

PRESENTATION OF FOOD WASTE MONITORING AND PREVENTION TECHNOLOGY

2023



MIESTO
LABORATORIJA

Prior to the audit, the quantities of food leftovers appeared to be low. Clients usually did not eat the accompaniments to their meals: bread, sour cream, jam, etc. At the preparation stage, the main leftovers were from the processing of vegetables and meat. All food leftovers, both from clients' plates and from the kitchen, go to a composting facility inside the "Miesto Laboratorija", which turns them into compost within 24 hours. If there are any leftovers that have not been sold, at the end of the working day they are donated to poor people or charities in the same area.

Two approaches have been chosen to implement solutions to measure food waste (by place of generation, type of food, and cause of generation) for prevention and reduction.

One for customers and one for kitchen:

- ✓ is a food residue accounting application for small kitchens, for more accurate planning of production, food storage, and procurement;
- ✓ a smart checkout application that allows café customers to choose the add-ons to their meals and to refuse those they do not want to eat or pay for.

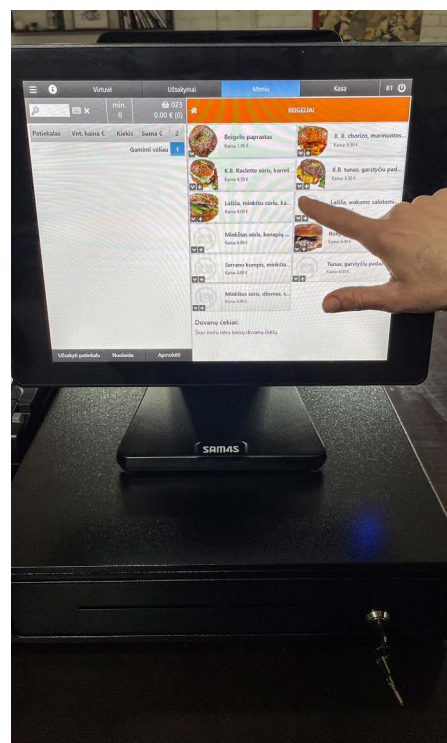
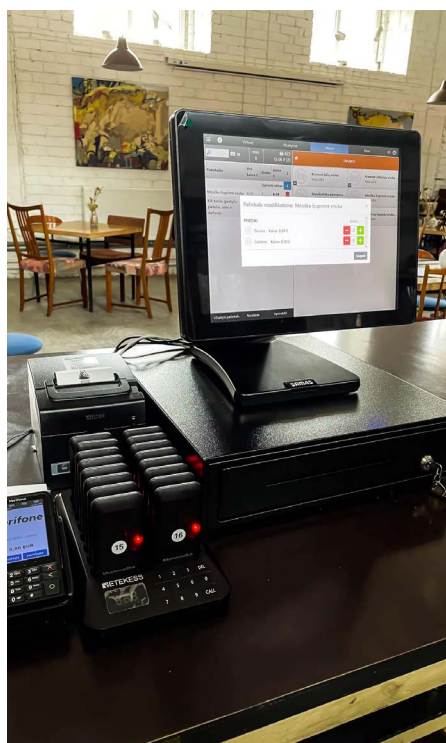
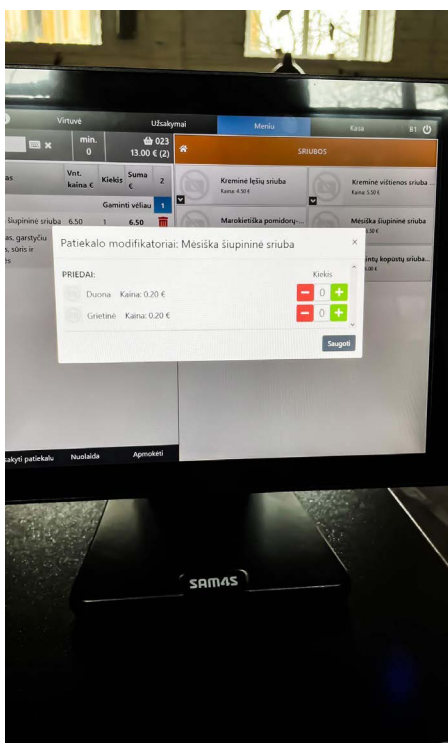
The audit showed that most of the leftover food on customers' plates was made up of extras, which they could not choose to order or not. This situation was due to the fact that the cash register system previously used in the "Miesto Laboratorija" cafeteria did not allow for the classification of additives. A new checkout system was chosen, which has modifiers that allow customers to choose the additives themselves. In the search for the most suitable cash accounting software for a catering project of this size, the main selection criteria were: a cash register system adapted to catering facilities; that the company supplying the equipment had experience working with the catering sector and their individual needs; and that the cash register system had a minimum service life of 12 hours.

