
Advancing Food Consumer Science Across Europe



COMFOCUS
Community on Food Consumer Science



INTRODUCTION

COMFOCUS is a collaborative European initiative dedicated to unifying the field of Food Consumer Science (FCS) by connecting researchers and their data. Its mission is to transform the currently fragmented landscape into a cohesive, data-rich discipline that effectively supports European public policies and private strategies promoting healthy food choices. Central to this mission is the adherence to FAIR (Findable, Accessible, Interoperable, and Reusable) data principles and Responsible Research and Innovation (RRI) guidelines.

The Challenge

The current state of FCS is marked by disjointed research infrastructures and methodologies, hindering a comprehensive understanding of the complexities of human eating behaviour. This fragmentation limits the discipline's potential to inform and influence policies and strategies aimed at fostering healthier food choices across Europe.

Our Approach

To address these challenges, COMFOCUS has brought together 14 key European research infrastructures, including:

- Wageningen Research (Netherlands)
- Aarhus University (Denmark)
- University of Surrey (United Kingdom)
- Jožef Stefan Institute (Slovenia)
- Sociedade Portuguesa de Inovação (Portugal)
- Javier de la Cueva (Spain)
- Institut de Recerca i Tecnologia Agroalimentàries (Spain)
- Alma Mater Studiorum - Università di Bologna (Italy)
- University of Goettingen (Germany)
- Nofima (Norway)
- University of Trento (Italy)
- Slovak University of Agriculture in Nitra (Slovakia)
- University of Turku (Finland)
- Noldus Information Technology BV (Netherlands)

This consortium aims to:

- Provide Access
 - › Offer both virtual and transnational access to high-quality services and resources for the academic and private research communities.
- Harmonise Methodologies
 - › Standardise research approaches and methodologies within the European FCS community to reduce fragmentation.
- Enhance Relevance
 - › Increase the applicability of FCS insights in business and policy contexts by leveraging FAIR data and RRI principles.

Our Vision

COMFOCUS envisions a future where open science serves as the foundation for a robust, data-driven FCS discipline. By fostering collaboration, standardising methodologies, and promoting responsible data practices, COMFOCUS strives to create a unified community capable of supporting evidence-based public policies and private sector strategies that encourage healthy eating habits across Europe.



ACTIVITIES FOR TRANSNATIONAL ACCESS (VIRTUAL AND IN-PERSON)

A key component of this initiative is its Transnational Access (TNA) activities, which enables researchers from various backgrounds to access state-of-the-art facilities and expertise across multiple European research infrastructures.

How Transnational Access Works

The TNA program is designed to provide researchers with the opportunity to conduct studies at leading research institutions within the COMFOCUS network. This includes access to specialized labs, cutting-edge technology, and expert guidance to support high-quality, reproducible research. The methodology follows these key principles:

1. Inclusivity & Open Science

COMFOCUS prioritizes diversity and collaboration, ensuring that researchers from different disciplines and career stages can participate.

