Artificial Intelligence: input by WATSON, Hanna-Leena Alakomi, VTT, Finland

EU Food Safety Forum, Rome, Italy

Co-funded by
the European Union

A holistic frameWork with Anticounterfeit and inTelligence-based technologieS that will assist food chain stakehOlders in rapidly identifying and preveNting the spread of fraudulent practices - WATSON.

watson

Co-funded by the European Union

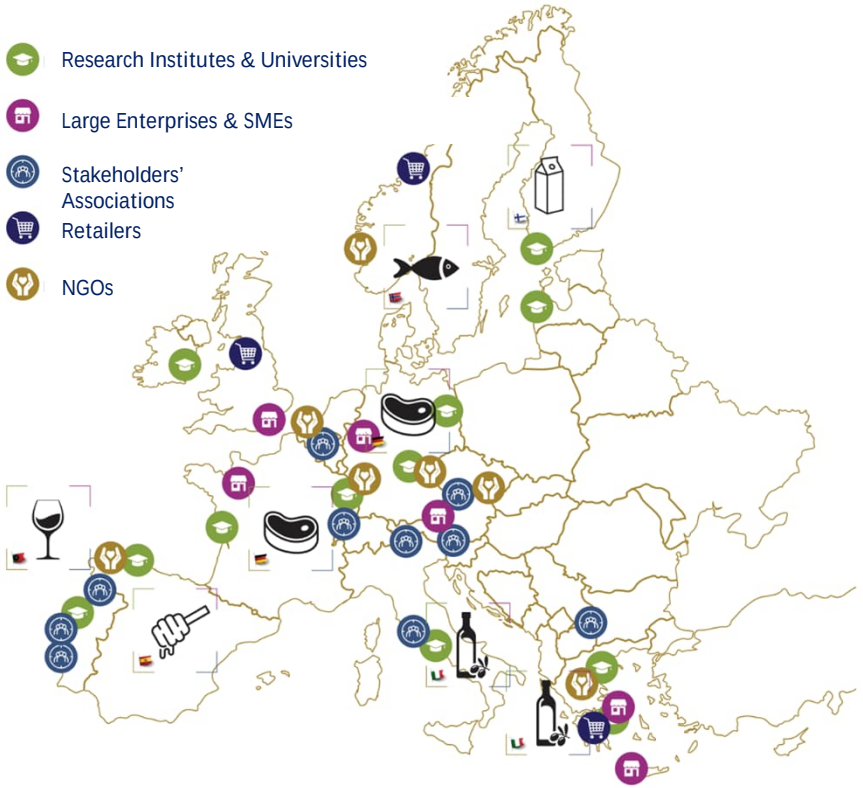
FACTS

watson

Co-funded by the European Union

Funding scheme: HORIZON-CL6-2022-FARM2FORK-01-11
EU Contribution: € 9.744.008 million
Total cost: € 11.221.383 million
Duration: 3 years, March 2023 – February 2026
Consortium: 47 partners across 20 EU & non-EU countries
Pilot sites: 6 use cases on agri-food value chains
Project Coordinator: University College Dublin

- Tackling counterfeiting of wine in Portugal
- Preserving the authenticity of PGI honey in Spain
- Rapid traceability of extra virgin olive oil in Italy
- Identification of possible manipulations at all stages of the meat chain in Germany
- Improved traceability of high value products in cereal and dairy chain in Finland
- Combating of fish counterfeiting in Norway



watson

Co-funded by
the European Union

PARTNERS

watson

Co-funded by the European Union

Watson

A holistic frameWork with Anticounterfeit and inTelligence-based technologieS that will assist food chain stakehOlders in rapidly identifying and preventing the spread of fraudulent practices

