

Building synergies in support to the agrifood: METROFOOD-RI and other integrating initiatives

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METROFOOD-RI Coordinator



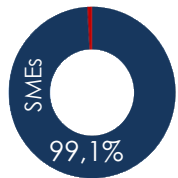
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The challenge for the Agrifood Sector

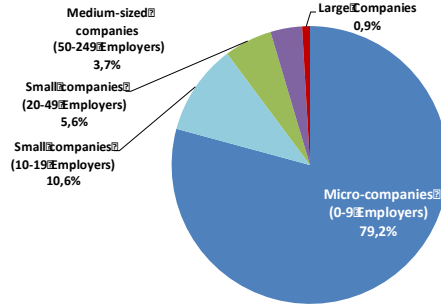
The EU food and drink industry is:

- The largest manufacturing sector in the EU (€ 1109 billion turnover and €110 billion of exports)
- The leading employer in the EU (4,57 million people employed)

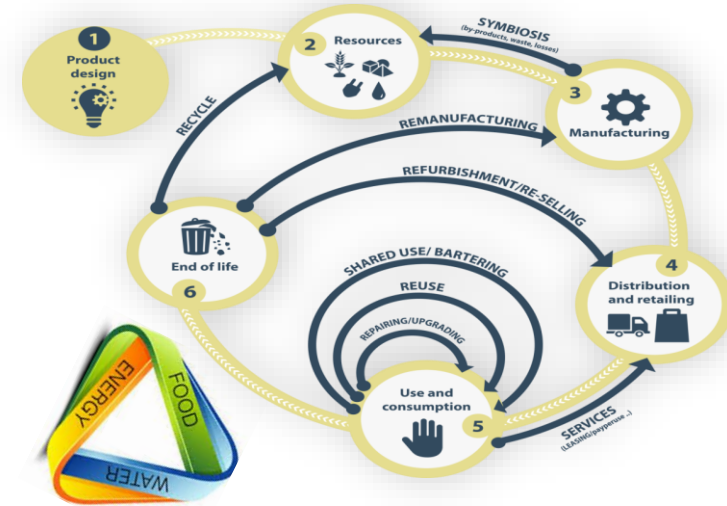
289.000 Companies



Large companies
0,9%



Source: FoodDrinkEurope, Oct.2018



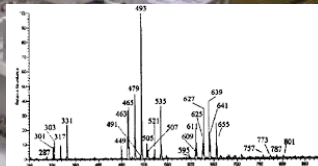
Food Integrity

Food chain approach

Advanced analytical systems

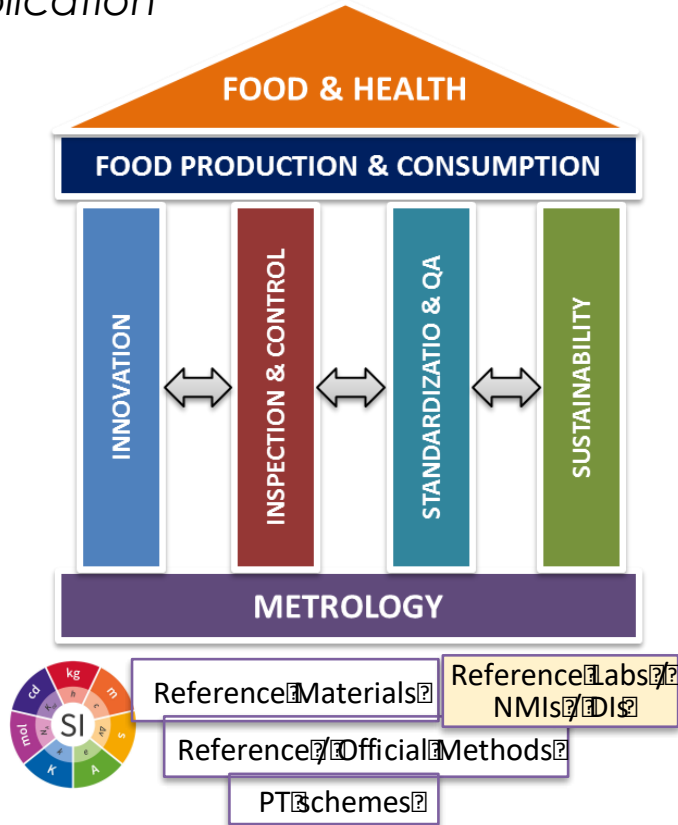
Digital revolution & Big Data

Large dataset management