2. Support & Mentorship

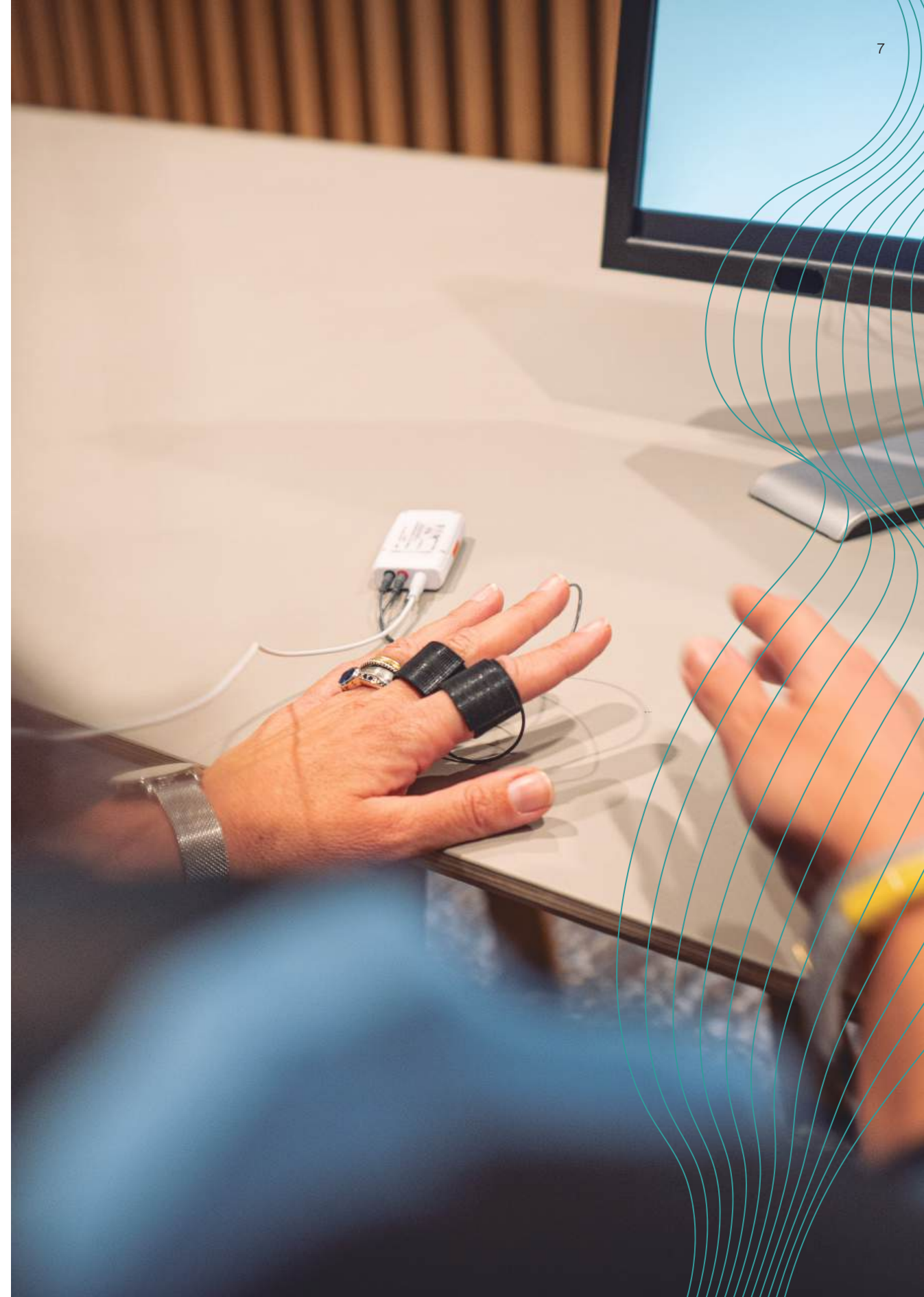
Researchers benefit from close collaboration with hosting institutions, receiving guidance on experimental design, data collection, and analysis.

3. Transparency & Reproducibility

All research conducted under TNA aligns with Open Science principles, fostering greater transparency and encouraging replication studies. Data generated through TNA projects is shared according to FAIR (Findable, Accessible, Interoperable, Reusable) principles.

Open Calls for Researchers

COMFOCUS adopted an innovative methodology to provide both virtual and transnational access to state-of-the-art research infrastructures across Europe. The project launched two Open Calls designed to support early-career researchers in conducting cutting-edge studies in FCS. These Open Calls facilitated access to advanced research tools, harmonised datasets, and collaborative networks, ensuring that research methodologies and data were standardised and interoperable across borders.



Open Call 1

Virtual Access to COMFOCUS Research Infrastructure

COMFOCUS established an Open Call program to provide early-career researchers with virtual access to European research infrastructures. The virtual access was offered through the Easy Questionnaire Tool (EQT), a platform allowing users to develop pan-European questionnaires focused on self-reported measures related to healthy eating. This initiative supported research proposals exploring motivational factors in healthy eating, consumer behaviour, and perceptions of food products.

Eligibility and Application Process

Applicants were required to meet specific criteria, including:

- Being at least 18 years old and an early-career researcher (academic or private sector) with a minimum of a Master's thesis.
- A proficient level of English (B2 or higher).
- Submitting a research proposal relevant to consumer behaviour and healthy eating.
- Agreeing to use a selection of harmonized measures and contribute data to the COMFOCUS Knowledge Platform.