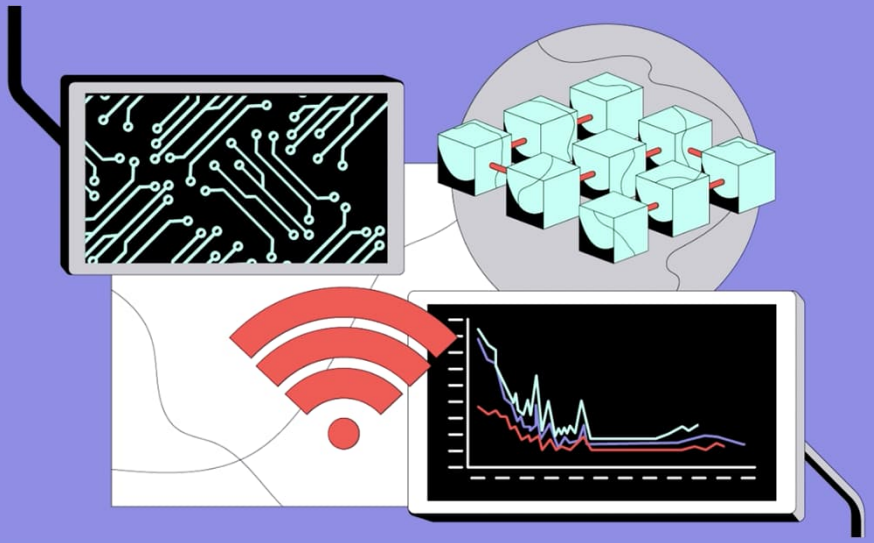
Kick-off in Dublin, Ireland - March 14-15, 2023

watson

Co-funded by
the European Union

AIM

Traceability and authenticity in the food system



Watson provides a **methodological** framework combined with a set of tools and systems that can detect and prevent fraudulent activities throughout the whole food chain.

