



How can a European research infrastructure promote metrological aspects of food/feed and nutrition analysis?

Maria Z. Tsimidou¹ , Nives Ogrinc² , Claudia Zoani^{3*} 

¹Laboratory Food Chemistry and Technology, School of Chemistry, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece

²Department of Environmental Sciences, Jožef Stefan Institute, 1000 Ljubljana, Slovenia

³Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Department for Sustainability, Sustainable Agrifood Systems Division (SSPT-AGROS), Casaccia Research Center, 00123 Rome, Italy

***Correspondence:** Claudia Zoani, Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Department for Sustainability, Sustainable Agrifood Systems Division (SSPT-AGROS), Casaccia Research Center, 00123 Rome, Italy. claudia.zoani@enea.it

Academic Editor: Charalampos Proestos, National and Kapodistrian University of Athens, Greece

Received: December 12, 2024 **Accepted:** January 14, 2025 **Published:** February 10, 2025

Cite this article: Tsimidou MZ, Ogrinc N, Zoani C. How can a European research infrastructure promote metrological aspects of food/feed and nutrition analysis? *Explor Foods Foodomics*. 2025;3:101071. <https://doi.org/10.37349/eff.2025.101071>

Abstract

Research infrastructures (RIs) are central to European Union (EU) policies for defragmentation of the research and innovation in all fields of science and technology providing resources, expertise, and services to address societal challenges and support evidence-based policymaking. The commentary stresses on how METROFOOD-RI, a geographically distributed RI, aims at advancing metrology in the agri-food sector with a particular emphasis on food/feed and nutrition fields. Structured according to Hub & Nodes model, METROFOOD-RI integrates physical and electronic infrastructures to provide FAIR (Findable, Accessible, Interoperable, Reusable) data and tools. Its activities span a comprehensive service chart covering research, information and communication technologies (ICT), and data, advisory, and educational services, as well as integrated service pipelines targeting transparency in the food chain, emerging food risks, innovative processing, and circular bioeconomy approaches. By leveraging metrology, METROFOOD-RI aims at harmonizing standards and fostering cross-border collaboration, whereas equally supports a multidisciplinary approach to tackling challenges in food systems and nutrition. The commentary highlights how this RI can contribute to the European research area priorities and United Nations sustainability goals.

Keywords

Food/feed metrology, nutrition metrology, research infrastructure, harmonization, research services, European research area



Background

For more than two decades, the European research area (ERA) [1] has advanced cooperation and coordination of research and innovation (R & I) policies [2] to supersede fragmentation of national R & I systems in a constantly evolving way. Building up a unified area for research and promoting the free circulation of researchers, scientific knowledge, and technology within the EU, and at national and regional levels is expected to sustain and advance competitiveness of the European industry securing concomitantly quality of quotidian life of all EU citizens. Targeting talent-oriented science and innovation, ERA supports excellence of human resources and infrastructures. Research infrastructures (RIs) play a strategic role and have the capacity to assemble resources (equipment, data, knowledge) and services for the agri-food sector (including research communities) on a long-term basis both within the EU and globally. In this context, RIs are the best-positioned entities not only to address societal challenges, but also to provide turnkey solutions for citizens, policy makers, and industry. In this direction, the ERA policy agenda has set out voluntary ERA actions for the period 2022–2024 to contribute to the priority areas defined in the Council Recommendation on a Pact for Research and Innovation in Europe [2, 3]. The four priority areas of the new ERA are shown in Figure 1. In the same figure, it is also shown how the actions proposed to fulfil these objectives are distributed.

