



A SOLUTION TO MEET THE CHALLENGE OF FOOD SELF-SUFFICIENCY AND POPULATION EXODUS



THE CHALLENGE OF FOOD SELF-SUFFICIENCY

According to the FAO, 100 million tons of crops are lost each year in Africa, which would be enough to feed 300 million people in the world !

The highest loss ratio is found in fruit and vegetables (40%), especially during peak harvests. At the same time, African countries import billions of dollars worth of food each year.

All these issues penalize local agri-food sectors, thus posing a challenge in terms of food resilience and trade balance.

This recurring problem is due to several concomitant challenges :

- ***On the supply side:***

- **The sector organization and production volume** do not allow demand to absorb the supply of fresh products during high production periods ;
- **Fruit and vegetable processing capacities are limited ;**

- **The poor quality of road infrastructure** does not allow rapid transportation of fragile products from production areas that are generally far from distribution or processing areas.

- ***On the demand side :***

- The African continent is experiencing **a steady increase in its urban population, and middle class** within this urban population.
- This population is **eager for traditional food products that are easy to use.**
- The demand for food products exists **throughout the year** , and not only during harvest periods.
- Due to supply problems, this growing demand is, today, **mostly met by products imported from other continents.**



A NEW SOLUTION FOR A BETTER ECONOMIC AND SOCIAL DEVELOPMENT OF AGRICULTURAL PRODUCTION IN AFRICA

Founded in 2016 by entrepreneurs from Africa and Europe, AS Food (African Sustainable Food) is **a mission-driven company**. It develops **an innovative, technological and organizational solution**, which contributes to increasing the economic and social impact of African agriculture **to better meet the challenge of food self-sufficiency and economic development**. This solution is based on an innovative processing technology for fruits and vegetables close to

the fields, which **addresses the very important and recurring problem of post-harvest losses**, while **promoting a virtuous ecosystem for rural communities**. In doing so, this solution makes a **tangible contribution to 6 United Nations Sustainable Development Goals** : “no poverty”, “zero hunger”, “decent work and economic growth”, “industry, innovation and infrastructure”, “consumption and production leaders” and “partnerships”.



A TECHNOLOGICAL SOLUTION FOR A BETTER VALORIZATION OF THE HARVESTS

AS Food develops modular **fruit and vegetable processing mini-factories**, that can be transported by truck to **the harvesting sites**.

These transportable mini-factories offer new perspectives by addressing 2 types of problems :

- *By avoiding transportation times that are detrimental to fresh products, **they allow post-harvest losses to be kept to a minimum**;*
- *Because they are modular, **they can be used throughout the year on several types of harvest** and several regions, thus significantly increasing the production capacities of the sector.*



AN ORGANIZATIONAL SOLUTION TO CONTRIBUTE TO THE DEVELOPMENT OF A VIRTUOUS ECOSYSTEM



AS Food works in **close partnership with governmental and non-governmental organizations** to promote the adoption of this new solution by rural communities. It is ready to play an important role in **organizing and leading the development of a virtuous ecosystem**, including **training** in good agricultural practices, **financial education**, **social**

microfinance, as well as **technical and commercial training and support for food processors or farmer's groups**. In doing so, it also aims to **contribute to limiting the rural exodus** through the creation of jobs and other lucrative activities (logistics, small trade, etc.)

A POSITIVE AND SUSTAINABLE IMPACT

Thanks to its 2 components, technological and organizational, the following benefits can be expected from the implementation of the AS Food solution :

- **Contribute to the development of the number of farmers and the number of local jobs created by agriculture;**
- **Contribute to the increase of farmers' incomes and to a better use of these incomes;**
- **Contribute to a better development of local human resources;**
- **In doing so, also contribute to increasing tax revenue for national and local communities;**
- **Allow a reduction in imports and an increase in food self-sufficiency, with quality products.**



