

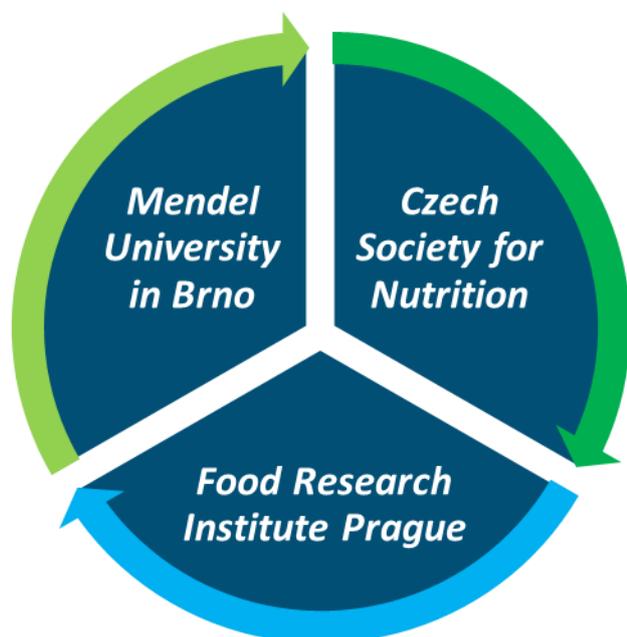
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## CZ AgriFoodTech

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**31<sup>st</sup> August 2020**

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**Mendel University in Brno**

**Czech Republic**

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# FNH-RI – National Node

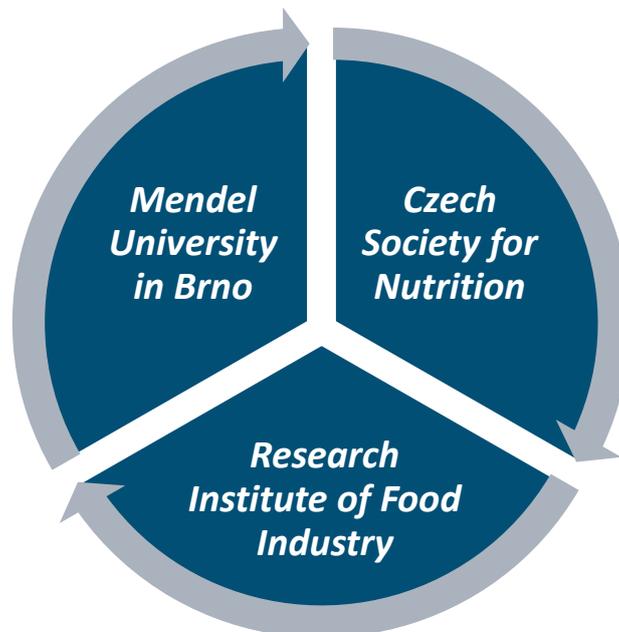
Czech Republic

The European Union (EU) is a political and economic union of 27 member states, its members have a combined area of 4,233,255.3 km<sup>2</sup> and an estimated total population of about 447 million. Although the EU is united in many ways, the situation regarding nutrition and access to research and development is not comparable.

We would be happy to cooperate as National Node lead by the Mendel University in Brno. The other links in the chain could be Czech Society for Nutrition, Research Institute of Food Industry, and other institution connected to our Node.

Mendel University in Brno and its Faculty of AgriSciences (formerly Faculty of Agronomy) celebrated 100<sup>th</sup> anniversary of its foundation in 2019.

***„Mendel University in Brno can form a national “Czech” node together with the Czech Society for Nutrition and Research Institute of Food Industry.”***



***Consortium Partnership***

## BACKGROUND

The present European food system is failing to meet the requirements of personal, public and planetary health. Food consumption needs to shift towards more plant-based foods to reduce non-communicable diseases, including obesity, and micronutrient deficiencies. Food production needs to keep environmental footprints within planetary capacity. To guide EU-citizens and societal stakeholders towards healthy and sustainable diets of the 21st century, a radical food systems transformation is needed, based on scientific breakthroughs and technological innovations.