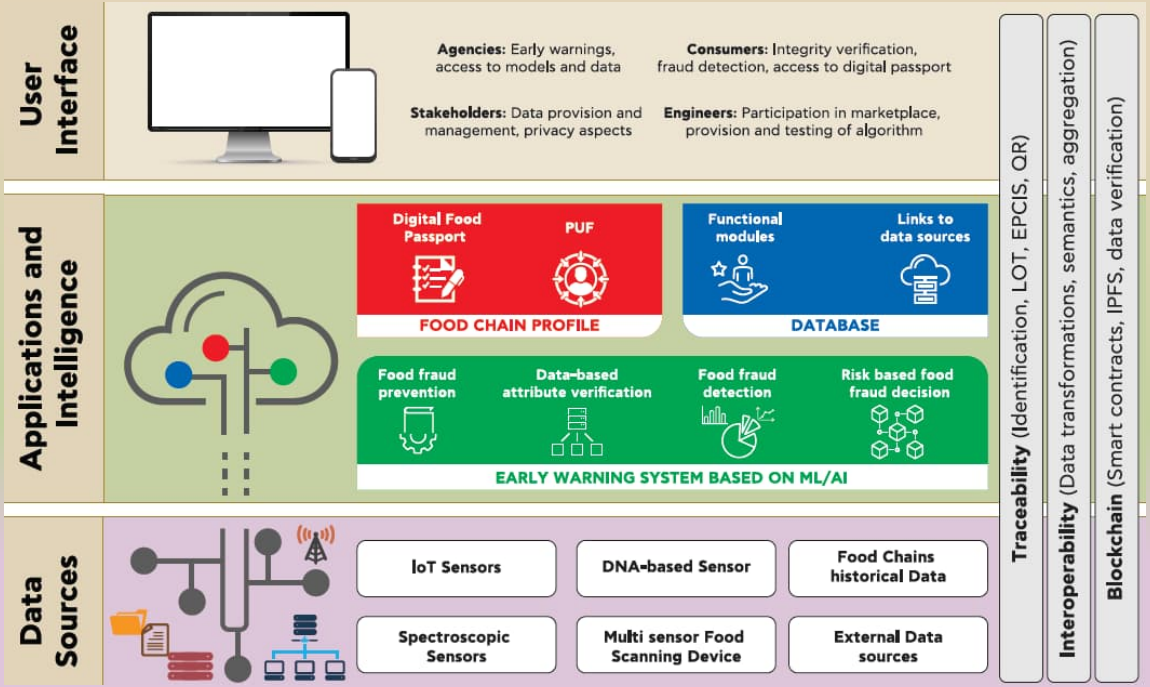
watson

Co-funded by the European Union

Concept & Approach

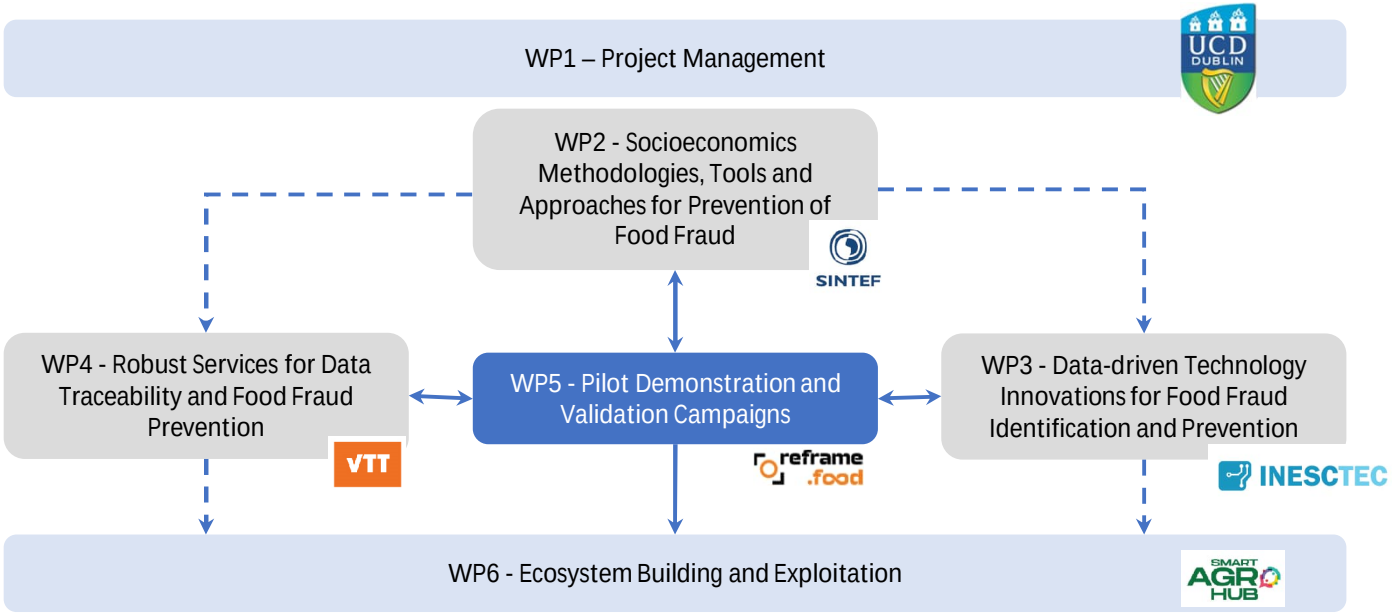
Digital Technology Architecture

- Watson high level architecture follows a layered and modular approach organized into three tiers:
  - trustworthy data sources
  - intelligence & application layer
  - user interface



Co-funded by the European Union

Work Plan



watson

Co-funded by
the European Union

WATSON PILOTS

- Tackling counterfeiting of wine in Portugal
- Rapid traceability of extra virgin olive oil in Italy
- Improved traceability of high value products in cereal and dairy chain in Finland
- Preserving the authenticity of PGI honey in Spain
- Identification of possible manipulations at all stages of the meat chain in Germany
- Combating of fish counterfeiting in Norway

watson

FOODGUARD

Microbiome applications and technological hubs as solutions to minimize food loss and waste

FOODGUARD

Starting date: 1st January 2024
Duration: 36 months
Coordinator: George-John Nychas, Agricultural University of Athens
Consortium: 21 partners from 11 European countries
https://www.foodguard-project.eu/

