

What can FNS-Cloud offer to EU Missions?

Karl Presser (Premotec GmbH)

EOSC Symposium

Wednesday 20th September 2023

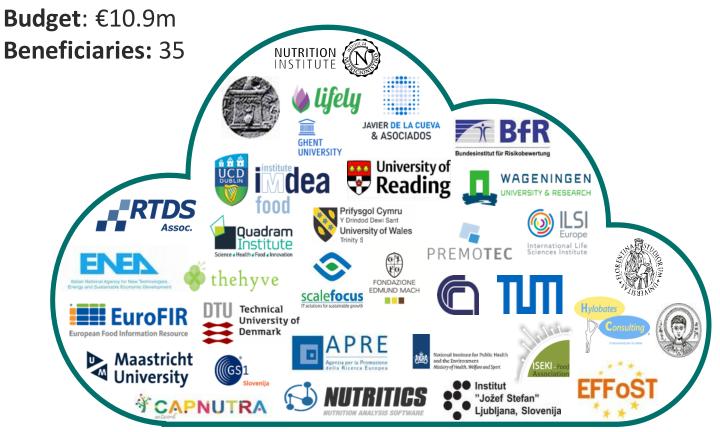




FNS-Cloud: Project Information

Funding: Horizon 2020 – Innovation Action (SFS-26-2019, Food Cloud Demonstrators)

Duration: 48 Months (Oct 2019 – Sept 2023)



Coordinator (CO): RTDS

Scientific Coordinator (SCO): QIB

Executive Board (EB): WP Leaders (RTDS, PMT, JSI, UCD, QIB, EuroFIR, UWTSD, JdlC)

External Experts Advisory Board (EEAB): variety of relevant experts and stakeholders from different countries and domains

General Assembly (GA): decision-making body consisting of a representative from each partner





FNS-Cloud: Aims & Objectives

VISION

citizens.

FNS-Cloud will help overcome European research infrastructure fragmentation by integrating and federating existing food nutrition security (FNS) data, tools and services, to provide added value, open access and FAIR data that can reduce knowledge gaps, enable better research and exploitation, inform policy and help deliver sustainable diets to European

Implement and test 'cloud' via Use Cases (WP4) and Demonstrators (WP5) to test existing and new proof-ofprinciple data and tools across FNS domain

Develop, integrate and test innovative FNS **Cloud Services**

Fnable harmonisation and standardisation of 3 FNS data (sources and format) and external services for integration and interoperability

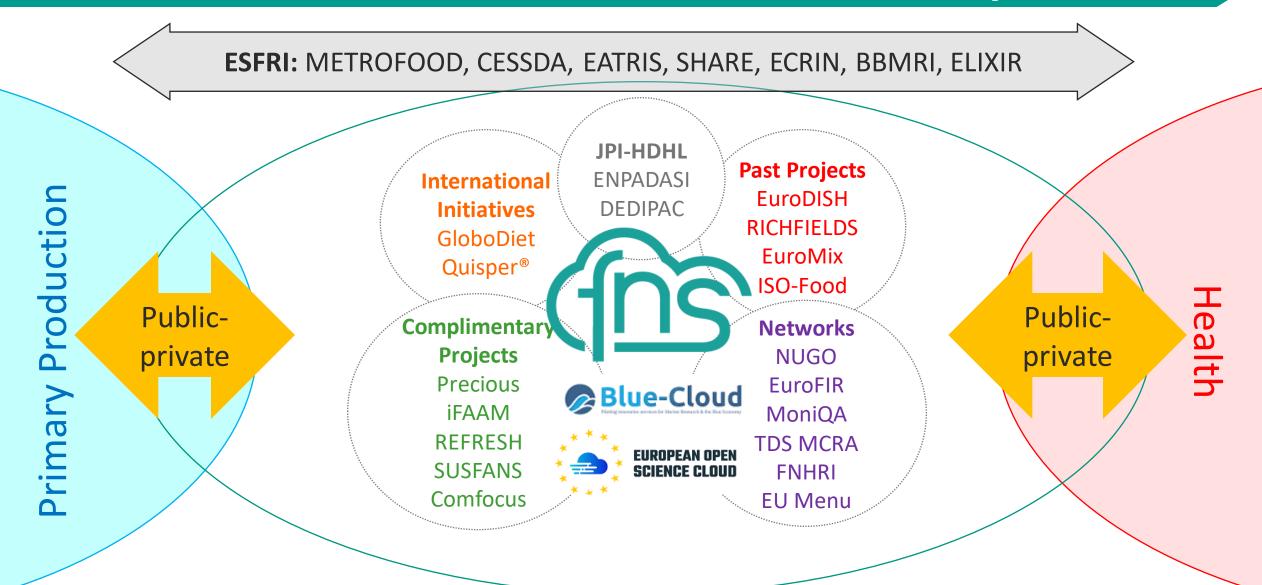
Engage FNS User Communities (especially researchers) to improve co-operation and reduce barriers to innovation and exploitation