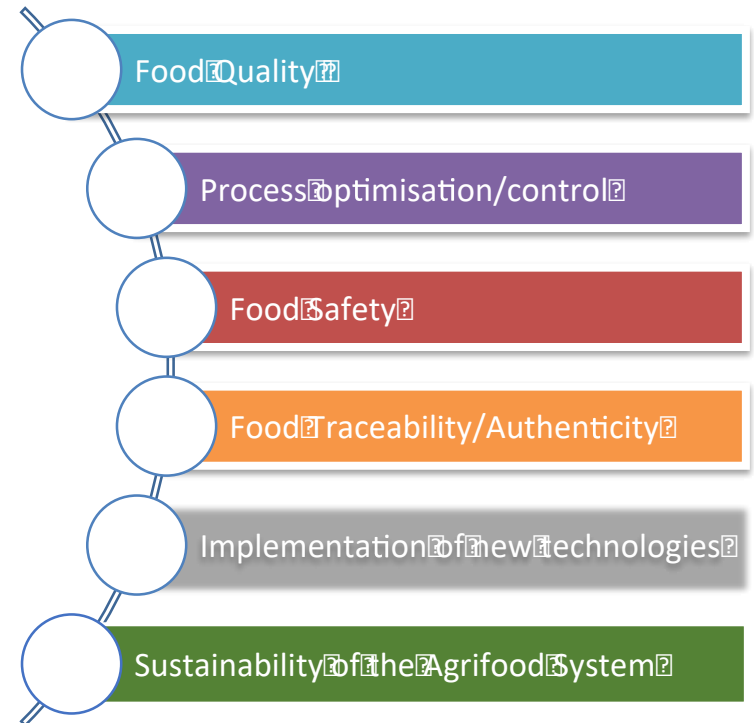


Metrology in support to the Agrifood Sector

“science of measurement and its application”



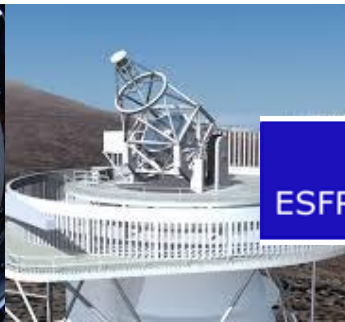
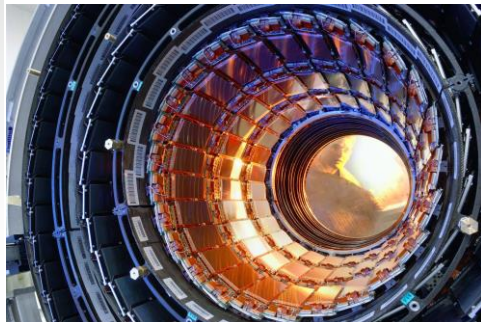
... an instrument for harmonisation and integration



The Role of Research Infrastructures

- ✓ Support **excellent science and knowledge transfer** for innovation
- ✓ Facilitate **innovation** (social and economic)
- ✓ Enable the greatest **discoveries** in science and technology
- ✓ **Attract researchers** from around the world
- ✓ **Build bridges** between research communities
- ✓ Allow the **training** of researchers
- ✓ Tackle **research challenges**
- ✓ **Avoid duplication of effort**

part of a **connected ecosystem** forming a unique resource for advanced research and interdisciplinary analysis of complex scientific problems