OUR OFFER FOR COMMUNITIES AND NGOs

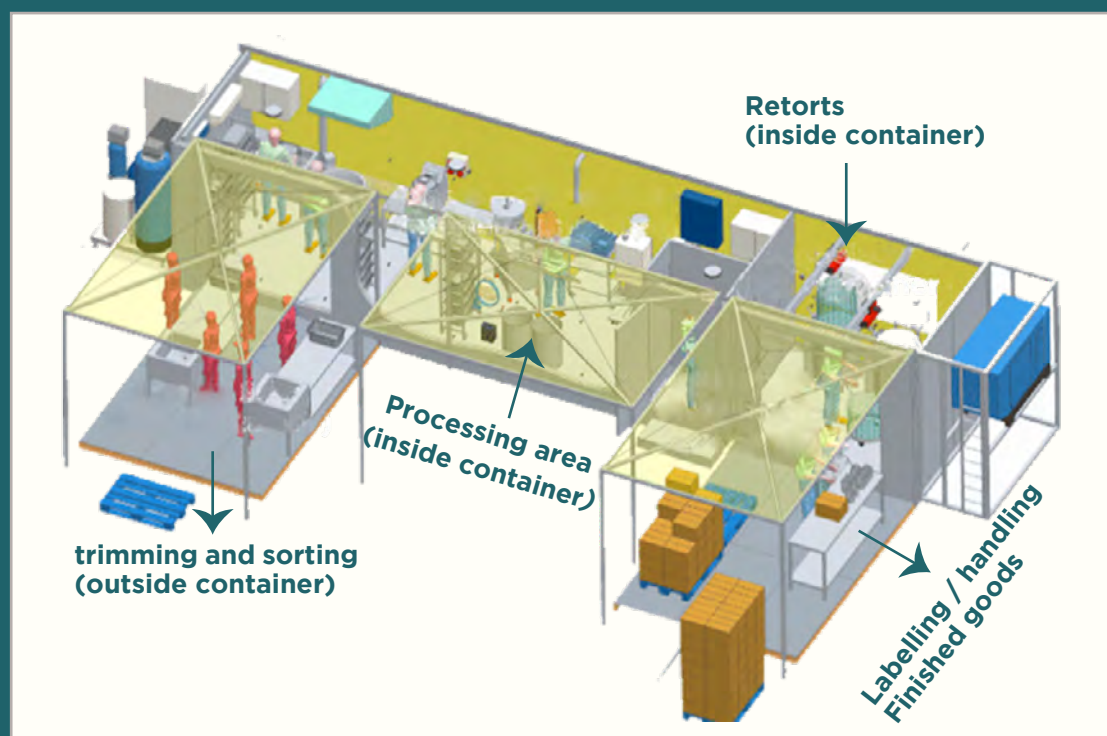
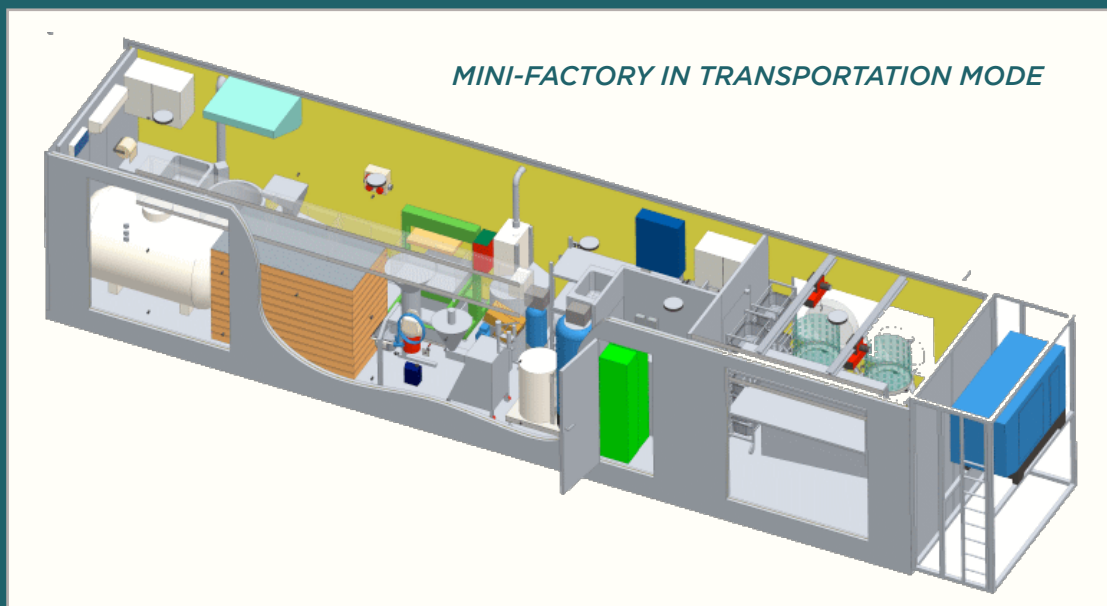
ASFOOD offers communities and NGOs a public-private-NGO partnership in which the acquisition of the mini-factories is ensured by the community or the NGO, and the operational management of the mini-factories is ensured by us. To do this, ASFOOD recruits and trains staff in the country. This management can be done in partnership with national private operators.

The economic model that we propose in this case is the following :

- *Either a fee paid annually by ASFOOD to the partner owner of the mini-factories. In this case, the annual fee amounts to 10% of the investment cost;*
- *Or an operating profits sharing between ASFOOD and the owning partner, according to distribution keys to be defined.*



HOW DOES THE AS FOOD MINI-FACTORY LOOK LIKE ?