Develop sustainable FNS Cloud governance and business models, as part of the wider EOSC





FNS-Cloud in the Research Landscape







FNS-CI

Authentication and authorisation infrastructure (AAI)

Websites



Catalogues



File repository

Agri-Food

Dataset search engine

Brands datasets

App to collect brands

Brand matching app

MCRA FoodCASE

Consumer app for **TDS** data

Nutrition&Lifestyle

TUM consumption app

Libro

Foodbook24

eNutriApp

Tomappo

Food consumption database

> Consumption analysis tool(s)

NCDs&Microbiome

Statistical analysis pipeline

Microbiome analysis pipeline

App to analyse gut microbiome

> Metabolic predictive tool

Diabetes and hypertension app

App for food-dietdrug interaction

Additional tools

Quisper

FNS Cloud Ontology

Meta-data database

EuroFIR Platform

METROFOOD-RI

No specific FNS domain Agri-Food



Nutrition & Lifestyle NCDs & Microbiome

EOSC Marketplace

Key Project Outcomes



List of generated and further improved tools, datasets and other resources



FNS Cloud Catalogues, myFNSCloud (CoP), FNS Cloud website (MVP)



High degree collaboration within and across beneficiaries (OA scientific publications, tools, data)



Interoperability across data & tools as shown by the Demonstrators



D&C materials for end users: videos, training materials, user manuals, guidelines (MVP)



FNS Harmony Ontology and proposed domain experts (MVP)



Contribution to EU Missions



Mission 1: Adaptation to Climate Change

- Experimental fields/farms help to investigate impacts on nutrient and contamination contents in food
- Infrastructure for consumption studies helps to discover changing nutritional patterns caused by climate change (taste, price, availability)

Mission 2: Cancer

 Food-and-drug knowledge base help improve the quality of life for patients and their families





Contribution to EU Missions

Mission 3: Restore our Ocean and Waters

- Infrastructure for consumption studies, food waste, nutritional quality and contamination help to understand the problem and to find feasible solutions
- Communication of over-fishing and "mono-culture nutrition" informs consumers who then can contribute by buying food responsibly
- Infrastructure for food quality helps to understand benefits of bio-diversity for human nutrition
- Infrastructure for food contamination helps to understand how ocean and water contamination accumulates in seafood products

Mission 4: Climate-Neutral and Smart Cities

- Data infrastructure can help to make food supply chains smarter
- Seed exchange and menu planning support citizens in "balcony gardening" and optimising nutrition





Contribution to EU Missions

Mission 5: A Soil Deal for Europe

- Unhealthy soil -> unhealthy food
- Experimental fields/farms help to investigate contamination uptake and contamination resistance

Thank you for your attention!

Acknowledgements



Funding

Food Nutrition Security Cloud (FNS-Cloud) has received funding from the European Union's Horizon 2020 Research and Innovation programme (H2020-EU.3.2.2.3. – A sustainable and competitive agri-food industry) under Grant Agreement No. 863059.