Before the new cash accounting system was implemented, the following work was carried out:

- ✓ the full food and beverage menu was entered, with the careful assignment of modifiers to dishes and beverages;
- ✓ introduced prices for additives/modifiers to dishes and drinks to raise customer awareness and encourage responsible choice.

The analysis and reporting function of the new POS system is very comprehensive and detailed. It gave a very clear picture of customer preferences: which additives are needed and which are not popular, whereas before they were automatically added to plates (e.g. greens with bagels, bread with soup).





The new POS system's detailed analysis and reporting function has provided a very detailed and clear picture of what customers are choosing - which add-ons they need and which ones they simply don't choose anymore, whereas before they were automatically added to their plates (e.g. greens with muffins, bread with soup).

The way to reduce and prevent food waste is to have a system that tracks food leftovers on customers' plates (i.e. food produced) and in the kitchen (raw materials). In order to choose the most appropriate device, it was necessary to consider not only the catering business model and size but also the volume of raw materials purchased per year. "The system chosen by the "Miesto Laboratorija" cafeteria is specifically designed for small restaurants with raw material costs of less than EUR 100 000 per year (the "Miesto Laboratorija" cafeteria spends up to EUR 75 000 per year on food).

Larger kitchens can be equipped with a 360-degree integrated scanning camera, scales, and display, or a system with a robust scale design that is easy to maintain and fully washable - the latter is particularly relevant for large establishments with high customer traffic and a need for fast and efficient kitchen operations.

"The operating model chosen by "Miesto Laboratorija" cafeteria is adapted to smaller kitchens (it consists of an ergonomically designed scale and display), **is small in size, and allows for the measurement of two sections of waste: kitchen waste (pre-consumer waste) and customer plates and cups left over (post-consumer waste).**

While it is common practice to install food residue measurement systems in the closed kitchens of restaurants/cafés, “Miesto Laboratorija” cafeteria decided to install the system in the customer area, on the counter of the dish rack. This decision was taken in order to educate its customers and to make them think about the scale and problems of food waste.

Raw materials or manufactured products leaving the kitchen as waste are calculated quite accurately (the software provides a wide range of options for determining the type, cause or source of products). Customer plate balances are calculated in total, without singling out specific products. These limitations of the system are somewhat disappointing, as it means that it will not be possible to keep track of what exactly is coming back on plates or in cups.

Before the system was installed, we first selected, weighed, and entered into the system the dishes and plates where kitchen staff and customers will weigh their waste. And when the equipment was installed, the following steps were taken:

- ✓ all the raw materials used in the menu were entered;
- ✓ all the containers have been entered: both the utensils used in the kitchen and those used to serve the dishes;
- ✓ staff training was organized;
- ✓ a communication plan was developed to present the results to both the system suppliers and the public, promoting education on solutions to reduce food waste.



While it is common to install food waste monitoring scales in the closed kitchens of restaurants or cafeterias, “Miesto Laboratorija” decided to place it in the customer lounge, in a rack of dish racks. The aim is to show customers how much food is left over, how much food is wasted, what the financial and CO2 value is, and to encourage them to think about the issue of food waste. The task of finding a convenient location and coming up with a clear system of use was not easy. The initial idea was that a customer places his plate with leftovers on the scale, indicates on the screen that it is the customer’s plate, and then places his plate on the bottom shelf to be taken away by the staff. But what if customers put their plates there without weighing them first? The accuracy of the accounting will be reduced. Therefore, the shelf was labeled with instructions on how to use the equipment and that it was important to leave only plates with leftovers on the shelf. If customers do not want to weigh, they can leave them on the tables and the staff will weigh the leftovers.



 Miesto LABORATORIJA

INSTRUKCIJA KLIENTAMS

**NESUVALGĖTE SAVO PORCIJOS?
PASKAIČIUOKIME, KIEK PINIGŲ,
VANDENS ir DEGAJŲ IŠKELIAUS | KOMPOSTA**

-  Padėkite lėkštę ant svarstyklių
-  Nuimkite nuo lėkštės įrankius ir sudekite į kibirėlį
-  Spauskite PLATE WASTE
-  Pasirinkite savo lėkštės dydį
-  Spauskite Kompostas
-  Pamatykite, kokią finansinę ir aplinkosauginę vertę turi tavo lėkštės likučiai
-  Pasvertą lėkštę padėkite į lentyną apacioje



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