ESFRI

European Strategy Forum
on Research Infrastructures

Service-oriented organisation

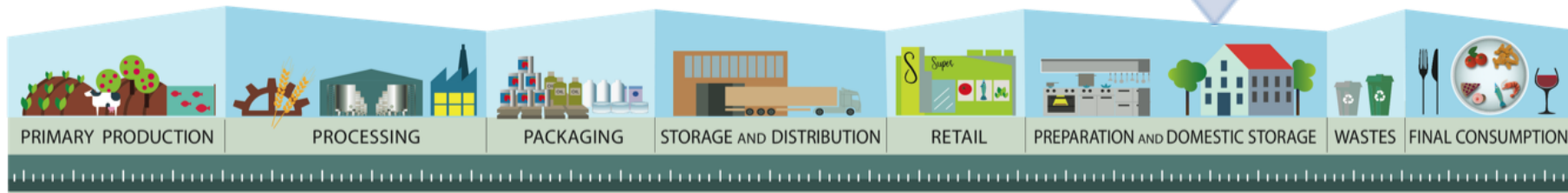
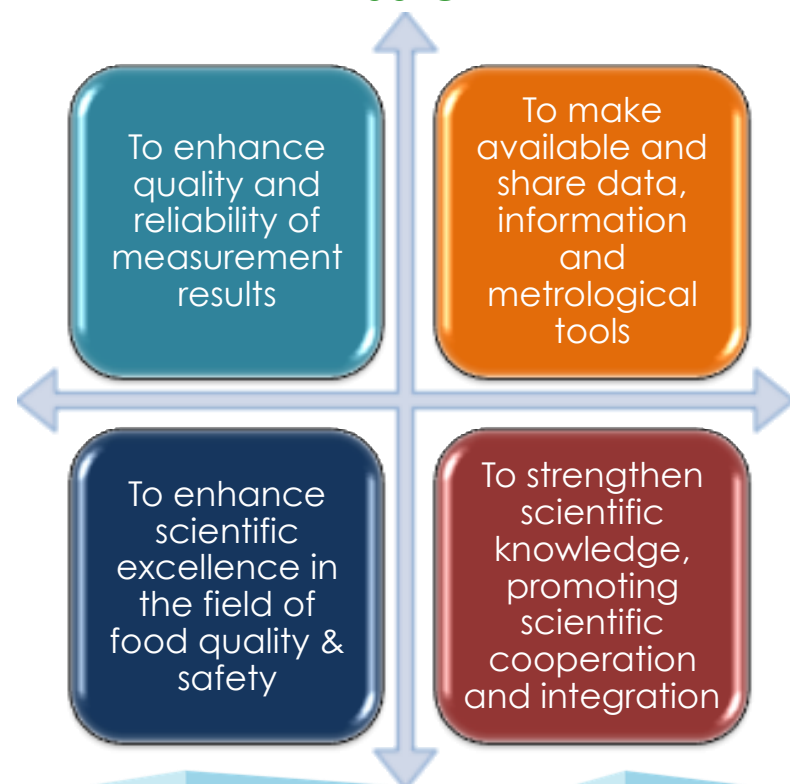
Innovation-oriented approach

Long-Term Sustainability

HIGH-LEVEL METROLOGY SERVICES IN FOOD AND NUTRITION FOR THE ENHANCEMENT OF FOOD QUALITY AND SAFETY

General objective: to enhance scientific excellence in the field of food quality & safety by promoting metrology in food and nutrition, allowing coordination on a European and increasingly on a Global scale.

MISSION



Current Partnership and Cooperation



- IT
- BE
- CH
- CZ
- DE
- ES
- FI
- FR
- GR
- HU
- MD
- MK
- NL
- NO
- PT
- RO
- SI
- TR

Support from International Organisations

JRC EUROPEAN COMMISSION European Commission, JRC, Directorate F - Health, Consumer and Reference Materials	IMEKO	EURAMET	efsa European Food Safety Authority
Eurachem A Focus for Analytical Chemistry in Europe	ICAR	EMPHASIS	FNH-RI
EuroFIR European Food Information Resource	MoniQA Association	the safe consortium	SPES GRIE
Oleum		NMKI	

Cooperating with:

FoodAuthenticity
A Virtual Network for Food Authenticity Analysis

Cooperation at a Global level

Brazil	INMETRO	
Argentina	CONICET	
South Africa	nmisa	
Australia	THE UNIVERSITY OF QUEENSLAND AUSTRALIA	UNSW SYDNEY
China	CHINA	



Physical-RI



e-RI

Metro

Plants and Labs for RM development

RM Preparation

Stability and homogeneity studies

Analytical Labs.

Sampling, pretreatment and storage

Food composition and characterization

Inorganic contaminants

Organic contaminants

Chemical and biological markers and profiles

Microbiological analysis

Development of sensors and devices

Environmental Analysis

Testing (rheological, leaching, etc.)

