
FOOD WASTE TRACKER MANUAL

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1 Intended use

SmartKitchen Food Waste Tracker is a solution for a food service company to track food loss. Tracking covers all kitchen functions: receiving, storing, and handling raw materials, as well as meal preparation, serving and plate waste. The service can also distinguish how much of the food wasted was edible.

Based on comprehensive monitoring and analysis of reports received from the service, the phases and items that generate the most losses are identified. Based on the information, measures to reduce waste can be targeted to minimize costs and greenhouse gas emissions.

2 Preconditions

Purchasing and activating the SmartKitchen Food Waste Tracker license entitles you to use the service. The functions included in the Food Waste Tracker are also part of Digital HACCP solution.

Food waste tracking can be started once waste categories and items have been created in the SmartKitchen service. Waste items can also be given a cost and carbon dioxide equivalent value. In addition, it is defined how many percent of the item is edible. After this is done the waste entries are automatically saved to the SmartKitchen cloud service. The waste data collected is monitored and used for measures to reduce food waste.

3 Deploying the service

Follow these steps to start using the service:

Step 1: Create user account on **smarkitchen.solutions** service.

Step 2: Activate the license you received. This is done from the Settings menu under License Management. Fill in the company information. Your account will become the unit / location main user account.

Step 3: If the staff of the unit logs in to the service with their own IDs, they have to create own user accounts. The unit main user adds these accounts with selected permissions to the unit. This is done from the Settings menu under Unit information and Unit members.

Step 4: Specify the waste items on the Food Waste menu, under Food Waste categories. Each item can be assigned a value in cost and carbon dioxide equivalents. Also define what percentage of the item is edible. If you leave the field blank, the service automatically adds 100% to it.

Example: It is known that 75% of plate waste is napkins and inedible items (e.g. fish skin, potato skins). The percentage of edible food waste from plate waste can be set at 25%. Food waste is usually 100% edible, excluding some items, e.g. used coffee grounds, where the edible portion is 0%.

Note. If the kitchen belongs to an organization, skip this step. Waste items are defined at the organizational level and are automatically inherited into the account.

Step 5: Select if production amount is recorded in addition to the waste amounts. This is done under General settings in the Food Waste menu. From the solution point of view, production amount means the daily amount of each waste item imported into a unit or manufactured in a unit.

Step 6: Select from the same menu if the food waste reason is also recorded.

Step 7: If you have purchased a SmartKitchen Waste Scale, activate it from the Food Waste menu under Scales and manual measuring locations. Give the scale an easily recognizable nickname. If necessary, specify the containers to be used and their weight in the Containers section. Once the containers and their weights have been defined in the service, they are selectable in the Food Waste Tracker application. For details, refer to the Waste Scale manual.

Note. If you belong to an organization, then the waste item information is pre-entered. This information can only be changed by the organization's main user who will receive separate guidance on SmartKitchen service.

The Food Waste Tracker service has now been set up and the recording of waste data can begin.

4 Food waste recording

It is recommended that food waste be recorded in the Food Waste Tracker solution as soon as it occurs. At the same time as the waste is poured into the collection container, it is recorded by selecting the waste item and its quantity (kg) from the service.

Other types of recordings are also possible. For example, recording when a waste collection container is emptied. In this case, only the total amount of waste generated can be monitored.

It is not recommended that the amount of waste is first written on paper and later entered in the service, as this is where there is the greatest possibility of incorrect entries.

The recording instruction specified by unit main user is followed.

Food waste entries can be made in the following ways:

1. The waste is recorded with the SmartKitchen Waste Scale (WSS) using the Waste Scale tablet application.
2. The amount of waste is entered manually into the SmartKitchen service using a web browser.
3. The amount of waste is entered manually using the KitchenHelper smartphone app.

1) Recording the amount of food waste with the WasteScale with touch screen (WSS).

Method of use 1: The excess food on the restaurant's buffet line must be thrown away after closing the service. First, all remaining salad is collected, poured into a collection container, and "salad" is selected on the Waste Scale touch screen. The weight and type of food waste is saved directly in the SmartKitchen service. Then the leftover meat products are collected and poured into the collection container, and "meat" is selected etc. In this way, the amount of waste is recorded with desired accuracy. The waste container on the scale is emptied when it is full.

