

Yumchop Foods and the REAMIT Project

Pilot-test start date: September-2021



www.reamit.eu

RESOURCE & MATERIALS EFFICIENCY

We are REAMIT

REAMIT is a transnational European territorial cooperation project funded by Interreg North-West Europe (NWE) Programme aiming to reduce food waste. The project focuses on fruits, vegetables, meat and fish supply chains as these are wasted in large quantities. It is being carried out in Ireland, Germany, France, UK and the Netherlands due to the amount of interconnected food supply chains and huge food waste in these countries. The REAMIT project is using existing Internet of Things and Big Data technologies to best fit the needs of the food supply chain management system in the NWE region. Through testing and adaptation, these technologies are being enabled to continuously monitor and record food quality and signal potential food quality issues. Through analytics, owners of 'food at risk of becoming waste' are provided with decision support options to minimise food waste including redistribution to nearby customers. As part of the technology demonstrations, the REAMIT project team is working with Yumchop, helping to reduce food waste.



Who are Yumchop?

Yumchop specialises in producing African flavoured frozen ready meals. They provide flavoursome and authentic food from around the world with an African twist that is frozen to retain its goodness and freshness and minimise waste. Yumchop is using locally sourced raw materials to prepare their ready-meal products. Most of the ingredients are supplied by local vendors, located locally from the production plant of Yumchop in Towcester, Northamptonshire, UK. Their tasty meals are distributed at institutions such as universities or hospitals through self-service automated vending machines. These unattended retailing kiosks have been fitted with an integrated microwave oven which enables them to warm the food upon purchase. However, Yumchop also delivers food to customers' homes through direct purchase at their website, enabling one-off purchases and monthly subscriptions that customers can customise to receive food at their preferred intervals. Moreover, they also supply directly to retailers and large organisations. [Click here to view their website.](#)

REAMIT-Yumchop collaboration with the University of Bedfordshire

REAMIT Lead partner, the University of Bedfordshire, UK is leading on a technology demonstration pilot test with Yumchop Foods. The REAMIT technology is integrated into the Yumchop operations starting from storing the raw materials and prepared foods in the internal storage until the 'ready-to-eat' meal packages are stored in the vending machines/outlets. In each stage of the operations namely sourcing, preparing, storing, logistics and delivering to customers, the REAMIT sensors monitor the temperature and transmit data to Yumchop team with an alerting system that helps the team know when there is a problem during storage, to avoid the food going to waste. Using REAMIT technology, the company prevents nearly 10% of food from being waste.

This REAMIT Pilot test with Yumchop aims to:

- Ensure that frozen food and raw materials for preparing the food are stored in the right temperature in the frozen food manufacturer's factory.
- Ensure that frozen food is transported at the right temperature from frozen food manufacturer's food factory to where vending machines are located or to private homes (frozen food manufacturer's home delivery service).
- Provide food fingerprint (i.e. data on the condition in which food produced by the frozen food manufacturer has been stored and transported).
- Adhere to legal requirements (e.g., HACCP) on food quality.

Current Potential Areas for food Waste	<p>Scenario 1: Warehouse, Freezers and refrigerators Sudden and undetected rise in the warehouse temperature overnight, temperature fluctuations, equipment malfunctioning.</p> <p>Scenario 2: Vending machines Temperature fluctuations, equipment malfunctioning, user interference.</p>
REAMIT's Solution	<p>IoT sensors installed and connected to the cloud providing information in real-time means:</p> <ul style="list-style-type: none"> • Improved system efficiency by continuously monitoring the temperature of freezers and refrigerators through an automated process. • Reduced food waste, saving the company from any loss due to temperature fluctuations. • Increase in food quality, revenue and transparency.

