

The F4F LIFE PROJECT

- Duration: 01/09/2016 – 28/02/2021
- Beneficiaries:



ΓΕΩΠΟΝΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ
AGRICULTURAL UNIVERSITY OF ATHENS

Freie Universität

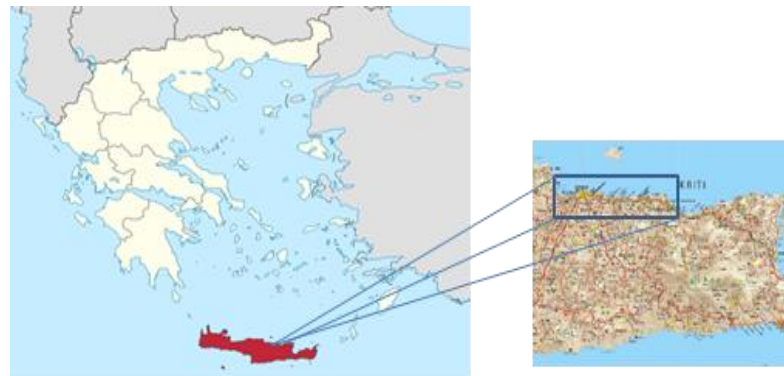


Berlin



ΧΑΡΟΚΟΠΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ
HAROKOPIO UNIVERSITY

- Location:

