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CASE HISTORY – Food industry

STRUCTURE
Cooperativa Ittica Mare Nostrum – Fish preparation / processing center

CUSTOMER DATA		
Place	**Dimensions**	**Typology**
Viareggio (I)	medium dimensions	Innovative processes of transformation and conservation of fish, for school meals, canteens and large-scale distribution



PROBLEM

- It is of primary importance to eliminate bad smells from the waste collection and storage area (plastic bins) and to avoid implementation and use of a dedicated refrigerated cell.
- Reduce the presence of insects and wild animals (mice, cats and birds) that lurk near the waste containers attracted to fish.
- Eliminate the withdrawals of containers containing organic waste (almost entirely fish) currently bi-weekly.
- Reduce the frequent washing, conditioning and sanitization of bins dedicated to the collection of organic waste (almost entirely fish)
- Reduce the extra costs of sanitation and rodent control due to the presence of insects and rodents
- Finding a sustainable solution in line with the Cooperative's policy of promoting an Eco-sustainable activity capable of reducing the CO2 impact produced by its business.



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STRUCTURE DESCRIPTION





Mare Nostrum operates with a fleet of 25 boats, from Viareggio to Carrara (Ms) and Piombino (Li). Each of them fishes with gillnets, applying the rules of "responsible fishing" to protect the environment



The Cooperative Project is based on the administration of fish in canteens, especially school, which has always been a sensitive issue: the product must be of good nutritional and hygienic-sanitary quality, responding at the same time to logistical and organizational needs, as well as to cost criteria.



To meet these needs, the Mare Nostrum cooperative has developed an innovative process for the preparation of the fish, subject to an industrial patent, which acts on three elements - temperature, humidity and oxygen - allowing the product to maintain organoleptic characteristics for many weeks. equal to fresh.

All the daily preparation waste produced (almost totally fish) varies according to the season with values between 120-180Kg and is collected in food plastic containers. The waste is then treated with the EcoSwiss EFR machine for its definitive reduction in weight and volume by drying..



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ORGANIC WET WASTE COLLECTION SERVICE



Collection is managed by the affiliated company for the recovery of Category 3 special waste.

The frequency is bi-weekly with a cost of € 0.35 per kg.

They complained of bad smells, massive presence of insects, cats and the containers were not very decent to the eye. Frequent cleaning and washing was therefore required with significant use of staff hours / work.

SOLUTION ADOPTED



Purchase and use of a no. 1 EFR50 machine to manage the organic wet waste produced daily by the facility with the aim of expanding the machinery fleet with the expected entry into operation of the new Viareggio fish market expected in the months to come.

(in this case the expected deviation will be greater than 230-250 kg / day)

Installation of an EFR 50 machine (50Kg / cycle) in a "small house" on the quay of the local "Darsena" where the direct sale of the catch of the day to the public also takes place; external area adjacent to the preparation and packaging area. A large part of the electricity in the houses is produced by a solar panel system positioned on the roof of each structure, in line with the Cooperative's Green Eco-sustainable philosophy. The little condensed water produced is evacuated into the water recovery grid placed on the floor of the house



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Impact on waste with use of EFR
○ Kg of annual organic waste produced around 37,000 Kg ○ Reduction of organic waste produced / year about **70%** ○ Kg of organic waste in less / year over **26,000 Kg** ○ Kg of dry residue that can be used as a resource over **500 kg**

List of Advantages and Economic Savings (quantifiable)
○ Total elimination of bad smells around the entire structure **non-quantifiable value but of great impact / image for the company; essential for choosing the purchase of machinery** ○ Do not implement and use a new refrigerated cell for the storage of organic waste deemed necessary in the spring-summer seasons (100%) value equal to **approx. 8.000 €** ○ Total elimination of the maintenance and repair costs of the refrigerated cell **value equal to 1,200 € / year** ○ Reduction of personnel costs for cleaning, reconditioning and sanitization of the refrigerated area and storage of organic waste **(about 80%) value equal to € 1,200 / year** ○ Improvement of the decor and general cleaning of the external area of the structure, **a value that cannot be quantified but of great impact / image!** ○ Elimination of extra costs of periodic reclamation of insects (flies) and de-ratification **(100%) value over € 1,000 / year** ○ Total elimination of organic waste collection (currently at a cost of € 0.35 / kg) **value over € 13,000 / year**

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