Co-funded by the European Union

PACKAGING

Package of Meat, Fish, Feta cheese, Vegs

Biopreservation

Edible Films

Water Soluble EO

Shelf-Life Monitoring

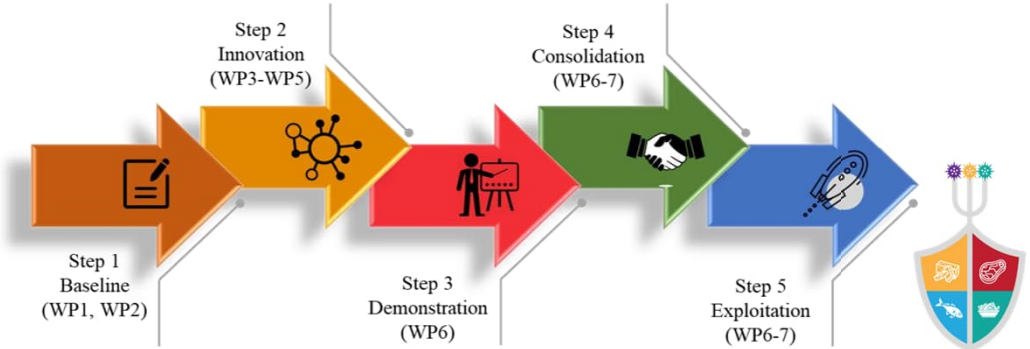
(i) Direct Biomarkers: molecules, genes,
(ii) Indirect Biomarkers: TTIs, smart printed tags, sensors in tandem with AI/ML
(iii) Microbial Indicators

Shelf-Life Prediction

(i) Predictive Modelling
(ii) Data Science (Artificial Intelligence, Machine Learning, Advance Analytic)

Continuously Enabling Traceability

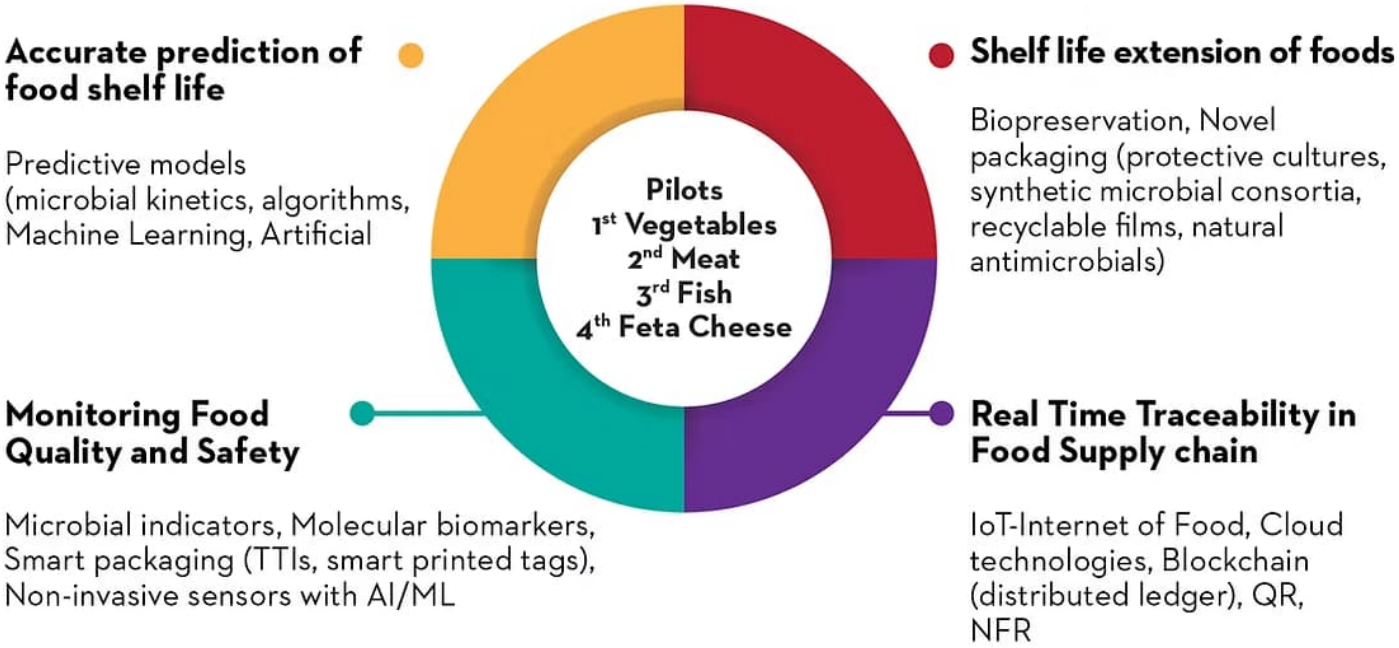
Internet of Things, Cloud Technologies, QR code, Distributed Ledger



Description of 5 steps of FOODGUARD methodology

Co-funded by the European Union

Aim of the project



Co-funded by the European Union

Thank you for your attention!

Acknowledgements:

Watson has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101084265.

The FOODGUARD project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101136542.

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.