Applicants submitted proposals via the COMFOCUS portal, and selected researchers gained access to:

- A harmonized library of consumer behaviour measures.
- The EQT for designing tailored surveys.
- COMFOCUS fellowships and networking opportunities with other researchers.

Evaluation Process

The selection process consisted of three stages:

1. Eligibility Screening: ensuring compliance with criteria such as language, project domain, and documentation requirements.
2. Individual Evaluation: assessment by two expert reviewers based on the quality and relevance of the proposal.
3. Final Evaluation: a panel discussion to assign final scores and provide feedback to applicants.

Successful applicants were required to acknowledge COMFOCUS in any publications and allow their research outcomes to be integrated into the COMFOCUS Knowledge Platform.

Open Call 2

Transnational Access to COMFOCUS Research Infrastructure

This call provided 67 early-career researchers with transnational access to leading consumer science institutes across Europe. Participants conducted research aligned with institute expertise, utilizing harmonized protocols for psychophysiological measurements and self-reported data collection.

Eligibility and Application Process

Applicants had to meet the following requirements:

- Hold at least an MSc degree in a relevant field (e.g., FCS).
- Not be affiliated with an institution in their country of residence.
- Demonstrate proficiency in English (B2 or higher).
- Submit a research proposal fitting COMFOCUS research priorities.

Selected researchers collaborated with host institutes, receiving support from local staff and research coordinators. They were expected to:

- Follow standardized data collection protocols to ensure future data integration.
- Share research findings within the COMFOCUS Knowledge Platform.
- Sign a data deposition agreement, ensuring compliance with European data protection laws and anonymization requirements.

Evaluation Process

The selection process mirrored that of Open Call 1, ensuring fairness and transparency through eligibility screening, individual expert reviews, and a final selection panel.

Benefits for Participants

- Conducting research in leading European consumer science institutions.
- Access to cutting-edge methodologies in psychophysiological and virtual reality research.
- Participation in collaborative projects and publication opportunities with other COMFOCUS fellows.

Both Open Calls contributed to the overarching goal of COMFOCUS: fostering harmonization in FCS research and enabling data integration across studies to generate new insights into consumer behaviour and healthy eating. By implementing this structured TNA methodology, COMFOCUS strengthens European consumer research, driving innovation and enhancing collaboration within the scientific community.

PROGRAMME OF ACTIVITIES WITH THE FELLOWS AND FINAL EVENT

The COMFOCUS programme was meticulously designed to provide a comprehensive, enriching, and collaborative research experience for the fellows selected through the Open Calls. The programme was a holistic journey encompassing hands-on research, knowledge exchange, professional development, and community building.

Access to Advanced Research Facilities

One of the most significant aspects of this programme was access to research infrastructures across Europe. These infrastructures are leaders in their respective fields, offering cutting-edge technologies and methodologies crucial for pioneering research in FCS. Fellows were given the opportunity to conduct experiments in highly specialised environments, utilising advanced tools such as:

- Psychophysiological Measurement Systems: including eye-tracking devices, facial expression analysis, heart rate monitors, and electrodermal activity sensors to understand consumer responses at a physiological level.
- Virtual and Augmented Reality Platforms: these immersive environments allowed researchers to simulate real-world shopping experiences and food choice scenarios, providing deeper insights into consumer decision-making processes.
- Decision-Making Laboratories: equipped with tools to analyse behavioural economics and consumer preferences, enabling complex experiments on choice architecture and purchasing behaviour.

This access empowered fellows to pursue innovative research questions, collect high-quality data, and utilise harmonised measures and protocols, ensuring consistency and comparability across studies.

Research Collaboration and Networking

Collaboration was at the core of the COMFOCUS programme. By bringing together early-career researchers from different countries and disciplines, the programme facilitated an enriching exchange of ideas, perspectives, and methodologies. This multidisciplinary approach was crucial in addressing the complex nature of FCS, which intersects psychology, nutrition, behavioural economics, and data science.

The fellows worked closely with leading experts and senior researchers at each infrastructure, benefiting from mentorship and guidance throughout their research journey. This approach fostered an environment of learning and growth, equipping the fellows with advanced research skills and methodologies.