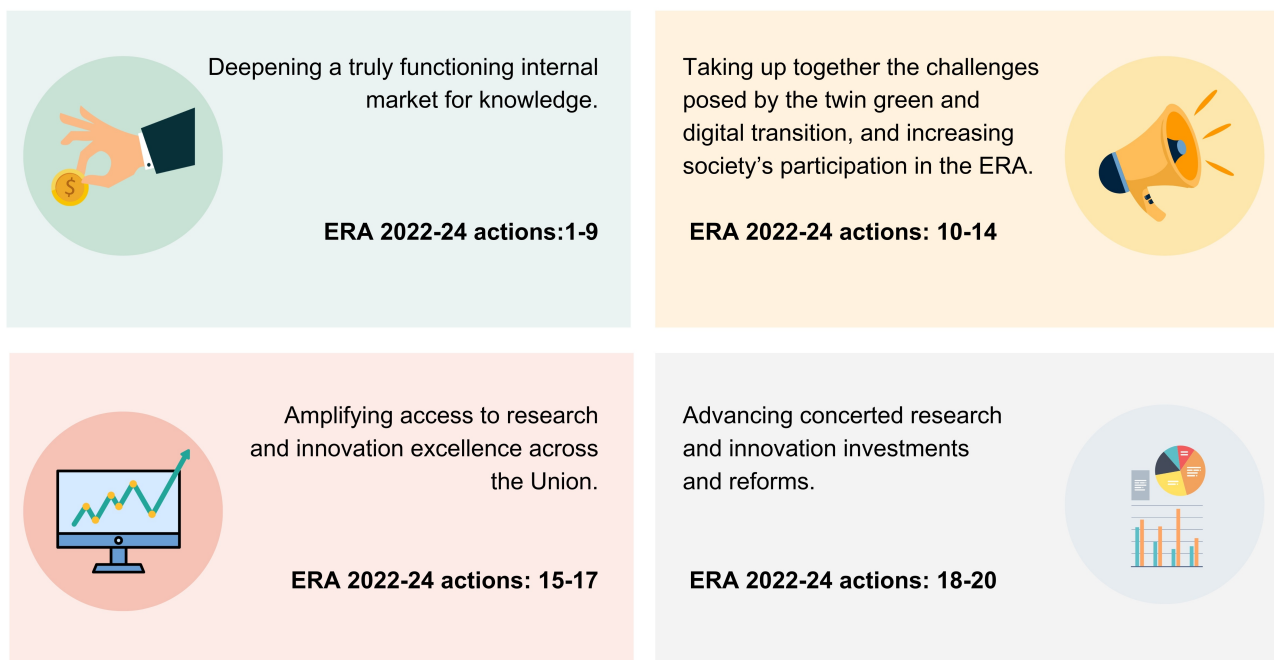


Figure 1. Priority areas in the new ERA [3]. ERA: European research area

Action 8 of the priority area, 'Deepening a truly functioning internal market for knowledge', focuses on 'strengthening sustainability, accessibility, and resilience of research infrastructures in the ERA'. The expected ERA outcomes from this action are: (i) a strategic analysis of the European RI landscape; (ii) broader and more sustainable access for all countries to European RIs and their services and revision of the European Charter of Access to Research Infrastructures; (iii) an update of the European Strategy Forum on Research Infrastructures (ESFRI) Roadmap and implementation of the RIs performance monitoring framework; (iv) a report on the European Research Infrastructure Consortia (ERIC) Framework; (v) increased cooperation between RIs, e-infrastructure, and stakeholders, including through European Open Science Cloud (EOSC).

Since the adoption of the Council Regulation on ERIC legal framework in 2009 [4], a significant number of ERICs have been set-up by the European Commission (EC), most of them being RIs prioritized in the ESFRI Roadmap. ERICs are currently considered key pillars of the ERA landscape as they are providing their

services to researchers across all scientific domains as well as operational users and industry. Among the 17 RIs currently falling within the domain of health and food [5], 13 of them have become ERICs, while 4 are listed as projects, including METROFOOD-RI. The latter evolved since 2015 around a central idea that is the provision of high-level metrology services in food and nutrition for the enhancement of food quality and safety at first place expanding steadily to all aspects of food/feed integrity from farm to fork [6].