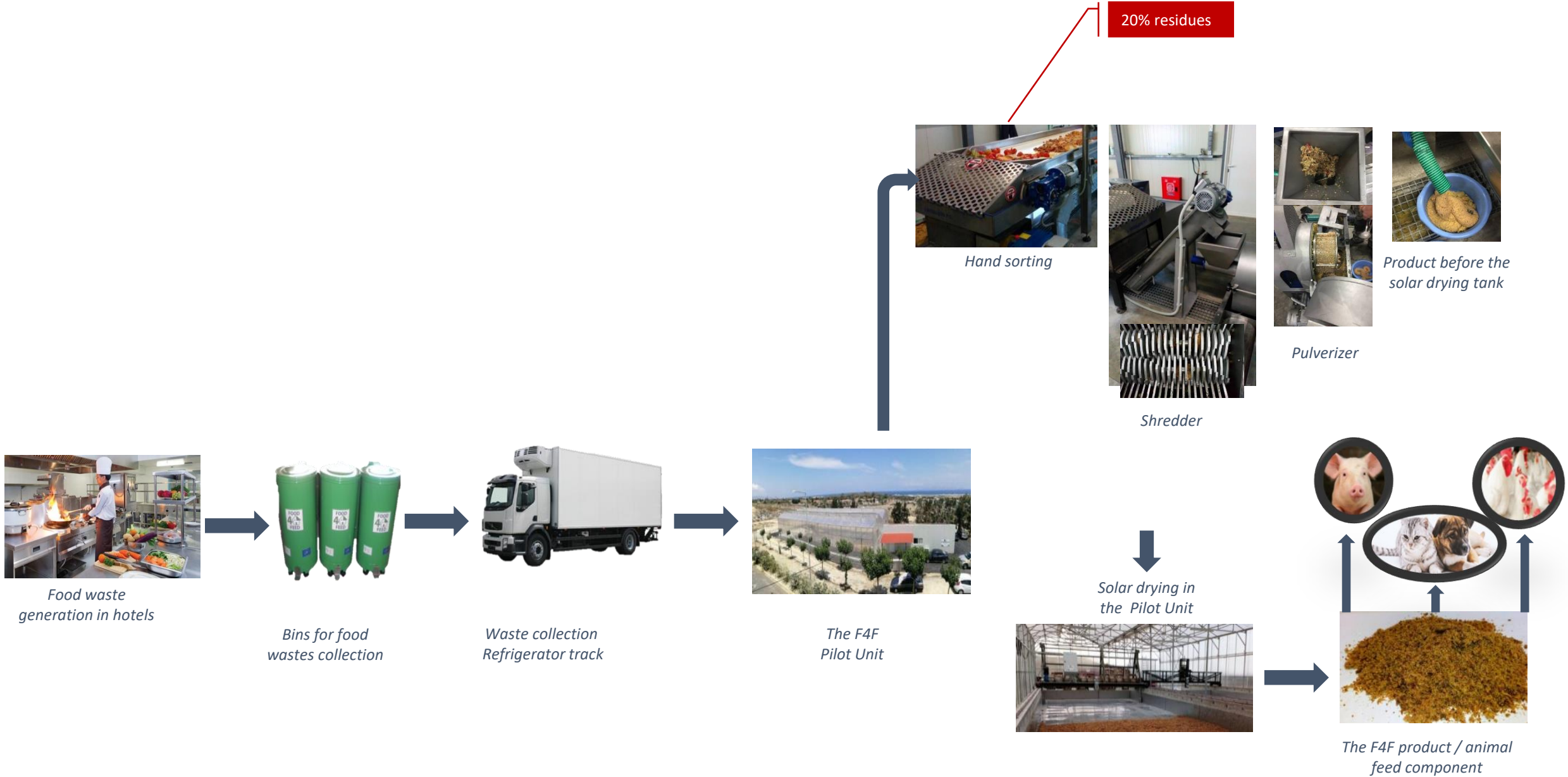


Heraklion, Crete, Greece

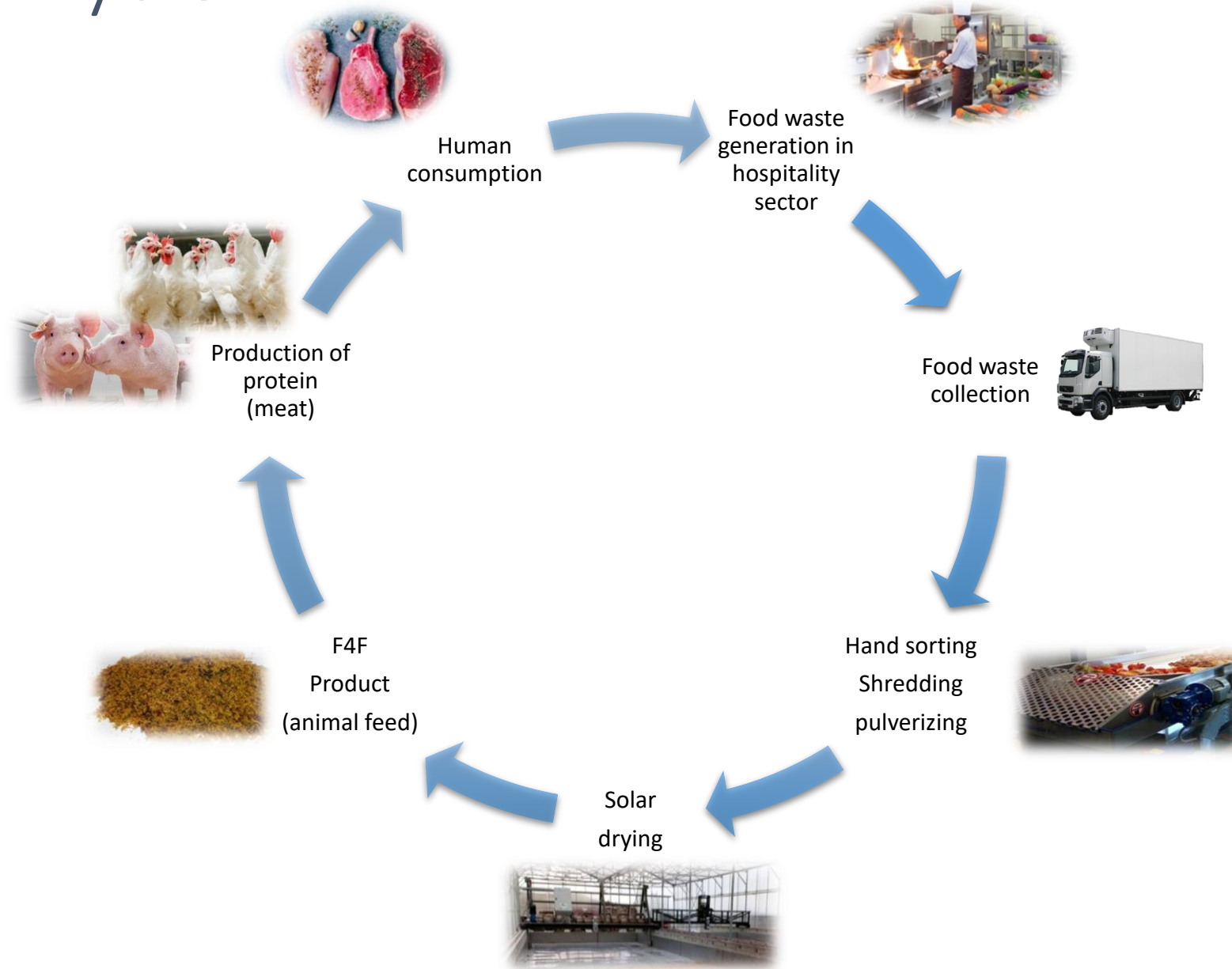


rethink food resources,
losses, and waste 2023

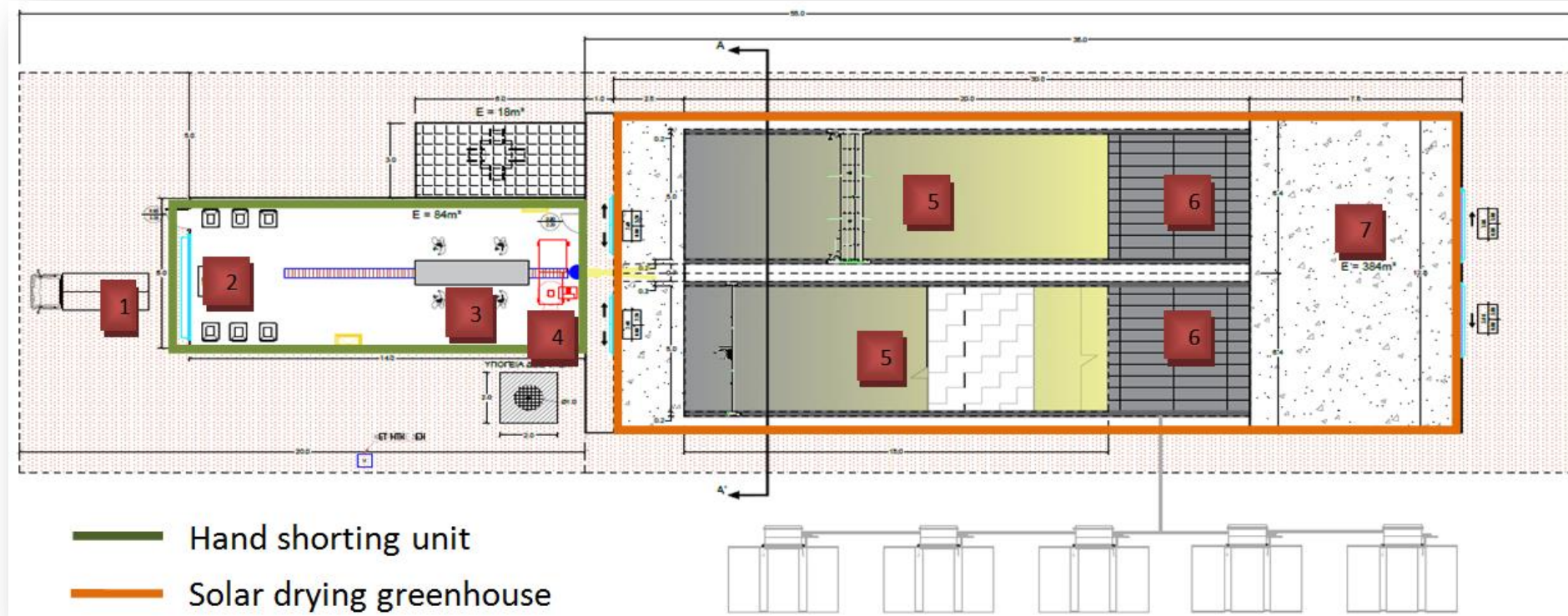
The F4F Production Flow Chart



The F4F Cycle



Plan View of the F4F Pilot Unit



1. Parking of refrigerator truck, brown bins uploaded
2. Bins entrance into the prefabricated building