To further encourage networking and community building, COMFOCUS organised several activities, including:

- Collaborative Research Projects
Fellows were encouraged to engage in joint research projects, combining data and findings from multiple studies to generate comprehensive insights and contribute to larger-scale research questions.
- Publication and Dissemination Opportunities
The programme promoted co-authorship and collaborative publications, increasing the visibility and impact of the fellows' research.
- Networking Events and Webinars
Regular online and in-person events facilitated interaction with other fellows, senior researchers, and industry stakeholders, enabling participants to establish professional connections and explore future research collaborations.

Academic Training and Capacity Building

COMFOCUS placed a strong emphasis on capacity building through a structured academic training programme. This training was designed to equip fellows with essential skills and knowledge to conduct high-quality research aligned with international standards, particularly the FAIR and RRI principles. The academic training programme covered a range of topics, including:

- Harmonised Research Protocols: fellows were trained on using standardised measures and protocols, ensuring data consistency and comparability across studies.
- Advanced Data Collection and Analysis Techniques: the training included hands-on sessions on data collection methods, data integration, and the use of the COMFOCUS Knowledge Platform for data analysis and visualisation.
- FAIR and RRI Principles: a key focus was on ensuring that all research adhered to the principles of FAIR data, along with RRI guidelines.
- Ethical Considerations and Data Management: The programme also provided guidance on ethical issues in food consumer research, including data anonymisation, informed consent, and secure data storage practices.

The academic training sessions were conducted by experienced experts from the COMFOCUS consortium and were available both online and in-person. These sessions were designed to be interactive and practical, providing fellows with real-world scenarios and case studies to enhance their learning experience.

Access to the COMFOCUS Knowledge Platform

An integral part of the programme was the access granted to the COMFOCUS Knowledge Platform, a digital ecosystem designed to support collaborative research and data sharing. The platform provided fellows with a range of tools and resources, including:

- The EQT: a powerful tool for designing pan-European questionnaires using harmonised measures, ensuring consistency in data collection.
- Data Validation and Harmonisation Tools: to ensure that collected data adhered to harmonised protocols and FAIR principles.
- Protocol and Dataset Search Tools: allowing fellows to explore existing datasets and protocols, enabling data reuse and integration across different studies.
- Discussion Platform: an interactive community forum for sharing ideas, seeking guidance, and collaborating with other researchers.

By leveraging these digital resources, fellows were able to enhance their research efficiency, improve data quality, and engage in meaningful collaborations with other COMFOCUS researchers.





Participation in Webinars and Scientific Events

Throughout the programme, fellows were invited to participate in a series of webinars, workshops, and scientific events designed to:

- Provide insights into emerging trends and challenges in FCS.
- Facilitate knowledge exchange and best practices for harmonised data collection and analysis.
- Enable fellows to present their research findings, receive feedback from peers and experts, and refine their methodologies.

These events were instrumental in building a vibrant community of early-career researchers who are well-versed in harmonised research practices and equipped to lead future innovations in this field.

Final Event

The culmination of the COMFOCUS programme was the Final Event, an inspiring and celebratory gathering that brought together all fellows, senior researchers, stakeholders, and partners.

The event was designed to:

- Showcase the research findings of the fellows, highlighting the innovative methodologies and impactful insights gained through the COMFOCUS programme.
- Facilitate knowledge exchange and networking, enabling fellows to establish professional connections and explore future collaborations.
- Reflect on the lessons learned and the overall impact of COMFOCUS on advancing FCS.
- Celebrate the achievements of the fellows and acknowledge their contributions to the community.

Additionally, the event served as a launching pad for future collaborations, with many fellows forming research partnerships and co-authoring publications following the event. It also solidified the COMFOCUS network, ensuring the sustainability and continued growth of the community beyond the duration of the project.

Legacy and Future Prospects

The Programme of Activities within COMFOCUS has laid a strong foundation for the next generation of FCS researchers. By empowering early-career researchers with advanced skills, access to world-class infrastructures, and a collaborative network, COMFOCUS has not only advanced the field of FCS but also inspired a culture of open science and international cooperation.