## CHALLENGE

Currently, scientific expertise on diets and the food system is fragmented. This impedes the over 1,000 research institutions in the European Food, Nutrition and Health domain (FNH) from supporting the necessary dietary changes and redesign of the food system. The research community needs a Research Infrastructure (FNH-RI) to help generate transdisciplinary evidence and expertise in order to substantiate the citizen-centred food systems transition. Positioned at the cutting-edge of fundamental and applied research in the social and life sciences, FNH-RI will reunite the disciplines by enabling data and facility sharing, training and education of future scientists, and reaching out to citizens, public and private stakeholders.

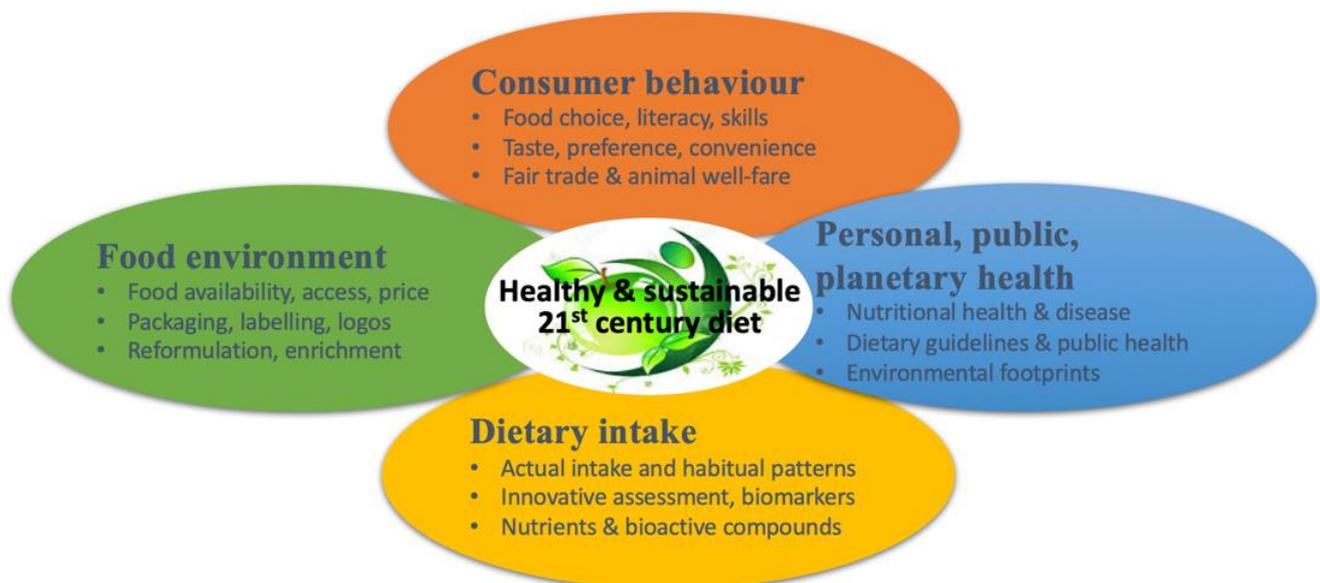


Figure 1. Simplified scheme

## IMPACT

Through FNH-RI, the scientific community will benefit by easy access to EU-wide data on food consumption, nutritional adequacy and health impacts, environmental footprints and food loss and waste; this includes consumer preferences and behaviours, access to

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*affordable, healthy and sustainable diets, and design of urban food environments. FNH-RI will stimulate national investments in FNH fields and facilitate EU-wide food science by integrating transdisciplinary data, knowledge and expertise in the social and life sciences, and contribute to the transition towards healthy and sustainable diets for EU citizens. Governments and food industries will benefit from dedicated data-services and top-level scientific research that supports co-creation and monitoring of evidence-based agri-food and health policies. For EU-citizens, this will secure the supply of healthy and affordable foods, compatible with a sustainable food system; moreover, they will benefit from innovative personalized nutrition feedback, tailored to their personal life and food environment.*

