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CASE HISTORY – Food industry

STRUCTURE
Serenissima - Cooking Center for Collective Catering

CUSTOMER DATA		
Place	**Dimensions**	**Typology**
Vicenza (I)	big dimensions	cooking center for collective catering and preparation of 3,000-3,500 meals / day



PROBLEM
o Eliminate bad smells from the waste collection and storage area (refrigerated cell) o Reduce the presence of wild animals (mice, cats and birds) that nest near the waste containers in the days between the bi-weekly collection of organic waste o Reduce the frequent washing, conditioning and sanitization of bins dedicated to the collection of wet waste. Often the lids break and while waiting for them to be replaced, the number of animals nesting directly in the bins increases; o Reduce the use of biodegradable-compostable bags, subject to breakage and percolation (significant cost). o Reduce the extra costs of rodent control due to the presence of rodents o Finding a sustainable solution in line with the Group's policy of promoting Eco-sustainable structures capable of reducing the CO2 impact produced by its business.

In line with the new European directives aimed at pursuing the reduction of CO2 emissions, the structure was designed and built to have total energy self-sufficiency through the production of energy with latest generation photovoltaic panels.

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STRUCTURE DESCRIPTION



All the preparation activity is managed within the structure and the waste from the collective catering services managed is always returned to it. The products used in the preparation activity, according to the new range, are products that are divided according to the degree of "processing" and range from I to IV range according to needs.





All the preparation waste produced in the structure and all that returning from the points served undergoes a first treatment inside the washing area of the structure in a machine that reduces its size by means of a hydraulic centrifuge action (shredding and wringing).



The residue is then collected in plastic containers and although reduced in volume it still has a significant presence of water and therefore a natural tendency to putrescence, the emission of unpleasant odors as well as a still significant specific weight.

Subsequently, all the waste is then definitively treated with the EcoSwiss EFR machine for its definitive reduction in weight and volume by drying.

Type of organic waste: a lot of pasta, rice, bread, vegetables and fruit; sometimes they have rind / fat from hams cleaning

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ORGANIC WET WASTE COLLECTION SERVICE



The collection is managed by the company having an agreement with the municipality to which the structure belongs. The frequency is bi-weekly (the lack of a 3rd weekly collection was complained of).

The bins often showed a certain state of wear, not completely intact (broken lids) and poured in a poorly clean state, with many traces of dry leachate.

When they were forgotten opened by the staff (often) they attracted many birds and cats with the consequent breaking of the bags and spreading of waste / leachate near the bins themselves.

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



Presence of black boxes for rodent control in the storage area of the bins and in the area in front of the kitchen, near the room used for the temporary storage of wet-organic waste.

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SOLUTION ADOPTED



Purchase and use of a no. 1 EFR 100 to manage all the organic wet waste produced daily by the structure.

EFR installation in the external area adjacent to the washing area, protected by a simple rain canopy. The machine improves its performance if installed outside thanks to an optimal activity of the condensing unit



The little condensed water produced is evacuated to the ground.



Quantità quotidiana media di scarto organico prodotto Average daily quantity of organic waste produced 80-90 Kg (7 days / week).

Average daily quantity of product

resulting reusable 20-30 Kg

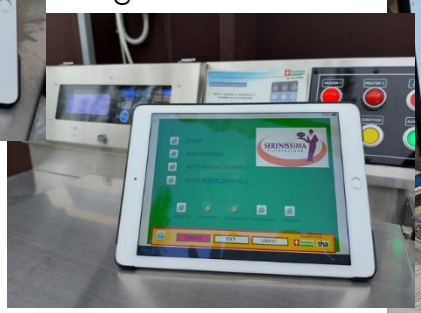
The resulting dry solid residue is partly used as a valid mixed soil improver for the green areas inside the structure.

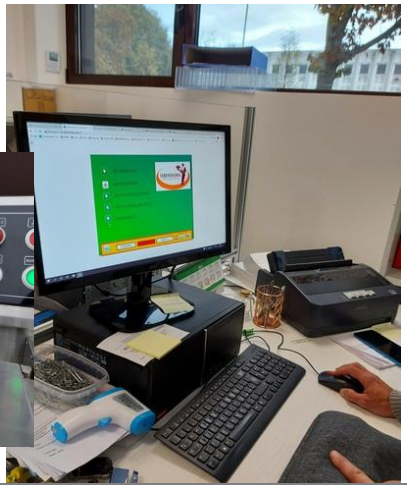
Eco-sustainable solution aimed at pursuing the reduction of CO2 emissions.

Remote control (Optional))



The EFR machine is equipped with dedicated electronics for remote management and start-up and data acquisition on operation / use / diagnostics.





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Impact on waste with use of EFR

- Annual organic waste produced: 30,000 - 35,000 Kg
- **Reduction of organic waste produced / year about 70%**
- **Kg of organic waste in less / year between 20,000 - 25,000Kg**

List of Advantages and Economic Savings (quantifiable)

- Total elimination of bad smells in the rooms adjacent to the kitchen and external storage area bins separate waste collection **(100%) value not quantifiable but of great impact/image**
- Reduction of personnel costs for cleaning, reconditioning and sanitization of the external wet collection area and bins **(about 80%) value equal to 3.500€**
- Improvement of the decor and general cleaning of the external area and in front of the kitchen, a **value that cannot be quantified but has a great impact / image**
- Elimination of air conditioning in the storage room for organic waste **(100%) value equal to € 500 + any annual intervention / maintenance costs (min. € 200)**
- Elimination of rodent control costs **(100%) – value € 1.400**
- Reduction of wet bags **(about 50%) - value € 2,300**
- Use (at least partial) of the solid residue obtained to replace chemical fertilizers for the large green areas and plants that adorn the gardens of the structure, a **value that cannot be quantified but of great value and eco-sustainable impact**
- Presentation of the request to the municipality for a possible% reduction of the waste tax **(currently not recognized) - future value of over € 6-7,000 per year if TARI discount of 20-30%**

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