Architecture of the METROFOOD-RI

METROFOOD-RI (Infrastructure for Promoting Metrology in Food and Nutrition) is a distributed RI aimed at promoting scientific excellence in the field of food quality and safety. It provides high-quality metrology services in food and nutrition, comprising an important cross-section of highly interdisciplinary and interconnected fields throughout the food value chain, including agri-food, sustainable development, nutrition, food safety, quality, traceability and authenticity, environmental safety, and human health. Further, it sets the validation standards for the methods developed within the network, enhancing their applicability in both commercial and legislative frameworks, while also advancing food metrology as a field of science beyond its current state-of-the-art. The METROFOOD infrastructure integrates a dual system consisting of a Physical-RI (P-RI) and an electronic-RI (e-RI) that facilitates the open sharing, accessibility, and processing of data. The P-RI connects a network of cutting-edge facilities: on the “Metro” side, these include laboratories equipped for comprehensive chemical, physicochemical, and microbiological analyses of food and related matrices, such as environmental samples from agricultural ecosystems, animal feeds, and materials in contact with food. Additionally, facilities are dedicated to the development and production of reference materials (RMs) for the agri-food sector. The “Food” side features experimental agricultural fields and livestock farms, pilot-scale facilities for food processing and storage, kitchen laboratories, and demonstration sites aimed at fostering direct interaction with stakeholders, including through living labs. The e-RI of METROFOOD-RI is a service-oriented electronic architecture designed to share and integrate data, knowledge, and metrological tools for food analysis while ensuring FAIR (Findable, Accessible, Interoperable, Reusable) principles. It organizes and complements P-RI results with existing data, providing tools for diverse applications. Leveraging artificial intelligence (AI) and big data technologies, the e-RI enables advanced data analysis, integration, and visualization tools. Innovative AI-driven methods, such as machine learning algorithms and predictive modeling, are being developed to process complex datasets from multiple sources, facilitating deeper insights into food systems. Further, as part of the EOSC, METROFOOD-RI actively contributes to building Europe’s data space, emphasizing data interoperability and integration with other networks and infrastructures. Robust data privacy and security measures, including encryption protocols, access controls, and compliance with General Data Protection Regulation (GDPR) standards, are implemented to safeguard user data while fostering trust and broad utilization of the platform. The scientific plan and thematic prioritization of the RI have been recently updated and publicized [7, 8].

METROFOOD-RI is structured according to a Hub & Nodes model. The central hub (CH) will be the statutory seat of the ERIC, representing the heart of the strategy, coordination, communication, and administration, directing the overall infrastructure and managing the central e-portal, which will give access to all infrastructure’s resources and services. The CH will act as a coordinating EU layer across all national nodes (NNs), while the latter represents the operational sites of the infrastructure. It is worth mentioning that the organization of METROFOOD’s NNs is highly diverse: some countries contribute through a single institutional participant, while others engage multiple partners within their NN.

Advancing metrological aspects of food/feed and nutrition through a European research infrastructure: from concept to implementation

RIs like METROFOOD-RI can play a critical role in addressing pressing societal challenges in food systems by fostering collaboration, supporting evidence-based policy development, and enhancing capacity building. Their contributions extend beyond research, bridging science, policy, and society, driving

transformative change, and providing tools and insights to support resilient and sustainable food systems. METROFOOD-RI users are individuals, teams, or institutions, who are expected to use the services of the RI. Four main user categories have been identified so far: researchers and academic communities; policy makers, food inspection and control agencies; food business operators (FBOs); consumers/citizens. Since 2015, the RI activities embraced all those target groups through appropriate practices. The specificity of METROFOOD-RI lies in its strong and well-established collaboration with the industry, encompassing joint initiatives, co-developed projects, technology transfer activities, and participation in METROFOOD-RI's training programs. By bridging the gap between research and real-world applications, METROFOOD-RI ensures that scientific advancements are effectively translated into innovative, practical solutions, addressing industry needs, and driving sustainable development. Activities involve one or more NNs and address emerging issues that affect in short or long term the agri-food systems [9, 10]. As a service-oriented organization, METROFOOD-RI has established its Service Chart, which encompasses a comprehensive range of services, including research services (spanning the areas of agri-food, metrology tools, health, environment, and sustainability), information and communication technologies (ICT) and data services, advisory services, as well as education and training (Figure 2).