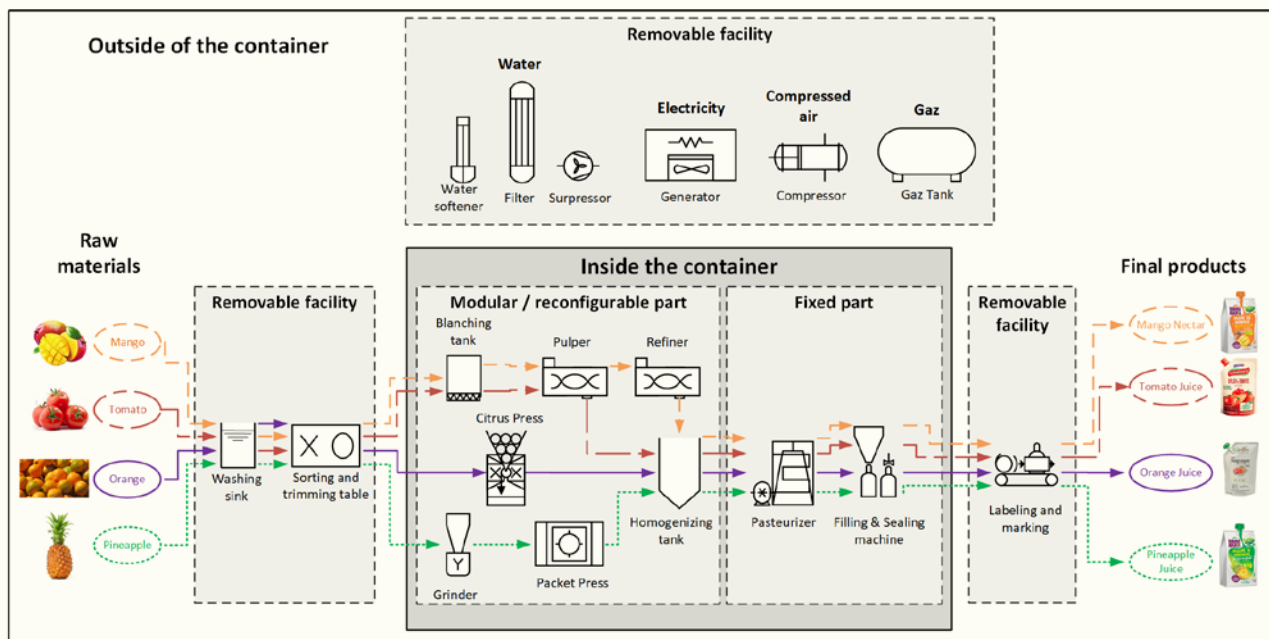
- *What fruit and vegetables can the mini-factory process :*

mango, pineapple, cashew apple, eggplant, okra, tomato (non-exhaustive list, contact us for products not mentioned)

- *Sous quelle forme les produits sont-ils transformés :*

puree, juice or nectar, packaged in doypacks pouches (other packaging is possible, depending on demand)

DETAILED OPERATION OF THE MINI-FACTORY



WHY CHOOSE THE AS FOOD SOLUTION

The solution promoted by AS Food responds in a concrete way to 6 United Nations sustainable development objectives :

1 NO POVERTY



Additional income for farmers, diversification of income for cooperatives, traders and processors, upskilling and development throughout the sector

2 ZERO HUNGER



Availability of fruit and vegetables all year round, diversification of agricultural products supply

8 DECENT WORK AND ECONOMIC GROWTH



Creation of direct and indirect jobs in rural areas and local distribution channels, upskilling and promotion throughout the sector

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Contribution to the development of the agri-food industry in Africa, mini-factories enabling to overcome the lack of road infrastructure, implementation of new technologies for usage facilitation and on-going optimization of the mini-factories

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Reduction of resource waste (food and land), reduction of the carbon footprint of imports, eco-design of the mini-factory, possibility of recycling co-products (processing residues)

17 PARTNERSHIPS FOR THE GOALS



Partnerships with governmental and non-governmental organizations, with micro-finance , with research institutions for the countries of the South.

RETURN ON INVESTMENT SIMULATION

Investing in mini-factories has a significant economic impact thanks to increased average income for farmers, direct and indirect employment, and ultimately increased tax revenues

- **25 to 100 kg/h of finished products, for vegetable purees**
- **130 to 260 litres/h of finished products, for fruit juices and nectars**

The basis for the following figures is the following production rates :

Number of farmers whose entire production can be processed by a mini-factory (1)	130
Minimum increase in average income for farmers (2)	50%

	For 1 Mini-Factory	For 25 Mini-Factory	For 50 Mini-Factory
Direct jobs created	22	550	1100
Indirect jobs created (3)	43	1075	2150

	For 1 Mini-Factory	For 25 Mini-Factory	For 50 Mini-Factory
Potential increase in tax revenues - VAT /year (4)	188 260 €	4 706 494 €	9 412 989 €

(1) Based on average area and harvest of aubergine per farmer

(2) Estimated for pineapple, mango, aubergine and tomato crops

(3) Based on figures in one French region for indirect employment

(4) For one year of operation and processing of pineapple, mango, aubergine and tomato

OUR PARTNERS







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