Moving forward, COMFOCUS aims to continue supporting and expanding this vibrant community, further developing the Knowledge Platform, and leading the way towards more harmonised and impactful food consumer research in Europe and beyond.

TRANSNATIONAL EXPERIENCE IN EACH INFRASTRUCTURE

The transnational experience offered by COMFOCUS was pivotal in transforming the way FCS is conducted in Europe. It facilitated a unique model of collaboration that transcended geographical, cultural, and disciplinary boundaries. By enabling researchers to access state-of-the-art infrastructures across Europe, COMFOCUS not only advanced individual research projects but also fostered a cohesive and harmonised scientific community. This section delves into the specific experiences, insights, and outcomes from the transnational access to virtual and physical infrastructures within the COMFOCUS network.

An Integrated Approach to Transnational Research

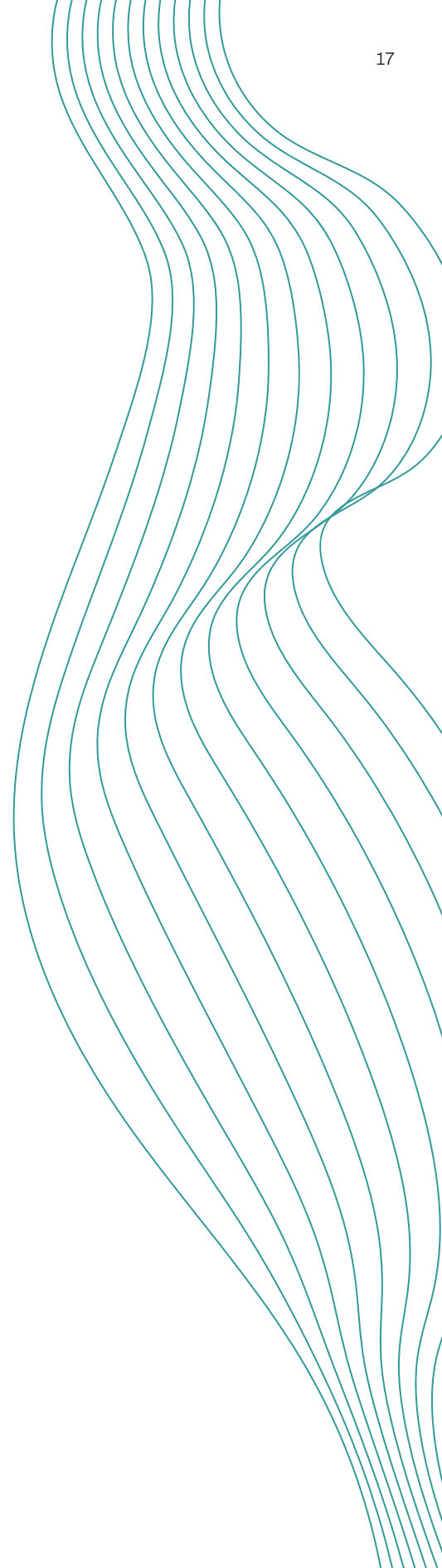
COMFOCUS adopted an integrated approach to transnational research, blending virtual and physical access to infrastructures. This dual model allowed for flexibility and inclusivity, ensuring that researchers from diverse geographical locations could participate regardless of logistical constraints.

- Virtual Access
Through the EQT, researchers were able to design harmonised surveys targeting food consumer behaviour across different European contexts. This virtual access facilitated a pan-European approach to data collection, ensuring standardisation and comparability of data. Additionally, the virtual model promoted inclusivity by enabling researchers from outside Europe to participate, thereby enriching the research with diverse cultural perspectives.
- Transnational Physical Access
COMFOCUS provided hands-on access to nine leading European research infrastructures. This allowed researchers to conduct complex experiments in cutting-edge laboratories equipped with advanced technologies, including eye-tracking devices, virtual reality (VR) simulations, and psychophysiological measurement tools. The physical access enabled researchers to collect high-resolution data on consumer behaviour, decision-making processes, and emotional responses in controlled yet realistic settings.

Experiences Across Diverse Infrastructures

The COMFOCUS network integrated nine research infrastructures, each offering unique capabilities that enriched the transnational experience. Researchers had the opportunity to work in specialised environments, allowing them to explore complex research questions using advanced methodologies and tools.