Research services place a strong emphasis on food and feed analyses, leveraging advanced metrological tools to ensure reliability in measurement results across the entire agri-food value chain. These services include the development of RMs, proficiency testing, and comprehensive analysis of food quality, authenticity, traceability, and safety, addressing critical issues such as contaminants, allergens, and nutritional content. Moreover, METROFOOD-RI has developed a suite of integrated services that combine its multidisciplinary expertise, resources, and facilities to address complex challenges in food systems (Figure 2). These services span key areas such as transparency in the food chain, emerging food risks, innovative processing, new-generation packaging solutions, and circular bioeconomy approaches. The principle of offering multiple services as a core aspect of the RI was also demonstrated in the most recent open call to researchers, authorities, and industry [11]. The consortium addressed real-world scientific problems using a multi-service approach to characterize fermentation processes and their bio-based derived products from the food industries as well as development of novel products with ingredients including alternative proteins and/or food-by-products. METROFOOD-RI also addresses the impact of climate change on food systems through targeted research initiatives and advanced metrological approaches. These include developing tools for monitoring and improving soil health, assessing water quality, and studying the effects of climate-induced stress on crops and food production processes. By standardizing and validating analytical methods, METROFOOD-RI enables the accurate assessment of environmental changes and supports the development of mitigation strategies, such as valorizing by-products, reducing food waste, and promoting sustainable practices across the food value chain. Overall, METROFOOD-RI's services show its ability to deliver comprehensive, user-driven solutions. Furthermore, some services are also integrated into more wide pipelines developed in collaboration with other RIs through dedicated Horizon Europe (HEu) projects, such as AgroServ (Integrated SERVICES supporting a sustainable AGROecological transition) and AquaServ (RI services for sustainable aquaculture, fisheries, and the blue economy). These projects cover a wide range of services and resources for agriculture, aquaculture, and fisheries, fostering valuable synergies, and promoting enhanced cross-domain collaboration. This integrated approach among RIs has applied also in the definition of new services for covering current gaps in the R & I landscape, such as the impact of artificial materials on health, food, and the environment, as it is ongoing in the frame of the HEu project "Food, Health and Environment Research Infrastructures for tackling emerging priorities (FHERITALE)". Organization of open science events such as webinars is also a regular way to convey knowledge to the young generation of scientists by joining forces with experts as was evident in the past but also in 2024 through two successful types of webinars [12, 13]. In parallel, NNs are active in organizing events for different citizen groups (pupils, students, adults), locally, strengthening links with the society that is deeply concerned with food and nutrition issues [14, 15]. Liaise with international organizations is always at the forefront of the RI activities as it is proved by its recent participation in the Science Summit held during the 79th Session of the United Nations General Assembly

