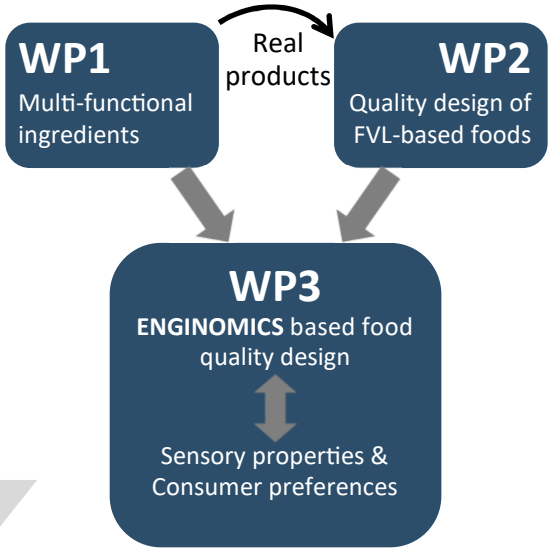
FOOD INDUSTRY NEEDS:
- Strategies for food quality design
- Shelf-life dating approaches
- Consumer information

Raw materials

Fruits Vegetables Legumes Ingredients

Process and storage

Conventional and advanced processing
(Accelerated) storage



NEW CONCEPTS FOR:
- Food quality design
- Shelf-life prediction
- Linking instrumental quality to sensory properties and consumer preferences

CONTRIBUTING TO:
- Improving food sustainability
- Reducing food loss and food waste

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FOODENGINE

An integrated food quality research and training programme

(From 01.01.2018 to 31.12.2021)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 765415.

FOODENGINE: Enginomics in food quality design: the case of shelf-stable fruit-, vegetable- and legume-based foods

FOODENGINE is a **Marie Curie Innovative training network** (ITN-ETN) for 13 early-stage researchers (ESR), funded by the **European Commission** under the **Horizon 2020** Programme. The FOODENGINE consortium combines the interdisciplinary expertise and infrastructure of three highly-ranked European Universities/Research institutes (KU Leuven, UCPH and INRA), three multinational R&D-based food (ingredient) companies (Döhler, Cargill and Unilever), two food (ingredient) companies (GNT and Greenyard) and an international market and consumer research company (Haystack) to establish an international, interdisciplinary and intersectoral pioneering European food training programme.

GOALS

- To train **interdisciplinary experts** with an intersectoral (from academia to private sector) experience on a beyond state-of-the-art new way of thinking for future food products and food process design.
- To offer an **integrated training programme** of specialised courses, providing the recruited fellows with highly valuable scientific, technological and transferable skills.

WP 1 Multi-functional ingredients for high quality food product development

Starting from raw fruit-, vegetable- and legume-based (FVL) materials, WP 1 aims to develop multi-functional ingredients to be used as clean label solutions in foods. Particular focus will be on pigments, micronutrients, structuring and emulsifying ingredients. A science-based insight into the complete value chain starting from the isolation of the functional ingredients from the raw materials (and the side streams), over processing and storage to the application in food systems will be aimed at.

WP 2 Quality design of FVL-based foods

Development of a science-based enginomics approach (connecting omics and kinetics) for quality design of FVL-based foods taking into account processing and storage in order to exploit the potential of the raw FVL materials and the clean label ingredients obtained in WP 1. Quality will be evaluated by analysing flavour, colour, rheological, colloidal and nutritional properties.

WP 3 Linking quality design to sensory properties and consumer acceptance

Development and application of new methodological approaches in the field of FVL-based foods to understand the sensorial quality of FVL-based food products. WP 3 also aims at connecting analytical food properties to sensory properties and consumer acceptance data.

WP 4 Skill training

- 4 workshops and 3 winterschools
- Topics include advanced project management, entrepreneurship and innovation in the food industry, intellectual property rights and technology transfer, communication skills, etc.