Other

Food

Experimental fields/farms

Crop production

Animal breedings

Fish farms

Facilities for food processing and storage

Industrial processing

Packaging

Supply chain and storage

Food preparation



Software development

development of new databases

Integration of existing databases

graphical interfaces development

database maintenance and updating

Data collection

Data analysis

Management of Interlaboratory tests

Diffusion and Training

Reference Materials

Official and Reference Methods

Reference Laboratories

Vocabularies, Guidelines and procedures

PTs Providers

Food composition

Contaminants in food

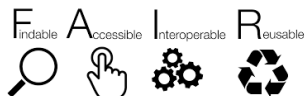
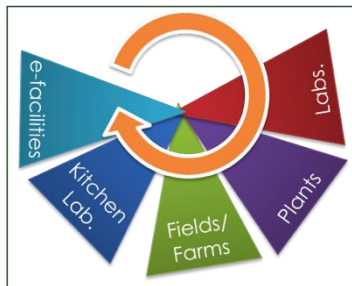
Food markers

Characteristics of production areas and technologies

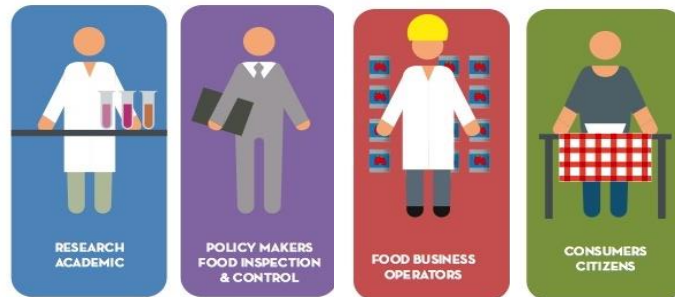
Food consumption



METROFOOD-RI - in full harmony with the RRI principles - will provide distributed services, acting on the real plan of measurement reliability and procedure harmonization and adopting the FAIR approach on data management



POTENTIAL USERS



SERVICES

Metrological & Standardisation Services

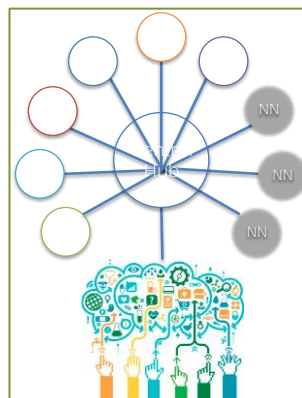
Agro-ecosystem characterisation, Food analysis, Food Packaging testing & characterisation

Services related to the improvement of Food Production & Consumption

e-Services

Integrated Services

ACCESS



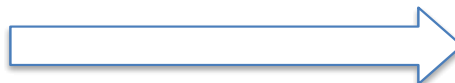
Physical



Remote



Virtual



Market-driven Access

Wide Access

METROFOOD-RI timeline

Roadmap Entry: 2018

Design Phase: 2015 -2017

Preparation Phase: 2018 -2021 ←

Implementation/Construction: 2021 -2024

Operation: 2019-2043



INFRADEV-02-2019 CSA (1 Dec. 2019/ 30 May 2022)

