Meal service with meal vending machine

THE GLOBAL GOALS

Nordic Council of Ministers

Government Offices of Sweden
Ministry of Health and Social Affairs

region västerbotten

Summary

A meal service featuring a meal vending machine enables home care users who are not able to prepare meals themselves to receive nutritious and hot meals. Users can choose what they want to eat and when they want to eat. The meal vending machine stores the meals (18 meals) and guides users via voice commands to heat the food.

Picture of a meal vending machine in use in Finland.

Main effects of the solution

This solution supports living at home, improves quality of life and management of a user's own life.

Users

Users are usually elderly people although this service is suitable for all people who have problems preparing meals. Over the last ten years, the service has had approximately 10,000 users. Currently, the service has 1,500 users, one third of whom are in Helsinki.

Quote/Testimonials

"This is actually the only service available to users that lets them decide what they want to eat and when they want to eat. This service can also be used on a part-time basis: the user can visit the nearest service centre to eat one day and can then eat at home on another day. The meals are frozen and don't get old".
– Sirpa Saarela, development coordinator in home care, Oulu.

Elaboration

Needs and challenges

Every person should eat a nutritious and hot meal at least once a day. Sometimes this does not happen. This solution is for persons who are no longer able to prepare meals and do not go out to eat.

Municipalities arrange meal services for citizens based on specific criteria. In the conventional service models, hot or cold meals are delivered from the municipality's own kitchen to home care users. Cold food is delivered three times per week and hot food is delivered daily. Users are not able to choose what they can eat. They must eat what the kitchen prepares.

Solution and function

Users will receive the meal service system in their homes. The system comprises a freezer, fan-assisted oven and computer. Users can order what they want to eat from an extensive menu. 18 meals are delivered at the same time to the meal service system in the user's home.

Different meals are put on different shelves and the system recognizes which meal is on which shelf. When the user pulls out a shelf, the system will state via a voice command which meal is on the shelf. If the user removes the meal from the shelf, the system will tell the user what to do and how to heat the meal. The system will prepare the meal in around half an hour. First, the system defrosts the meal (frozen food) and then heats it rapidly. When the meal is ready to eat, a voice command tells the user that the meal is ready to eat.

If the user needs help to eat the meal or prepare the meal, a timer function can be used. This means, for example, that the home care worker can make the meal ready in the system during a morning visit and set the timer so that the meal is ready at lunch time when the home care worker visits again.

The system has an internet connection, which enables the home care worker to know what the user has eaten and when. This information will be used when it is time to order more meals.

Implementation

Health Lab as an implementation method

OuluHealth Labs was used as an implementation tool regarding the meal service featuring a meal vending machine. OuluHealth Labs is a test and development environment run by the city of Oulu, hospital district and the University of Applied Sciences.

Companies can develop their products and services in a real user environment with real users. Oulu WelfareLab is Oulo city's part of OuluHealth Labs. Oulu WelfareLab conducts systematic analyses targeted at professionals and citizens regarding what should be developed in the social and health services. Companies can make contact with professionals via the Oulu WelfareLab process. Companies are keen to sell their products and would like to reach all persons related to implementing new products. When using Oulu WelfareLab, contacts are gathered in one location and collaboration is efficient.

Oulu WelfareLab tests services and innovations in user environments. Trials run for a specific period and are evaluated after the test period. After evaluation, Oulu WelfareLab makes recommendations to decision makers. If the service is good enough and suitable for implementation in the social and health services, public procurement is the next step.

More detailed information about the meal service featuring a meal vending machine:

- This idea is from a company that provides the service. The company prepares meals and delivers them to their customers' homes.
- Oulu WelfareLab presented this service to Social and Health Directors, who decided on a 6-month pilot.
- The Oulu WelfareLab coordinator had meetings with the city's home care organization.
  - The home care organization chose a pilot area that required long distances (involving transportation costs).
  - The home care organisation asked customers to participate (12 customers). The customers had to be existing meal service customers (who then received a hot meal every day delivered by the city).
- Oulu WelfareLab entered into agreements and test plans with the company.
- As the pilot proceeded, Oulu WelfareLab coordinated it. A few customers dropped out and new customers were recruited. Customers who dropped out included:
  - One male customer who ate 3 meals per day because they tasted so good
  - One customer suffering from dementia who was frightened of the voice commands (the vending machine issues voice commands that provide information about the meals and when to eat)
- After 6 months, when the trial was over, Oulu WelfareLab evaluated the service and made a number of recommendations including what kind of customers could benefit from the service. Oulu WelfareLab also calculated cost savings and asked users (both customers and professionals) for their feedback
- After evaluation and meetings with the directors, the procurement process commenced.

The service is ready to implement. There are some prerequisites, for example, minimum number of users before the service becomes profitable for the service provider in one area.

This service is being used in municipalities as a supportive meal service. Service providers also sell the service directly to users (without municipality involvement).

Economy

The cost of the service is based on price/meal. There are no other costs relating to logistics or the meal service system. The average price is EUR 10.00/meal. The meals are more expensive than meals prepared in the municipality's own kitchen but savings are achieved in logistics (once a day – once every 18 days).

Process

If municipalities adopt this service as an optional meal service, a decision-making process is required. In some municipalities, users can choose whether they want this service or the traditional meal service.

The service provider also sells the service directly to citizens, without the municipality as a mediator. In the municipality's assessment, it must be considered whether users can order food themselves or whether they need home care support to do this. In addition, it must be considered whether users can manage the service themselves or whether a timer function is needed.

Meals are prepared in two different locations in Finland. Figuring out how to deliver meals to users is also a complex process for service providers.

More about effects

The service helps people receive nutritious meals and gives them the freedom to choose what to eat and when.

Learning and tips

Do not automatically assume that this service is not suitable for users. Have the courage to try out the service on all users. It has been noted that even people suffering from memory loss can manage the service. However, the service is not suited to "gluttons", who want to eat and eat.

The system's voice commands can be disabled if a user finds them frightening. The systems requires quite a lot of space and is therefore not suitable for small apartments. The system does not require WLAN. A SIM card is included.

More information

- The food available at Menumat.fi »
- Information on how much the food costs (PDF in finnish)

Context

The service can be upscaled but depends on a service provider. It can be upscaled by new user groups. The service can benefit, for example, families with children who are alone at home after school.

Contact details

City of Helsinki
Eksote

Name of the service

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Service provider

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