1. Measure Consumer Behaviour Competence Centre (MCBCC) - Wageningen University (Netherlands)
 - Researchers engaged with the NOLDUS Hub, integrating eye-tracking, facial expression analysis, and physiological sensors.
 - Immersive virtual environments simulated real-world shopping scenarios, enabling the study of consumer decision-making in dynamic contexts.
 - Studies explored how sensory stimuli influence behaviour and emotional responses, highlighting the role of contextual factors in food choices.
 - Findings opened new avenues for researching subconscious decision-making processes.



2. Cognition and Behaviour Lab (COBELab)
- Aarhus University (Denmark)

- Researchers conducted eye-tracking experiments to analyse visual attention patterns on food labels, nutritional claims, and branding elements.
- Studies revealed cultural differences in label perception and decision-making, underscoring the need for tailored communication strategies.
- Examination of cognitive load associated with complex nutritional information contributed to more effective label designs.

3. Psychology Research Infrastructure (PRI)
- University of Surrey (United Kingdom)

- Researchers used psychophysiological recording equipment, including heart rate monitors, electrodermal activity sensors, and eye-tracking systems.
- Virtual reality simulations facilitated controlled studies on consumer behaviour and decision-making processes.
- Findings underscored the role of emotional and cognitive factors in food choices, offering insights for health-related interventions.

4. Consumer Behaviour Laboratory (CONBELAB) - Monells (Spain)

- Multidisciplinary research setting combining explicit and implicit behavioural measurements.
- Physiological sensors, eye-tracking, and self-reported data assessed consumer perceptions in real and virtual environments.
- Studies informed communication strategies promoting healthier and more sustainable food choices.
- Findings contributed to refining product design and marketing approaches.

5. FARE Lab - University of Bologna (Italy)

- Focus on applied and experimental economics in agriculture, food, and environmental sustainability.
- Mobile workstations enabled data collection in real-world settings.
- Investigations explored decision-making in food consumption and sustainable business models.
- Research provided insights into how economic and psychological factors influence consumer choices.



6. Cognitive and Experimental Economics Laboratory (CEEL) - University of Trento (Italy)

- Interdisciplinary research combining economics, psychology, and marketing to study consumer behaviour.
- Use of physiological measures like skin conductance response to assess subconscious reactions to food stimuli.
- Research advanced understanding of cognitive biases in purchasing decisions and cross-cultural consumer preferences.

7. Laboratory of Consumer Studies (LCS) - Nitra (Slovakia)

- Interdisciplinary approach using neuromarketing techniques, eye-tracking, and biometric measurements.
- Studies focused on cultural influences on consumer preferences and ethical considerations in food marketing.
- Findings informed evidence-based guidelines for responsible marketing strategies.

8. FLAVORIA® - University of Turku (Finland)

- Living lab concept integrating research within a real-world restaurant and café environment.
- Observational studies examined consumer interactions with food, sensory experiences, and behavioural patterns.
- Research explored how environmental cues like ambience and social dynamics shape food choices.
- Findings offered practical recommendations for healthier and more sustainable dining spaces.

9. UGOE - University of Goettingen (Germany)

- Research focused on consumer behaviour in agribusiness, with emphasis on sustainability, animal welfare, and supply chain management.
- Employed advanced methodologies including eye-tracking, functional near-infrared spectroscopy (fNIRS), and sensory research.
- Investigated consumer responses to food innovations, labelling, and branding.
- Findings contributed to more effective marketing strategies for sustainable food systems.

Insights from Collaborative Research and Data Harmonisation

One of the key strengths of the transnational experience was the collaborative research environment created by COMFOCUS. By standardising measures and protocols across different infrastructures, COMFOCUS ensured that data collected was harmonised, comparable, and interoperable. This standardisation enabled:

- Cross-Cultural Analysis
Researchers could compare consumer behaviour across different European populations, revealing valuable insights into regional variations in food choices, health perceptions, and decision-making.
- Data Integration and Meta-Analysis
Harmonised data allowed for large-scale meta-analyses and longitudinal studies, enhancing the reliability and applicability of research findings.
- Collaborative Publications and Knowledge Exchange
Standardised data facilitated joint publications and knowledge sharing across institutions, increasing research impact and fostering a connected community within FCS.