organise the legal entity that will manage the future RI

ERIC

TRANSNATIONAL ACCESS

- *Physical access*
- *Remote access*
- *Wide/virtual access*

OPEN LAB for
PHYSICO-CHEMICAL
CHARACTERIZATION of
NANOPARTICLES in FOOD

OPEN PLANTS for
FOOD PROCESSING
and ADDED VALUE
PRODUCTIONS

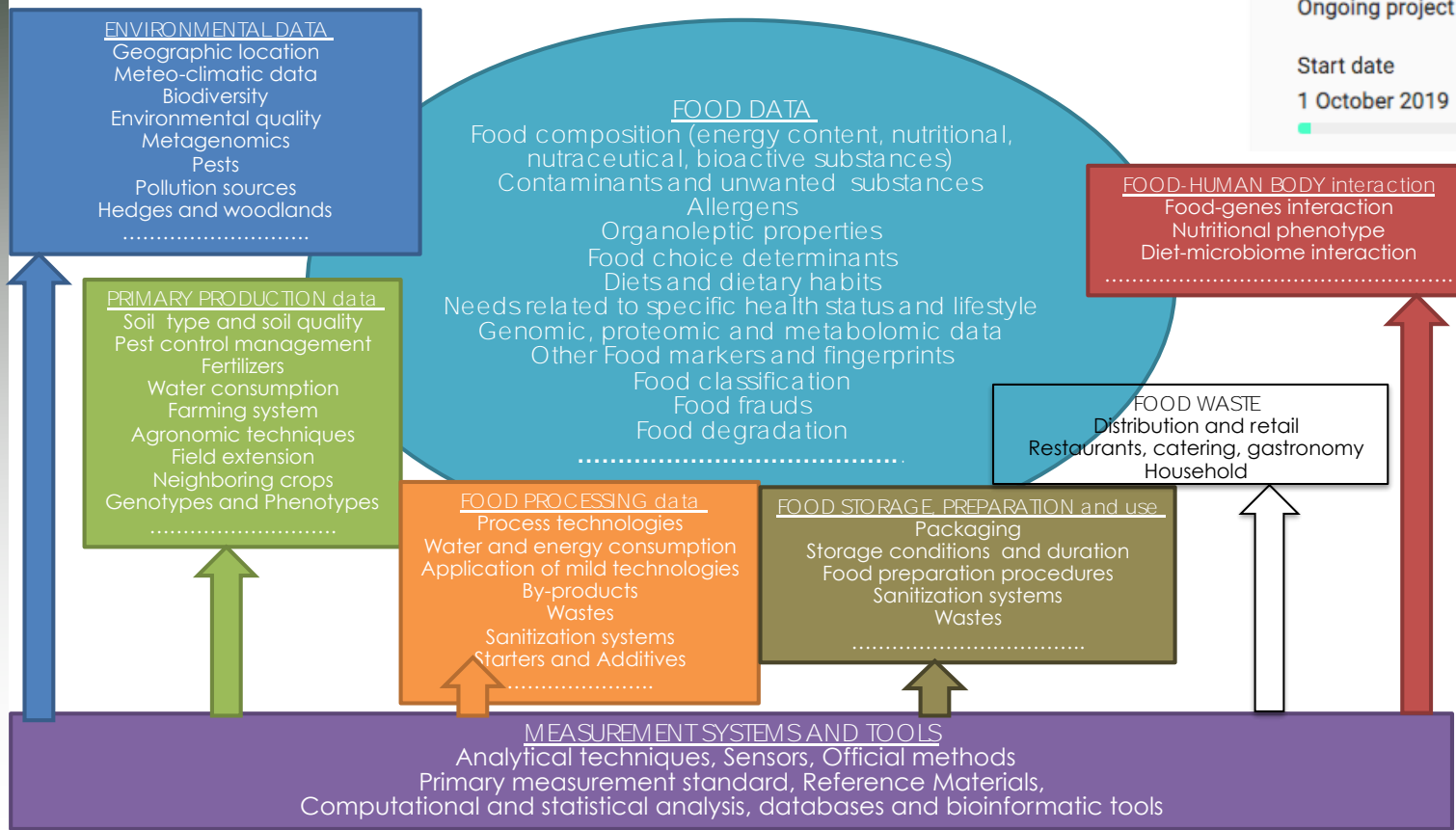
Establish a landscape of first-class sustainable RIs and services open to researchers, industry, and other interested groups

Strengthen the technological development capacity and effectiveness, as well as the scientific performance, efficiency and attractiveness

Develop synergies and complementarity between the new and existing RIs, contributing to the development of a consistent European RI ecosystem

FOOD CLOUD

Data integration and interoperability



FNS-Cloud

Grant agreement ID: 863059

Status

Ongoing project

Start date

1 October 2019

End date

30 September 2023

34 Beneficiaries





Transnational cooperation:
Two shores working
together

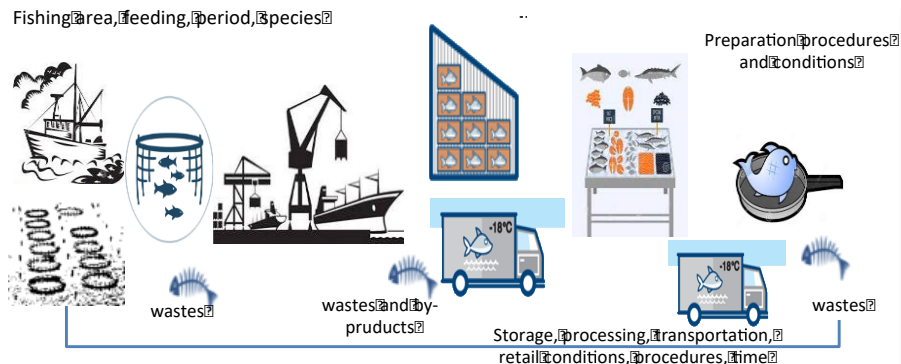


“Circular Economy for Food: Partnership for sustainable coastal cities in the Western Mediterranean”

© Comité des dix - Italie

Italy + France, Malta, Algeria

Concrete projects:
Quick implementation



- 1) Innovating food fisheries and aquaculture
- 2) Urban metabolism and agriculture in peri-urban areas
- 3) Intelligent supply chain: food quality, safety and traceability

Thank you for your attention!



Contacts

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