3. Belt for hand sorting
4. Shredder and pump
5. Solar drying halls (covered with stainless still)
6. Place for bagging the end product
7. Temporary storage

Solar drying unit (30mx12.8m)=384m²
Prefabricated building (14mx6m)=84m²

The F4F LIFE Project

- Production of animal feed components from food waste

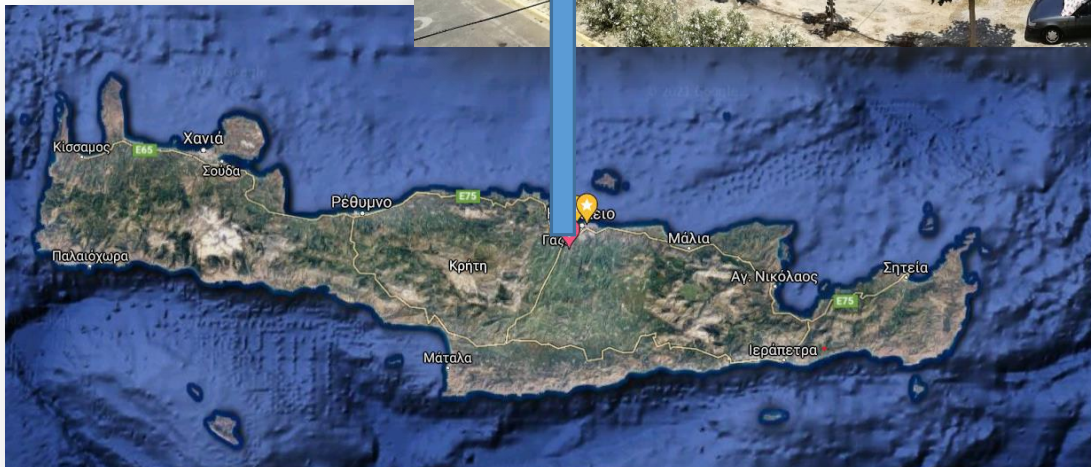
The pilot unit (1,5tn/day)