FINAL REMARKS

The COMFOCUS project has set a new benchmark for transnational collaboration and innovation in FCS. By integrating leading research infrastructures across Europe, COMFOCUS has harmonised research methodologies, advanced data sharing practices, and fostered an inclusive and collaborative scientific community. This initiative has not only addressed the fragmentation within the FCS field but has also laid the foundation for a more connected, data-rich, and impactful research environment.

Impact on Food Consumer Science

COMFOCUS provided a solid foundation for the FCS transformation by promoting harmonisation and standardisation of research practices. Through the implementation of harmonised measures and protocols, the project ensured consistency and comparability of data across different studies, paving the way for large-scale meta-analyses and cross-cultural comparisons. This methodological rigor has significantly enhanced the validity and reliability of research findings, making them more applicable and relevant for evidence-based policy-making and strategic business decisions.

The project has also contributed to the advancement of research methodologies by leveraging cutting-edge technologies such as psychophysiological measurements, virtual and augmented reality simulations, and advanced data analytics. These innovative approaches have enabled researchers to explore complex consumer behaviours, decision-making processes, and emotional responses in more realistic and immersive environments.

Building a Harmonised and Connected Research Community

COMFOCUS has established and advanced three key infrastructures to enhance collaboration, researcher exchange, and data integration in FCS:

- **Institutional**
Developed a “New Way of Working” community, granting 67 research fellows access to nine leading institutions. This initiative fostered collaboration, provided advanced research facilities, and ensured harmonised protocols for FAIR data, strengthening future partnerships in the field.
- **Social**
Built a strong network of early-career researchers across Europe, promoting harmonised methodologies and cross-institutional access. Through training programs, collaborative projects, and the Consumer Research Exchange seminar series, COMFOCUS has expanded competencies and created a more inclusive research landscape.
- **Data**
Developed the COMFOCUS Knowledge Platform, ensuring FAIR data principles. This platform integrates harmonised measures, protocols, and tools, enabling data interoperability, reusability, and cross-cultural analysis to drive innovation in FCS.

Contributions to Policy and Industry

COMFOCUS has greatly contributed to the FCS field by generating evidence-based insights into food consumer behaviour, health perceptions, and decision-making processes. The harmonised datasets collected through the project provide valuable data for policymakers to develop targeted and effective public health interventions and food choice policies. These insights also help private enterprises to better understand consumer preferences, enabling them to design products, marketing strategies, and communication campaigns that resonate with diverse consumer segments.

The project has also contributed to the European Green Deal’s objectives by advancing research on sustainable food choices, environmental labelling, and ethical consumption patterns. By understanding the behavioural drivers behind sustainable food choices, COMFOCUS supports the development of effective policies and strategies that promote environmentally responsible consumer behaviour.

Looking Ahead

COMFOCUS leaves behind a rich legacy of scientific achievements, methodological advancements, and community-building efforts. The networks, partnerships, and collaborations established during the project have laid the groundwork for a sustainable and interconnected research community that will continue to grow and evolve beyond the project's timeline.

The COMFOCUS Knowledge Platform will remain a valuable resource for researchers worldwide, providing access to harmonised datasets, advanced analytical tools, and a collaborative digital ecosystem. This platform is expected to expand further, integrating new research infrastructures, datasets, and analytical capabilities, ensuring its relevance and usability for future generations of food consumer scientists.

As COMFOCUS continues to grow and evolve, it will remain at the forefront of FCS, driving research excellence, fostering international collaboration, and contributing to healthier and more sustainable food choices for European consumers.

For more information, visit the official COMFOCUS website:



For the future, COMFOCUS envisions:

- Expanding the network, including more research infrastructures and collaborators from both Europe and beyond, promoting a truly global FCS community.
- Driving interdisciplinary research, encouraging collaborations across disciplines such as behavioural economics, psychology, nutrition, and data science, to address complex and emerging research questions.
- Leading open science practices, continuing to advocate for FAIR and RRI principles, ensuring that FCS remains transparent, accessible, and impactful.