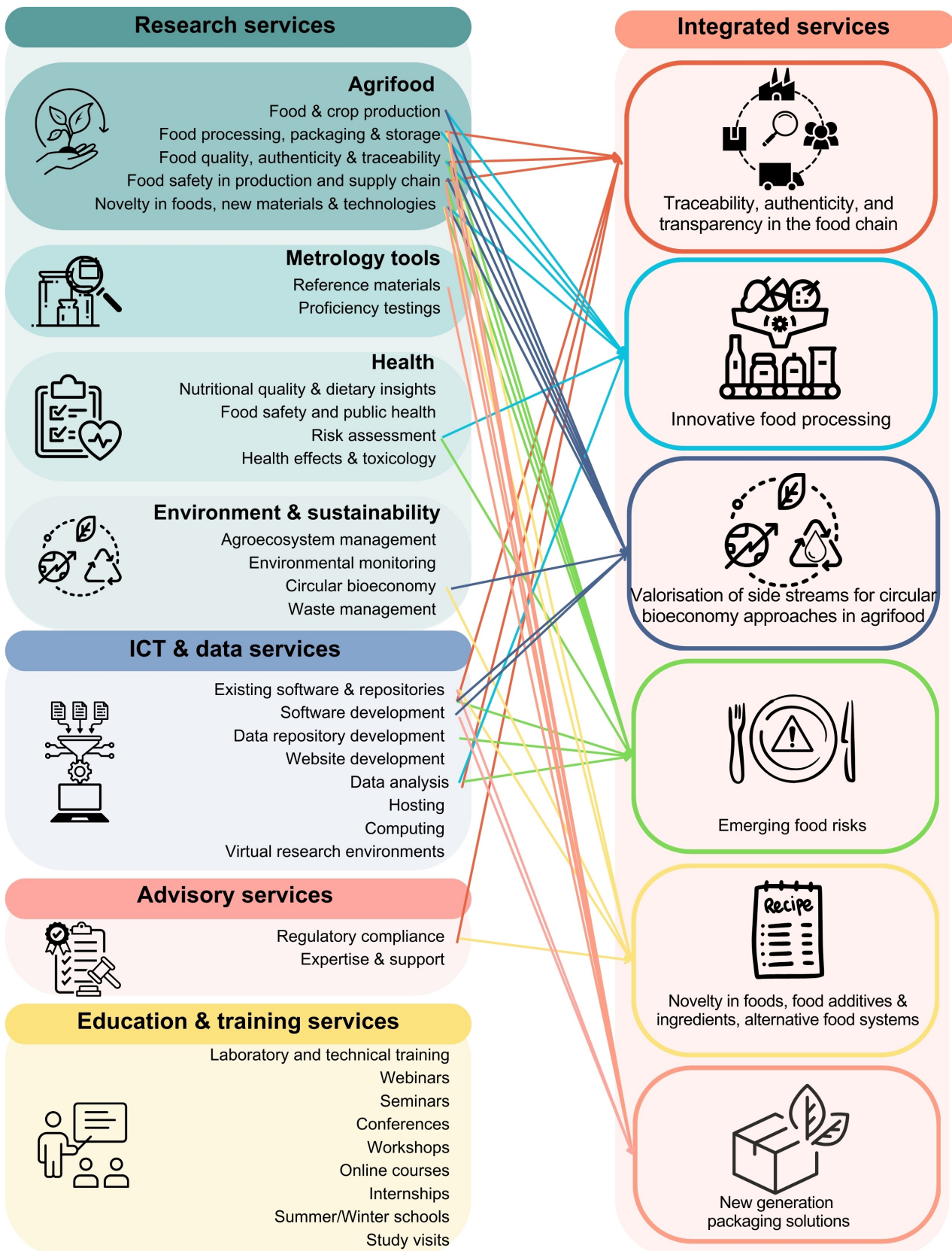


Figure 2. Overview of METROFOOD-RI Service Chart, illustrating key service categories: research services (agri-food, metrology tools, health, environment & sustainability), ICT & data services, advisory services, education & training services, and integrated services. RI: research infrastructure; ICT: information and communication technologies

that took place in New York in September 2024 [16]. In addition, the partners are involved in different international projects supported by the United Nations (UN) focusing, among others, on the use of nuclear techniques including stable isotopes in food authenticity and traceability.

Being extremely active in spreading the importance of food and nutrition metrology, the consortium members participate actively in the organization and the scientific program of IMEKOFoods annual conferences in support of the Technical Committee 23 (TC23) of IMEKO, the International Measurement Confederation. TC23 was founded in 2006 and it is dedicated to metrology in food and nutrition. This forum has become a reference meeting for developing new alliances among food scientists involved in measurements and beyond at a global scale, and, also, presenting the evolution of the RI achievements towards full implementation and operation stage.

Last but not least, undertaking the responsibility of a special issue such as this one it became evident how scientists belonging to the METROFOOD-RI consortium can support willingly an activity around metrological issues in the sensitive domain of food/feed analyses, the variability in analytical expertise (metagenomics, spectroscopy, spectrometry, etc.), AI expertise and problems related to local (e.g., Greek saffron, *retsina*) or novel products (e.g., insect-based ones), contaminants, etc., involving in total more than 12 publications from various institutes and countries.

Fostering multidisciplinary collaboration and driving innovation in the food industry education, training, and technology transfer are central pillars of METROFOOD-RI's mission, aimed at addressing societal challenges, promoting sustainable development, and enhancing innovation across the agri-food sector. By integrating advanced research, capacity building, and direct engagement with industry, METROFOOD-RI ensures a holistic approach to supporting knowledge generation and its translation into impactful solutions.