The hand sorting & pretreatment unit



The solar drying unit



Cooperative hospitality Units with the F4F



AGAPI BEACH RESORT
CRETE



AQUILA
ATLANTIS HOTEL



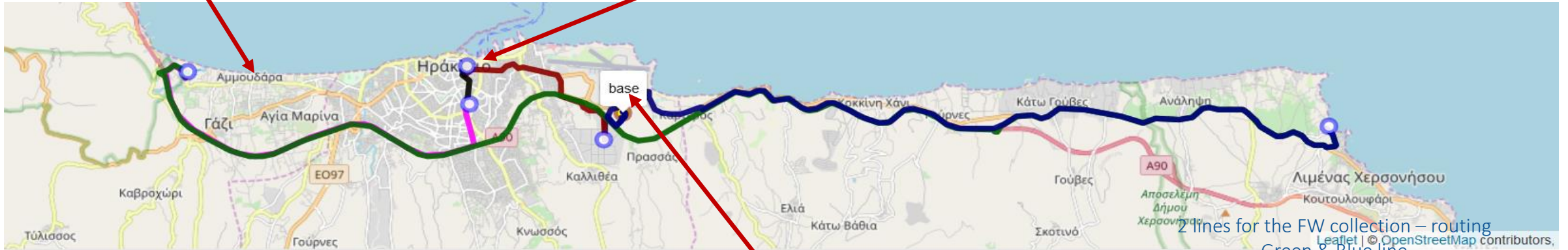
OLIVE GREEN
HOTEL



Season hotels in Ammoudara

City hotels in Heraklion

Season hotel in Herssonissos



2 lines for the FW collection – routing
Green & Blue line

F4F PILOT UNIT

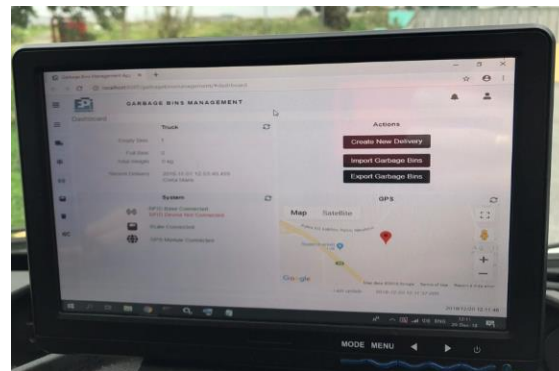


12 branch stores in Heraklion, Ammoudara, Herssonissos & Malia



rethink food resources,
losses, and waste 2023

Refrigerator truck for collection of food waste from hospitality units



During food waste collection from hospitality units



In the pretreatment unit ...

Weighting - Hand sorting – Shredding - Pulverizing

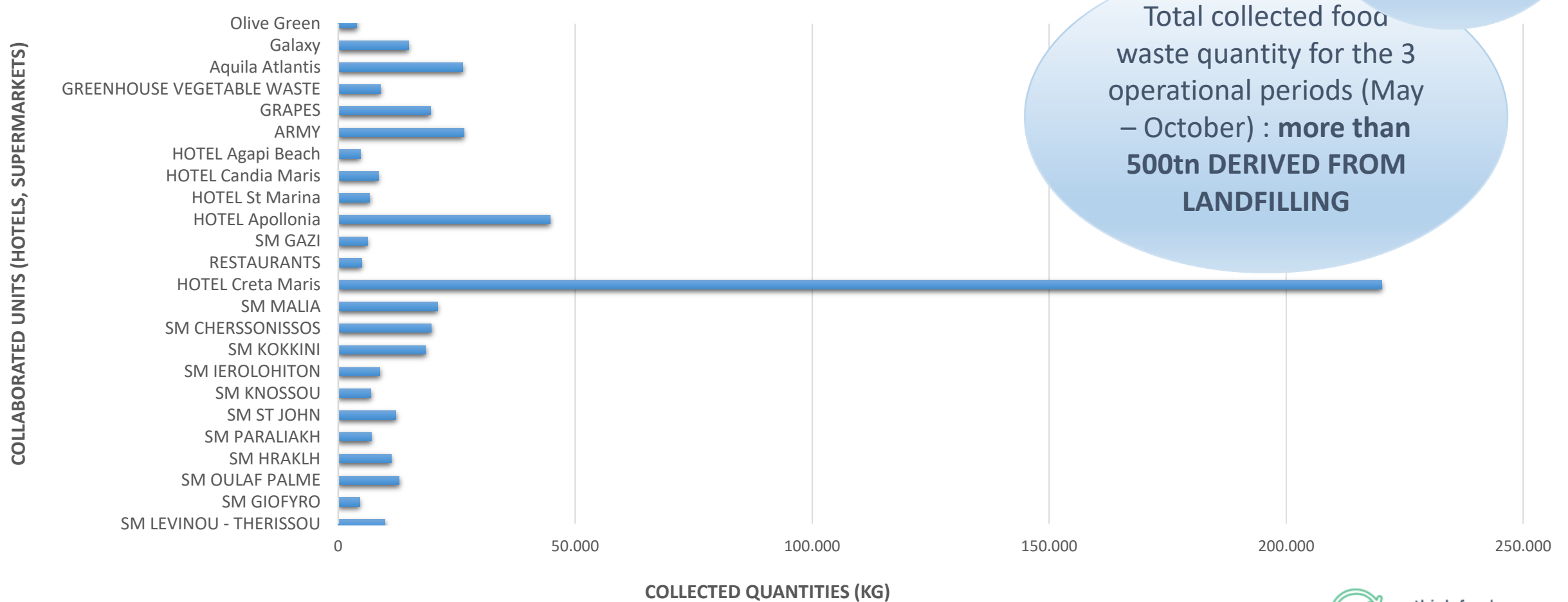


In the Solar drying unit...



Total collected waste during THREE operational periods of the F4F per hospitality unit

Total collected food waste & Green waste per unit (Kg)

