dehydrator (cm2)

100

Weight reduction of the fruit during dehydration (%)

85%

Number of loading cells

1400

Final weight of the fruit dehydrated in every cycle (g)

27 300

Weight of fruit (g/cm2)

1.30

Price of dried mango (€/kg)

10

Weight of fruit on each tray (g)

130

Daily sales revenue (€)

273

Total weight of fruit to dehydrate (g)

182 000

Weight loss from whole fruit to prepared fruit to dehydrate (%)

30%

Total weight of whole fruit for every cycle (g)

260 000

Price of fruit harvested (€/kg)

0.25

Cost of fruit per cycle (€)

65

Total weight of whole fruit for every cycle (g)

260 000

Number of cycles per season (days)

40

Total weight of fruit to be supplied for every season (g)

10 400 000

Total weight of fruit to be supplied for every season (ton)

10.40

Yield in quintals for hectare.

35

Land necessary for a season of harvest (ha)

0.32

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