Education and training activities within METROFOOD-RI focus on developing multidisciplinary skills and fostering collaboration across a diverse range of stakeholders, including researchers, students, FBOs, and policymakers. These initiatives include thematic workshops on advanced metrological techniques for food analysis, hands-on sessions with cutting-edge analytical instruments, and seminars on topics such as food quality and safety management. Tailored programs are developed for specific sectors, such as regulatory compliance for FBOs and novel food technologies for researchers.

To cultivate the next generation of researchers, METROFOOD-RI supports educational programs at multiple levels, including MSc and PhD courses, summer schools, and exchange programs among partner institutions. These programs provide practical training opportunities in advanced laboratories and collaborative projects, equipping participants with cross-disciplinary expertise in areas such as traceability, authenticity, nutrition, risk assessment, and sustainability practices. Mobility is promoted through internships, fellowships, and short-term visits, ensuring practical exposure, professional development, and interdisciplinary collaboration.

The combination of physical and virtual access, including e-learning platforms, webinars, and online training modules, ensures broad accessibility to educational initiatives. Through its talent development strategy, METROFOOD-RI aims to attract and retain top researchers by offering competitive training packages, access to state-of-the-art infrastructure, and career advancement opportunities.

METROFOOD-RI acts as an innovation driver, fostering collaboration with the business sector, including large industries, small and medium-size enterprises (SMEs), farms, and industry associations. This is achieved through living laboratories, pilot plants, and an extensive network of facilities and databases. Key strategies for effective technology transfer include: collaborative research and development, through the engagement in joint research projects, pilot programs, and co-creation initiatives with industry partners, addressing challenges such as food safety, waste reduction, and product innovation; knowledge sharing and capacity building, through workshops, seminars, and advisory services organized to transfer expertise and build skills tailored to industry needs; custom solutions, by supporting the development and validation of analytical methods, advanced processing technologies, and innovative food products, ensuring compliance with food safety regulations and addressing market demands.

Several successful initiatives highlight METROFOOD-RI's impact on driving industrial innovation. For instance, the infrastructure has supported the development of alternative food sources, novel packaging solutions, and circular economy practices through waste valorization. METROFOOD-RI adopts a win-win

model for industry collaboration, where businesses gain access to cutting-edge research and facilities, while the infrastructure benefits from industrial feedback to refine its services.

By actively supporting the agri-food industry, METROFOOD-RI enhances competitiveness, facilitates compliance with evolving standards, and promotes sustainable practices. These efforts contribute to a robust and innovative food system that meets consumer demands for healthy, safe, and sustainable products.

The way forward

Building on the foundations laid by the METROFOOD-RI Strategic Research & Innovation Agenda (SRIA), finalized at the end of the preparatory phase in May 2022, the infrastructure is now focusing on translating its strategic priorities into impactful actions [8, 17]. The agenda highlights the research priorities of the RI for the first five years of operation. It describes how METROFOOD-RI will implement its mission into science and services for the benefit of promoting scientific excellence in providing high-level metrology services and support to the agri-food sector in its different aspects of transformation towards circular bioeconomy. The SRIA serves as a key, dynamic reference point, ensuring alignment with global challenges and emerging EU policies (including, e.g., the green deal and digital transformation), while paving the way for METROFOOD-RI's evolution in the coming years. By adopting a multidisciplinary approach, the wide range of expertise, tools, and capacities of the RI Consortium members will be used to address key issues related to the food chain, fostering the infrastructure's development, and increasing its operational width and impact. METROFOOD-RI plays a pivotal role in supporting evidence-based policymaking by providing reliable scientific data, validated methodologies, and standardized procedures essential for addressing critical challenges in food safety, sustainability, and nutrition. By collaborating with policymakers and regulatory agencies at national and European levels, METROFOOD-RI contributes to shaping regulations that promote food integrity, consumer protection, and environmental sustainability. This commitment is exemplified in its recent policy brief, "Strengthening Food Safety, Sustainability, and Innovation in the Agri-food Sector through METROFOOD-RI and the One Health Approach", which outlines strategic recommendations for leveraging metrological services to address pressing issues in the agri-food sector [18]. Moreover, METROFOOD-RI's activities foster societal impact by enhancing public awareness, engaging citizens in food-related issues, and providing tools to address societal concerns such as food fraud, dietary health, and climate resilience. Through initiatives like public engagement events and partnerships with international organizations, METROFOOD-RI amplifies its influence, ensuring that science drives positive change across multiple sectors.