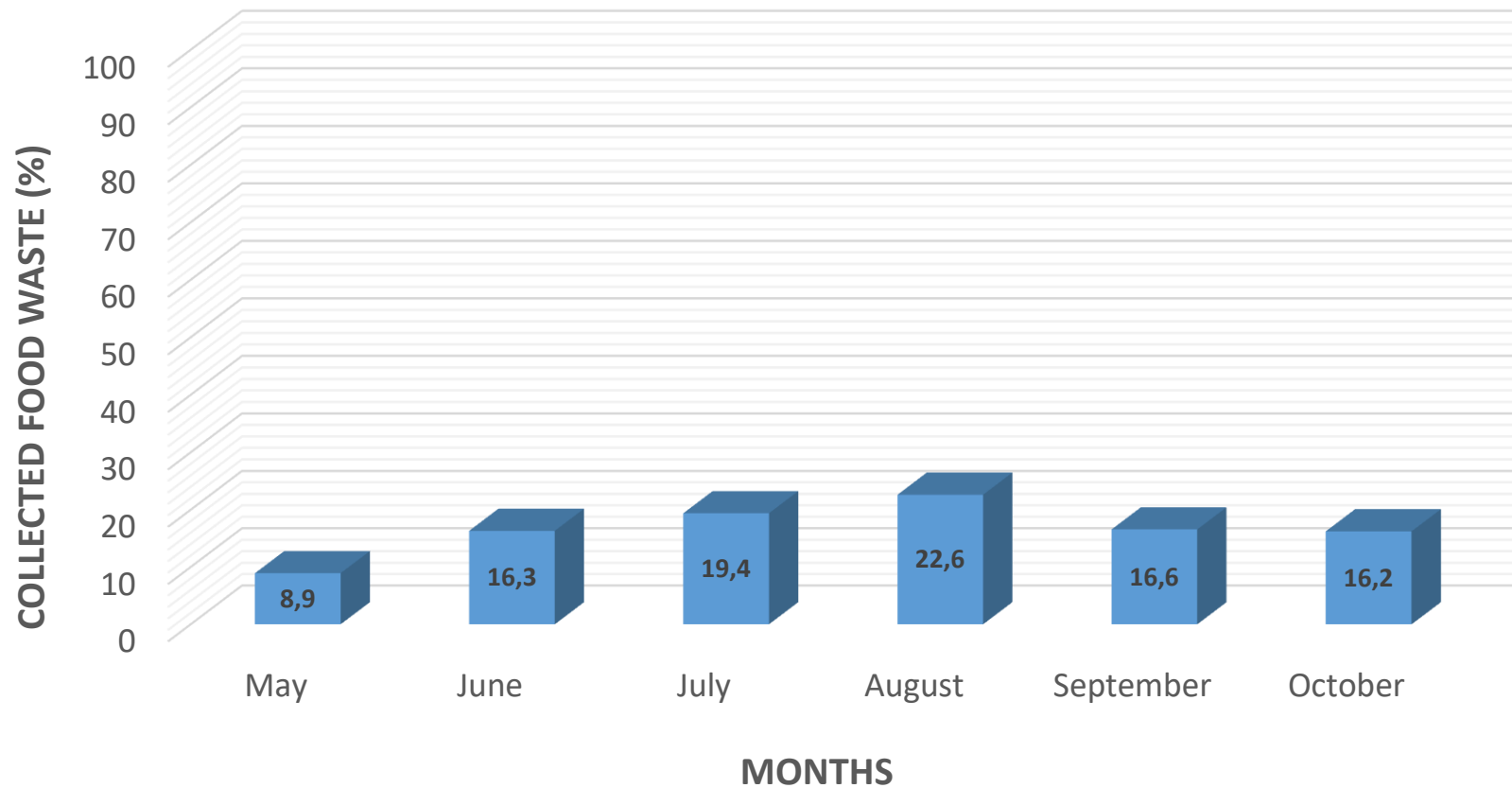


Total produced F4F dry product: **more than 150tn**

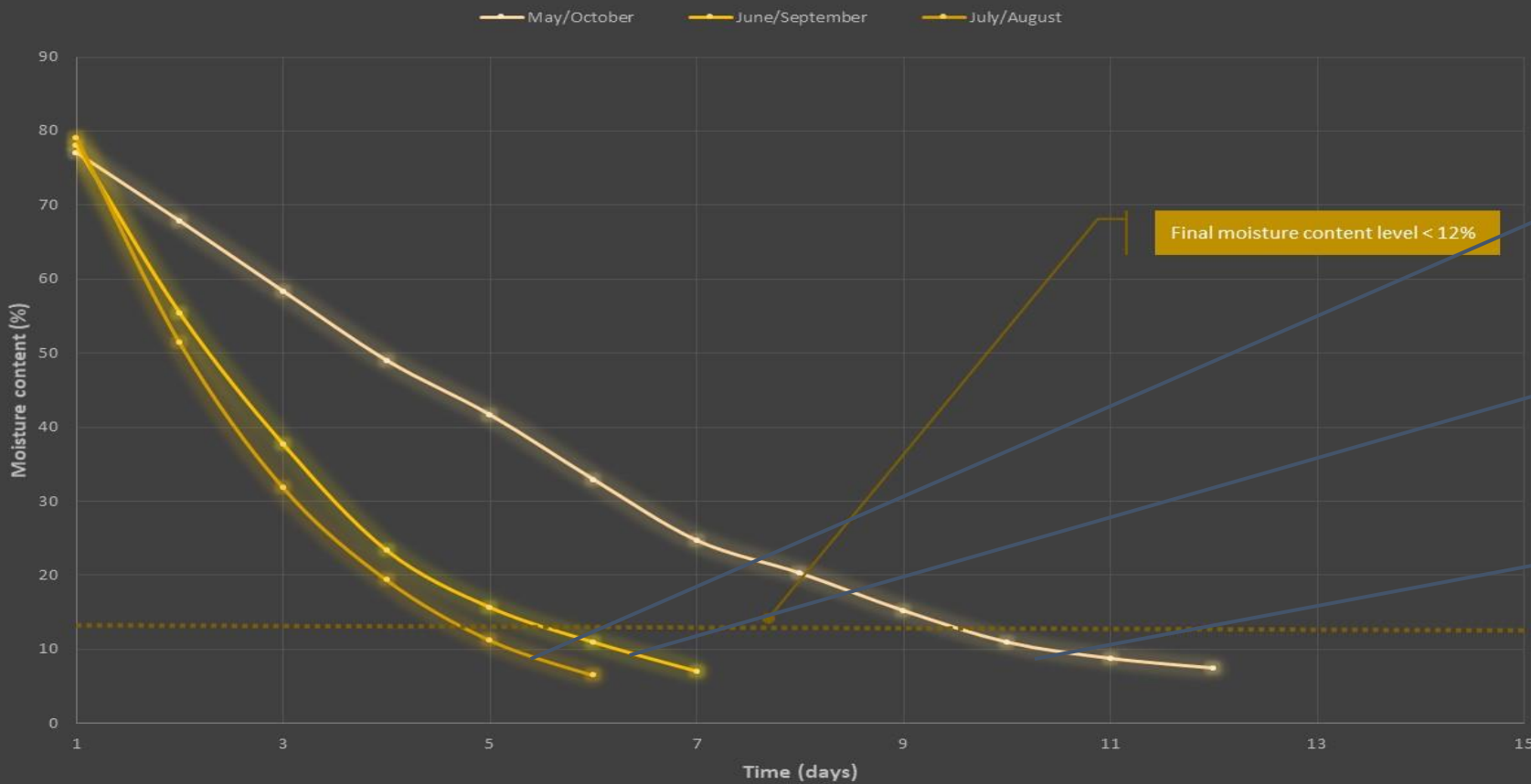
Total collected food waste quantity for the 3 operational periods (May - October) : **more than 500tn DERIVED FROM LANDFILLING**