Method of use 2: The food waste occurs in the restaurant kitchen during food preparation or at some other stage. The spoiled food or raw material is poured into a container on top of the Waste Scale and its type is selected on the touch screen. The weight and type of food waste is saved directly in the SmartKitchen service. After the measurement, the waste is poured into a waste bin. Each batch of waste is weighed separately. This method is good when WasteScale is on the table and the kitchen waste is sorted.

Method of use 3: The restaurant serves a lunch buffet with dishes served in three different containers. The weight of empty containers is specified in SmartKitchen service. When recording with the Waste Scale, the container used is selected first. The entry is made in the same way as in the method 1, but the weight of the container is automatically reduced during weighing. The contents do not need to be separately poured out of the serving container to record the waste. Containers used can also be defined at the organizational level, in which case they are inherited to all units in the organization.

Note. If the way of using the scale is changed and used according to Method 2, select “Ignore cookware or bin selection” from the “Select cookware or bin” section of the settings.

Guide: Check the SmartKitchen Waste Scale manual.

2) Manually entering the waste with a web browser to the SmartKitchen service.

Typical use:

Communal food service produces meals in central kitchen for forty schools. The municipality wants to keep track of the leftover food amount on each school. Leftover food is weighed with normal kitchen scale, and the result is entered to the SmartKitchen service with web browser.

Guide: Log in to the Food Waste Tracker with your username. The Food Waste menu has an “Input waste amount” function.

3) Entering the food waste data manually with KitchenHelper smartphone application.

Typical use: A batch of expired food items is found during a weekly inventory. The person making the inventory reads the total amount (kg) of expired food from packages, pours the waste into the waste bin and enters the amount into the SmartKitchen service with the KitchenHelper smartphone application.

Guide: Download the Kitchen Helper app from the Google Play Store and sign in with your username. To enter waste, select the waste item, the reason for the waste (if enabled), and enter the amount in kilograms. Press “Save” to accept. Manual entering requires that a manual measurement location has been created in the SmartKitchen service. This is done from the Food Waste menu under Scales and manual measuring locations.

5 Production amount recording

It is not necessary to record production amounts. Production data is needed if the amount of waste is to be analyzed and reported in relation to the amount of food produced. If the daily numbers of diners are also recorded, the amount of waste can be analyzed and reported in relation to the number of customers.

From the solution point of view, production amount means the daily amount of each waste item imported into a unit or manufactured in a unit.

In the Food Waste menu, under General settings, specify whether the unit records production amounts. Under Production settings specify the items for which production amounts are recorded.

Guide: Record production amount and number of diners daily from the Food Waste menu under Enter Production amount. Select a date, record the number of diners for that day and the production amounts of the items in kilograms. The data can be corrected afterwards.

6 Analyzing and reporting the food waste data

The food waste data recorded in all the above examples is stored in the SmartKitchen service, where the data can be viewed on a daily, weekly, or monthly basis. In addition to the total amount of food waste, the service also monitors the amount of edible food waste. The data can also be viewed separately for each collection point and scale. The data is presented both in numerical and graphical format, making it easy to transfer to reports and distribute further. Viewing take place by weight (kg), cost (local currency) and size of its carbon footprint (kgCO_{2e}).

Graphical reports can also be saved as pdf or image files which are easily attached to other documents.

By analyzing the food waste data, targeted measures can be taken to reduce waste costs and the carbon footprint.

7 Task management

By reducing food waste, the kitchen can significantly save costs and reduce greenhouse gas emissions. Kitchen staff take measures to reduce waste in their daily work. Several measures are smaller and quick to implement.

Sometimes it is also necessary to do broader and longer-lasting tasks to reduce waste. In this case, the “Tasks” function of the Food Waste Tracker is used. This function records the objective of the corrective action and its brief description, person in charge, and schedule goal. In this way, the tasks are easy to remember and regularly reviewed. At the same time, the tasks and their results are archived and can be found later.

Guide: See separate guide for Task Management. The function is also part of the SmartKitchen Digital HACCP solution.