METROFOOD-RI is a living entity with established principles and guidelines, yet it demonstrates flexibility in addressing challenging situations, thanks to the co-operative culture and mutual respect built-up among the participating institutions over the last decade. By fostering collaboration across domains and leveraging cross-functional expertise, the infrastructure ensures that its offerings remain adaptable, evolving to meet emerging needs and priorities in food and nutrition. METROFOOD-RI addresses fragmentation in European agri-food research by fostering cross-border collaboration and harmonizing standards across national and disciplinary boundaries. Metrology provides a neutral foundation for harmonization, standardization, and data integration, enabling consistent and interoperable research efforts. This approach not only enhances scientific impact but also ensures that innovations benefit the entire agri-food sector.

Abbreviations

AI: artificial intelligence

CH: central hub

EOSC: European Open Science Cloud

ERA: European research area

e-RI: electronic-research infrastructure
ERIC: European Research Infrastructure Consortium
ESFRI: European Strategy Forum on Research Infrastructures
EU: European Union
FBOs: Food Business Operators
HEu: Horizon Europe
IMEKO: International Measurement Confederation
NN: national node
P-RI: Physical-research infrastructure
R & I: research and innovation
RI: research infrastructure
RMs: reference materials
SRIA: Strategic Research & Innovation Agenda
TC23: Technical Committee 23

Declarations

Author contributions

MZT: Conceptualization, Methodology, Investigation, Writing—original draft, Formal Analysis. NO: Conceptualization, Writing—review & editing, Formal analysis. CZ: Conceptualization, Funding acquisition, Project Administration, Investigation, Supervision, Visualization, Writing—review & editing, Formal analysis. All authors read and approved the submitted version.

Conflicts of interest

Maria Z. Tsimidou, Nives Ogrinc, and Claudia Zoani who are the Guest Editors of Exploration of Foods and Foodomics had no involvement in the journal review process of this manuscript.

Ethical approval

Not applicable.

Consent to participate

Not applicable.

Consent to publication

Not applicable.

Availability of data and materials

Not applicable.

Funding

This work has been supported by the METROFOOD-EPI project, funded by the European Union [GA No. 101130162]. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them. The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Copyright

© The Author(s) 2025.

Publisher's note

Open Exploration maintains a neutral stance on jurisdictional claims in published institutional affiliations and maps. All opinions expressed in this article are the personal views of the author(s) and do not represent the stance of the editorial team or the publisher.