Total collected food waste (%) per month

Collected food waste (%) per month



Solar Drying Rate profile within months May - October



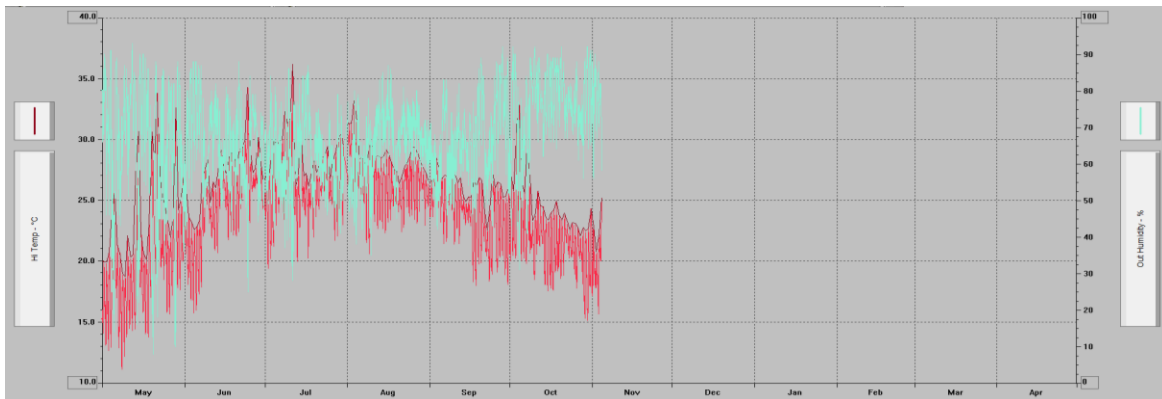
Initial raw material $\approx 11\text{m}^3$
12 turnings of material per day

Less than 5 days
(July & August)

Less than 6 days
(June & September)

Less than 10 days
(May & October)

Final moisture content level < 12%



Aver. Max °C
 May / October : 24-25°C
 June/September: 27-29°C
 July/August: 30°C

Graph 1. max temperature and humidity profile, May-October, 2019

Total F4F product ... as feed component...



