

# INFORM: Intelligent Food Recognition and Monitoring for patient wellbeing

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## Overview

A sensor equipped system that uses AI to monitor food intake, suitability, nutrition and food waste.

NHS UK currently provides ~141 million meals each year and it is estimated that up to 30 million meals were wasted each year.

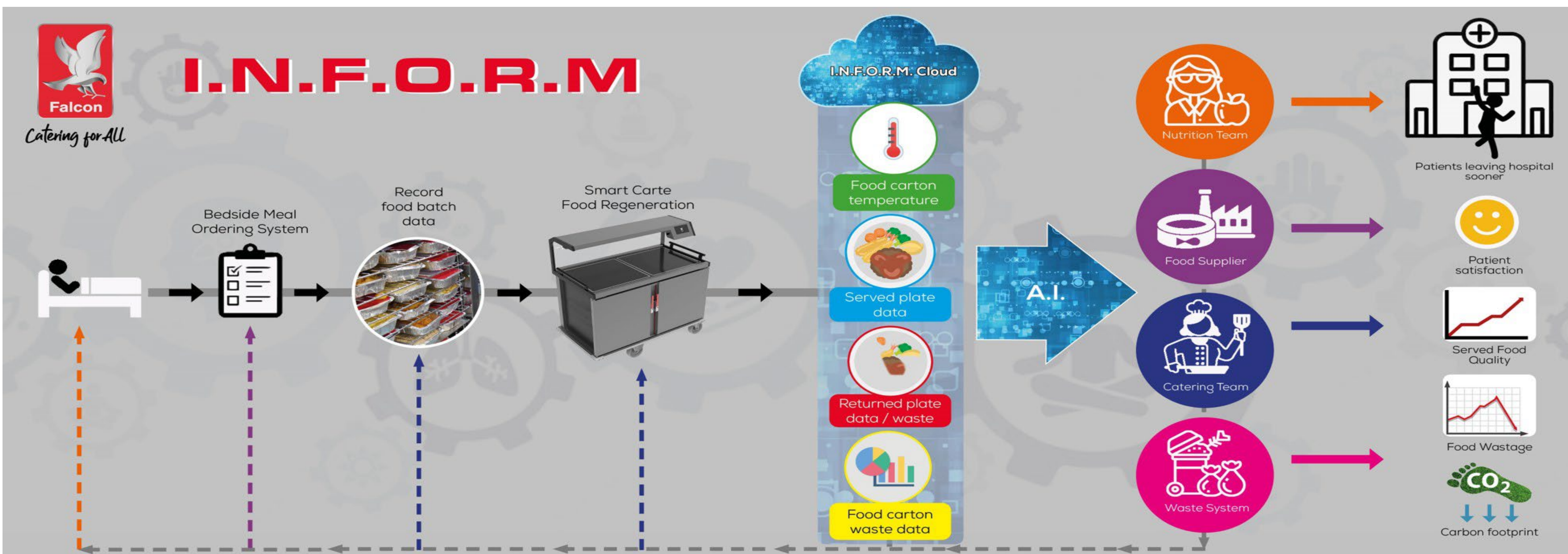
The INFORM system provides patient centred nutritional tracking that constantly learns and can lead to the reduction in food waste and better patient satisfaction and quicker recovery.

An integrated digital solution that has wider societal benefits as well as integration with Falcon kitchen equipment to provide feedback and further improve the food preparation process.

## Purpose

INFORM has several ways in which it can improve the NHS food journey:

- Notify Serving Staff if the food is correct (type, temperature, quantity, quality)
- Provide a reliable, consistent method of automatically recording the amount of food waste during a meal by monitoring individual plate waste.
- Monitor the nutritional intake of patients and highlight potential issues before they get serious.
- Deliver captured information to all relevant parties in an easily understandable format through an online dashboard.



## Process

The diagram above gives an overview of the INFORM Process:

- Food is ordered by a patient using a Bedside Meal Ordering System
- The required food is cooked using a Smart Food Regeneration Carte
- The INFORM System captures data at various points in the process:
  - Temperature
  - Plate data when the food is served and after the patient has eaten
  - Plate waste and food carton waste
- The system then provides outputs to a number of key groups:
  - Nutritional information is provided to the Nutrition Team
  - Food quality information is provided to the Catering Team and the Food Supplier
  - Waste information and energy costs are given to the
  - Feedback on cooking is given to the Smart Carte to adjust cooking parameters.

All of the captured information is fed back into the system to improve future performance of the system.

## Benefits

The INFORM System provide benefits in various areas:

- Patients:
  - Higher quality of served food – checks on quality of food on the plate ensures that each meal is meeting high quality standards
  - Increased patient satisfaction
  - Improved patient outcomes – Better nutritional tracking can provide beneficial information to help patients recover quicker.
- Hospitals:
  - Reduced food waste:
    - Up to £230m of food waste annually
    - Plate waste tracking allows more accurate food waste data than ever before
  - Reduced carbon Footprint
- Food Suppliers:
  - Improved Food quality
- Equipment Providers:
  - Better cooking performance
  - More efficient equipment

UK patent applied for, Patent Application No. 2302940.8



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