References

1. A new ERA for Research and Innovation. Staff Working Document [Internet]. Brussels: European Commission; c2020 [cited 2024 Dec 11]. Available from: <https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-04/a%20new%20era%20for%20research%20and%20innovation-KIBD20018ENN%20%281%29.pdf>
2. Council of the European Union. Council Recommendation (EU) 2021/2122 of 26 November 2021 on a Pact for Research and Innovation in Europe [Internet]. Brussels: European Commission; c2025 [cited 2024 Dec 11]. Available from: <https://www.europeansources.info/record/proposal-for-a-council-recommendation-on-a-pact-for-research-and-innovation-in-europe/>
3. European Research Area Policy Agenda – Overview of actions for the period 2022-2024 [Internet]. Brussels: European Union; c2021 [cited 2024 Dec 11]. Available from: <https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-04/ERA%20policy%20agenda-2021.pdf> [DOI]
4. Council Regulation (EC) No 723/2009 of 25 June 2009 on the Community legal framework for a European Research Infrastructure Consortium (ERIC); OJ L 206, 8. 8. 2009 (December 26, 2013)
5. ESFRI RIs PORTFOLIO [Internet]. ESFRI [cited 2024 Dec 11]. Available from: <https://ri-portfolio.esfri.eu/ri-portfolio/portfolio-editions/2024-first-edition>
6. ESFRI Roadmap Domain “Health and Food”. High-Level Metrology Services in Food and Nutrition for The Enhancement of Food Quality And Safety [Internet]. METROFOD; c2019 [cited 2024 Dec 11]. Available from: <https://www.metrofood.eu>
7. Tsimidou MZ, Ordoudi SA, Mantzouridou FT, Nenadis N, Stelzl T, Rychlik M, et al. Strategic Priorities of the Scientific Plan of the European Research Infrastructure METROFOOD-RI for Promoting Metrology in Food and Nutrition. *Foods*. 2022;11:599. [DOI]
8. Stelzl T, Tsimidou MZ, Belc N, Zoani C, Rychlik M. Building a novel strategic research agenda for METROFOOD-RI: design process and multi-stakeholder engagement towards thematic prioritization. *Front Nutr*. 2023;10:1151611. [DOI] [PubMed] [PMC]
9. Novielli P, Magarelli M, Romano D, de Trizio L, Di Bitonto P, Monaco A, et al. Climate Change and Soil Health: Explainable Artificial Intelligence Reveals Microbiome Response to Warming. *Mach Learn Knowl Extr*. 2024;6:1564–78. [DOI]
10. Di Bitonto P, Magarelli M, Novielli P, Romano D, Diacono D, de Trizio L, et al. From data to nutrition: the impact of computing infrastructure and artificial intelligence. *Explor Foods Foodomics*. 2024;2: 810–29. [DOI]
11. Rychlik M, Zappa G, Añorga L, Belc N, Castanheira I, Donard OFX, et al. Ensuring Food Integrity by Metrology and FAIR Data Principles. *Front Chem*. 2018;6:49. [DOI] [PubMed] [PMC]
12. ESFRI Roadmap Domain “Health and Food”. High-Level Metrology Services in Food and Nutrition for The Enhancement of Food Quality And Safety. Open Call [Internet]. METROFOD; c2019 [cited 2024 Dec 11]. Available from: <https://www.metrofood.eu/access/open-call.html>
13. ESFRI Roadmap Domain “Health and Food”. High-Level Metrology Services in Food and Nutrition for The Enhancement of Food Quality And Safety. METROFOOD-EPI webinar series starts in May [Internet]. METROFOD; c2019 [cited 2024 Dec 11]. Available from: <https://www.metrofood.eu/media-room/news-events/news/metrofood-epi-webinar-series-starts-in-may.html>

14. ESFRI Roadmap Domain “Health and Food”. High-Level Metrology Services in Food and Nutrition for The Enhancement of Food Quality And Safety. The book of abstracts from the METROFOOD-GR webinars on saffron cultivation in the era of climate change is available [Internet]. METROFOOD; c2019 [cited 2024 Dec 11]. Available from: <https://www.metrofood.eu/media-room/news-events/news/the-book-of-abstracts-from-the-metrofood-gr-webinars-on-saffron-cultivation-in-the-era-of-climate-change-is-available.html>
15. METROFOOD•GR [Internet]. METROFOOD•GR; c2025 [cited 2024 Dec 11]. Available from: <https://metrofood.gr/mikroi-peirates-se-apostoli-metro-ntas-plastika-stin-a-p-thalassa/>
16. Science Summit 2024. Global minds together to advance science and innovation [Internet]. Sched; c2025 [cited 2024 Dec 11]. Available from: <https://sciencesummit2024.sched.com/event/1jzj7>
17. Research and Innovation Agenda of METROFOOD-RI - Infrastructure for Promoting Metrology in Food and Nutrition [Internet]. METROFOOD-PP Consortium; [cited 2024 Dec 11]. Available from: <https://www.metrofood.eu/images/preparatoryphase/SRIAppro.pdf>
18. Strengthening Food Safety, Sustainability, and Innovation in the Agrifood Sector through METROFOOD-RI and the One Health Approach. METROFOOD-PP Consortium; [cited 2024 Dec 11]. Available from: <https://www.metrofood.eu/component/jdownloads/?task=download.send&id=297&Itemid=1920>