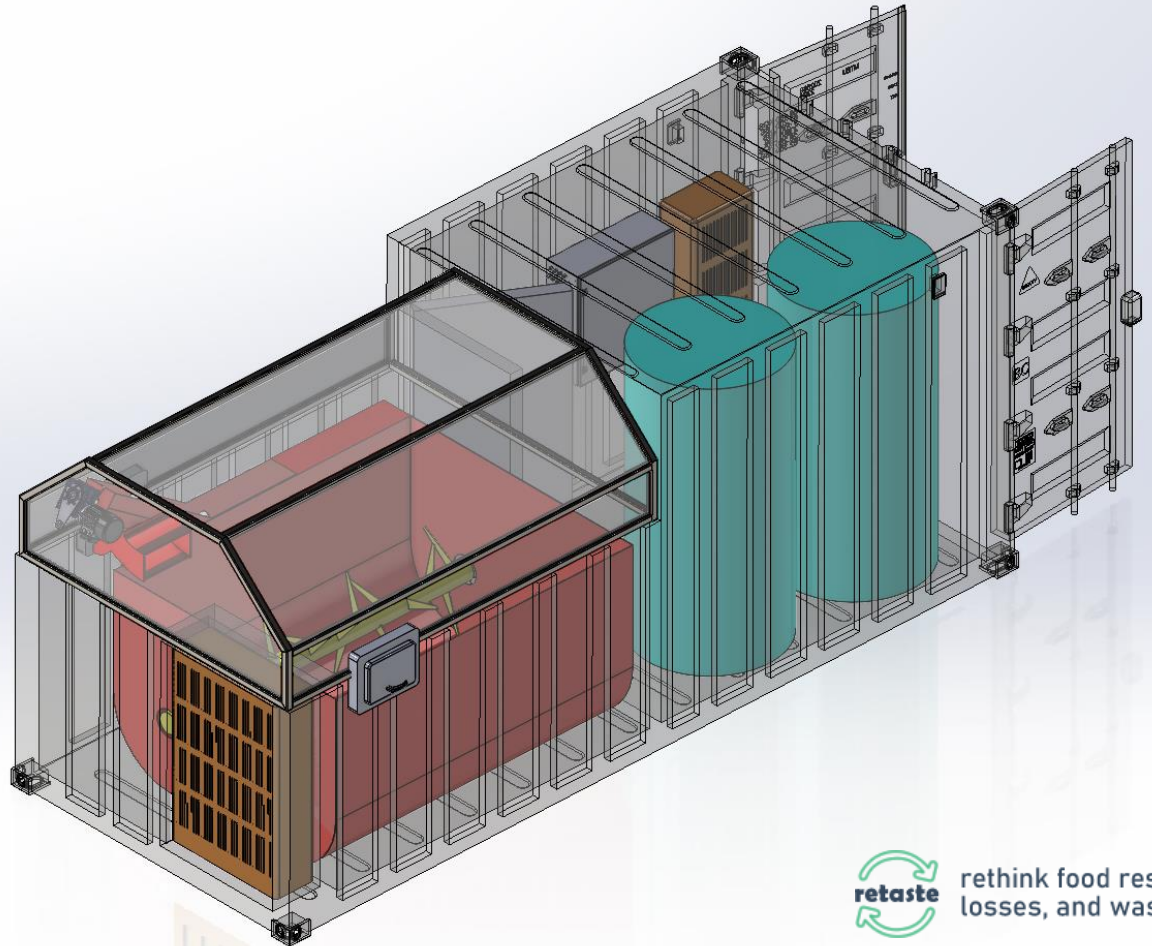
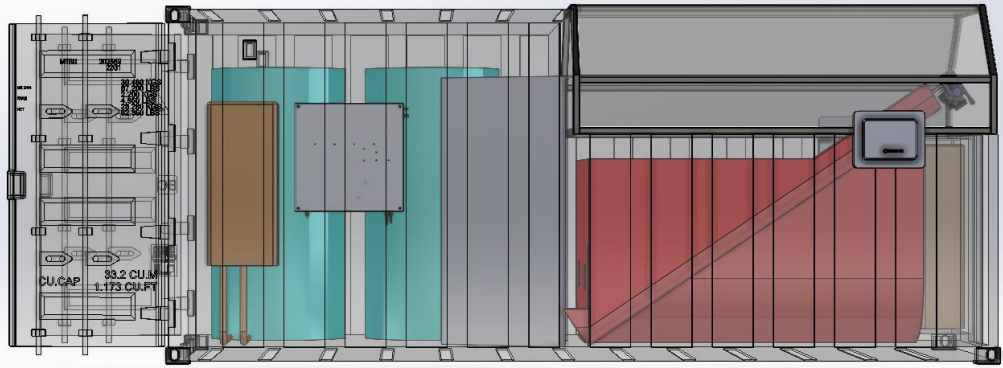
The final product

