ESFRI
European Strategy Forum on Research Infrastructures

METRO FOOD

INFRASTRUCTURE FOR PROMOTING METROLOGY IN FOOD AND NUTRITION

European Commission

• FACILITIES •

Physical-RI - *METRO* side

Facilities for Reference Material (RM) development & production

- RM preparation
- Bottling
- Sealing
- Labelling
- Packaging
- Areas for storage

- Customized RMs
- R&D activities
- Feasibility studies
- New RM production
- Provision of Proficiency Testings

Analytical Labs

- Method development
- Chemical, physical, and (micro)biological analysis and testing of foods and any other matrix of interest for the agrifood sector (e.g. environmental matrixes, Food Contact Materials)
- Development of new devices, sensors and portable systems to check and evaluate food safety in situ (in field), during processing or retail (in line), and at a domestic level (post-retail)
- Standardisation and harmonisation of methods and procedures

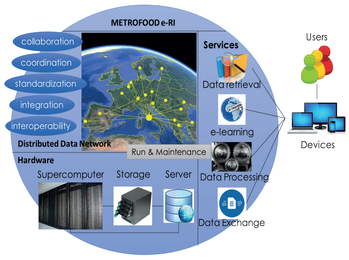
Physical-RI - *FOOD* side

Field trials, greenhouses, grow chambers, experimental stables (controlled livestock production, ...) and fisheries

Experimental Plants for food processing, packaging, storage and preparation (including *kitchen lab* facilities)

- Provision of new data on food (composition, contaminants, markers, etc.)
- Identification of markers and patterns for food traceability/authenticity
- Experimental studies for evaluating the nutritional value and contaminant contents of foods in relation to different influence parameters (geographic origin, technologies of production/process/storage/preparation)
- Food quality & safety studies along the value chain (post-retail included)
- Experimental studies to evaluate exposure through diet
- Evaluation of benefits & risks related to the application of new technologies (i.e.: nanotechnologies) in food production and packaging
- Development of best practices

electronic-RI



- Access to information on tools for standardizing and harmonizing food analyses (RMs, reference and official methods, Proficiency Testings, ...)
- Collection, sharing, analysis, and interoperability of data, data link and visualisation (food composition, contaminants, markers; food production and processing; environmental and health impact; ...)
- Dissemination and training on metrology in food and nutrition, food quality/safety/traceability/authenticity, nutrition, ...
- Collection of information about the needs related to metrology in food and nutrition

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

• SERVICES •

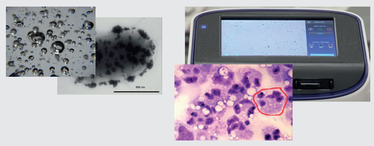
By specific service
(e.g. RM development; PT management; method development and validation; sensor development)

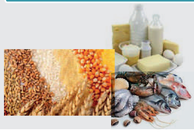
- Metrological and Standardisation Services
- Agroecosystem characterisation, Food analysis, Food Contact Material testing and characterisation
- Services related to the improvement of Food Production & Consumption
- e-Services

Integrated services

By technique *(e.g. NMR; MS; TEM)*

By specific application
(e.g. NP characterisation, isotope analysis, SCC)





By food chain
(dataBases, thesauri, best practices, integrated traceability systems etc.; *e.g. cereals and cereal-based products; milk and dairy products; etc.)*

Coordinate by

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