

# Cooling technology for higher food quality

Key words: **sustainability, food services, cooling**



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### Aim

Provide next generation sensor solutions and load management for sustainable food cooling

### KEY FACTS

**Project started:** 2016

**Innovation Community:**  
EIT Climate-KIC

**Theme:**  
Urban transition

**Funding generated:**  
EUR 2 million

**Number of partners:** 10

## The project

### Overview

Our SensorHold product and ChillService app work on next generation energy concepts for supermarkets and cooling chains for food. The project combines advanced sensors, machine learning and energy modelling to identify optimal solutions for load management in food cooling.

The client is guided through the installation by a smartphone app, which also enables the documentation of the process, ensures the quality of the implementation, and generates a database that will be used by the client to build their future energy efficiency strategy.

After the implementation of the sensor holder and the optimisation of the load management system, the cooling cabinets consume significantly less energy, resulting

in a return on investment of around two years.

### EIT Climate support

EIT Climate-KIC enabled our team to turn research findings from previous projects into a commercial product and service. Support from the Urban Transition theme of EIT Climate-KIC was invaluable and the EIT Community will be crucial to building further services based on the data generated in the project.

### Groundbreaking innovation

Our product can be applied to every cooling cabinet to reduce its energy consumption by 3-10%, depending on the type of cabinet and cooling concept, while also increasing the lifetime of the food stored in the cabinet.

In addition, the project introduces software support into a very fractured segment of the industry that is, as a result, prone to human error.

### Societal impact

Every person in the European Union is directly affected by food cooling and gaps in the cooling chain. When not handled properly, food has a reduced life as bacteria grow exponentially at higher temperatures. Our product and service contribute directly to the longer life of food, less food waste and fewer health problems related to insufficient food quality and freshness.

## Achievements so far...

The first commercial versions of SensorHold and the ChillService app were produced in spring 2017, and the REWE Group has been secured as our first commercial customer with an order for 400 supermarkets. We have also had significant interest from other supermarket chains.

### Teamwork

This is, for all of us, the most interdisciplinary team we have ever worked in and also the most rewarding. The REWE Group has been an invaluable partner in understanding the framework conditions, going beyond thinking in silos, and turning a good idea into a great product and service. This is matched by a team that is willing and able to work beyond the boundaries of their original disciplines and go the extra mile to make a difference.



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