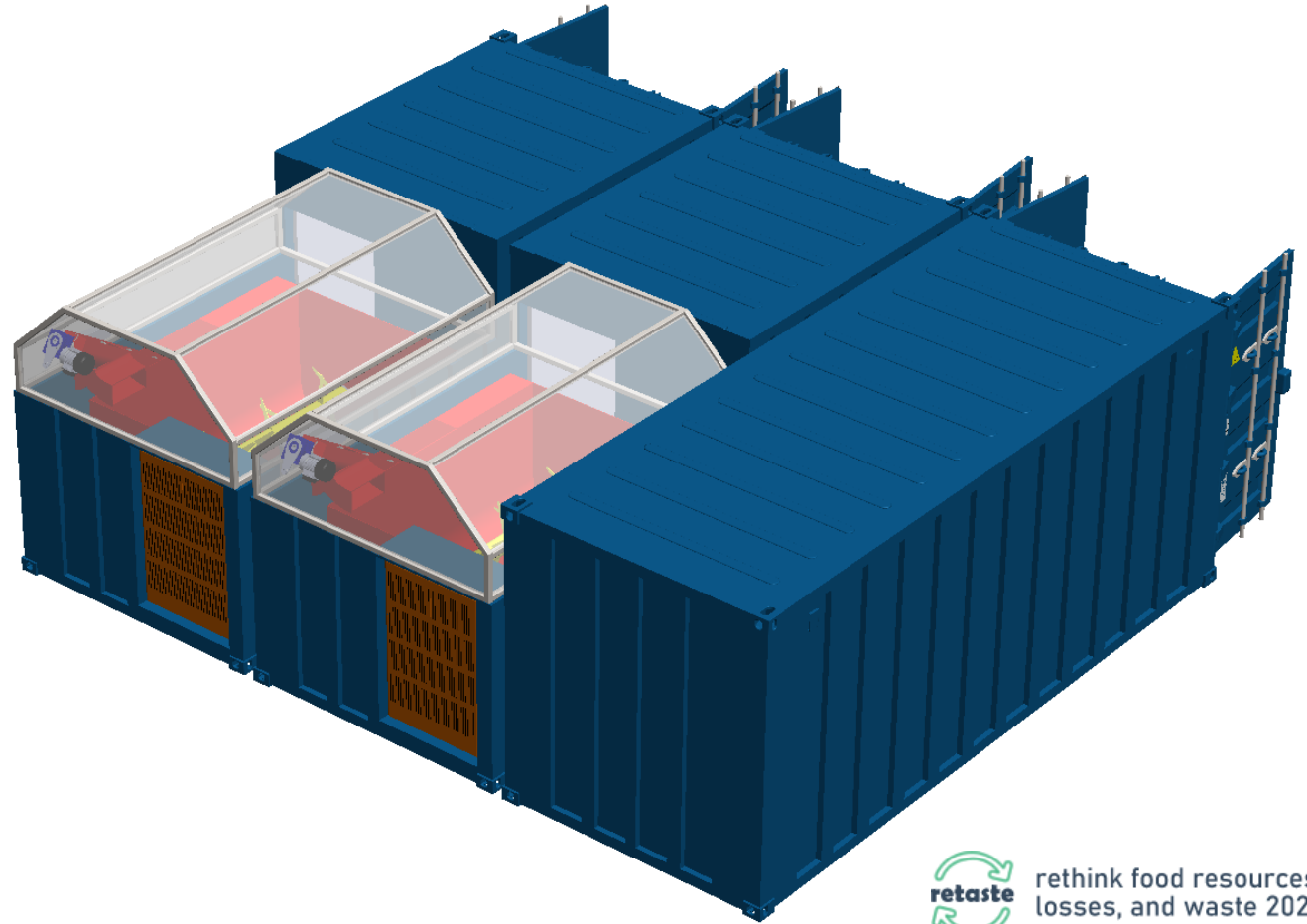
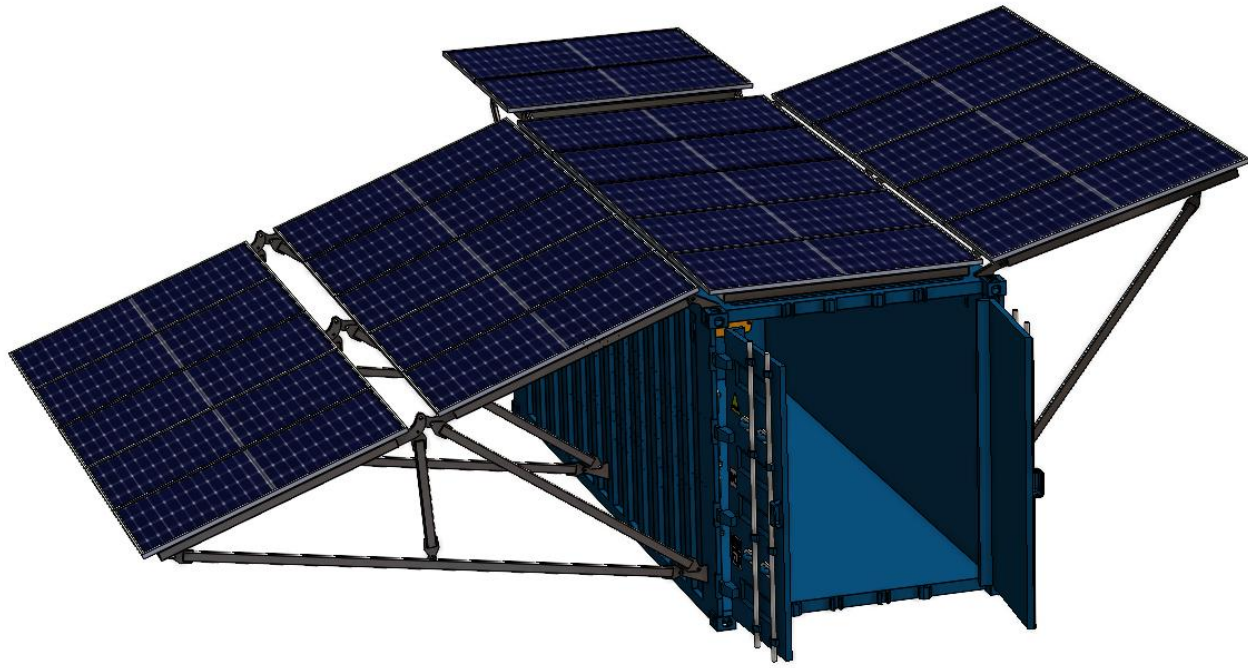
- ✓ initial moisture 75 – 80%
- ✓ final moisture < 12%
- ✓ Drying rate < 6 days
- ✓ Crude protein 21-24%
- ✓ Crude fiber 16-21%
- ✓ Ether extracts (fats) 3-6%
- ✓ Evaluated as feed component
- ✓ Included in feedstuffs at 8-15%



rethink food resources,
losses, and waste 2023

The next step of the F4F
...is the on-site treatment....







rethink food resources,
losses, and waste 2023

KEEP FOOD LOSSES IN THE FOOD CHAIN !!!!



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<https://life-f4f.esdak.gr/>

Acknowledgements

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