### **SERVICES**

*FNH-RI will be a European knowledge-hub, providing three key services to the scientific community: DATA, FACT (FACilities & Tools) and TED-services (Training, Education & Dissemination). DATA-services will include a platform for sharing existing (meta)data from disciplinary research, facilitating meta- and pooled analyses, modelling of scenarios, and monitoring of dietary behaviours, culminating in evidence-based transition pathways towards the future food system. FACT-services cross-fertilize beta and gamma sciences beyond existing data. Core feature will be the new pan-European panel of more than 20,000 EU citizens who supply continuously real-life data on determinants, food choice, and intake via apps, sensors, and wearables; this allows exploitation of big data by emerging data science technologies (e.g. AI). Moreover, FACT-services will facilitate access to psychology and virtual labs for experimental research on, for example, cognition and emotion, food choice and dietary patterns as well as bio-physiological labs, e.g. sensory sciences and neurophysiology, nutritional requirements, and X-omics. Finally, TED-services will inspire the research community to advance methodology and knowledge by providing training in emerging research fields. This will create transdisciplinary expertise through exchanges between young and established researchers, and facilitate widespread use of its services to societal stakeholders.*

### **ORGANISATION**

*Academic and public research organisations will be organised under ‘National Nodes’, which connect with the FNH-RI-Hub and, together, govern and deliver DATA-, TED- and FACT-services. The Hub will be supported by an external advisory body and will be accountable to the General Assembly, made up of the funding Members States. Funding will originate from the EU (2021-2029), and member states (2025-onwards), with increasing project-based contributions from public and private research-consortia.*

As of November 2019, a total of ten member states have already committed political and/or financial support towards the FNH-RI and its national nodes.

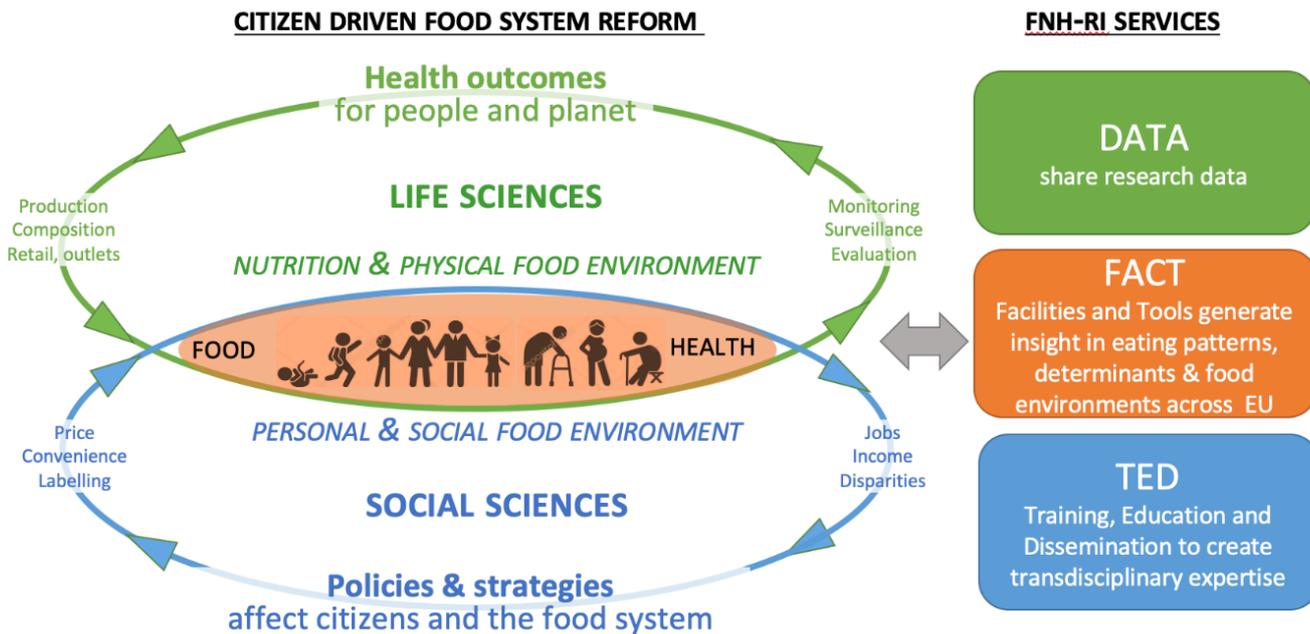


Figure 2. The citizen-driven transition towards healthy and sustainable diets is supported by services of the FNH-RI knowledge hub to the scientific community. The transition takes place at the intersection of the social and life sciences, each mediated by their own feedback loops (ellipses), outcomes and interventions (right and left side of the intersecting feedback loops). FNH-RI services drive the research needed for the food system transformation.

## Governance Structure

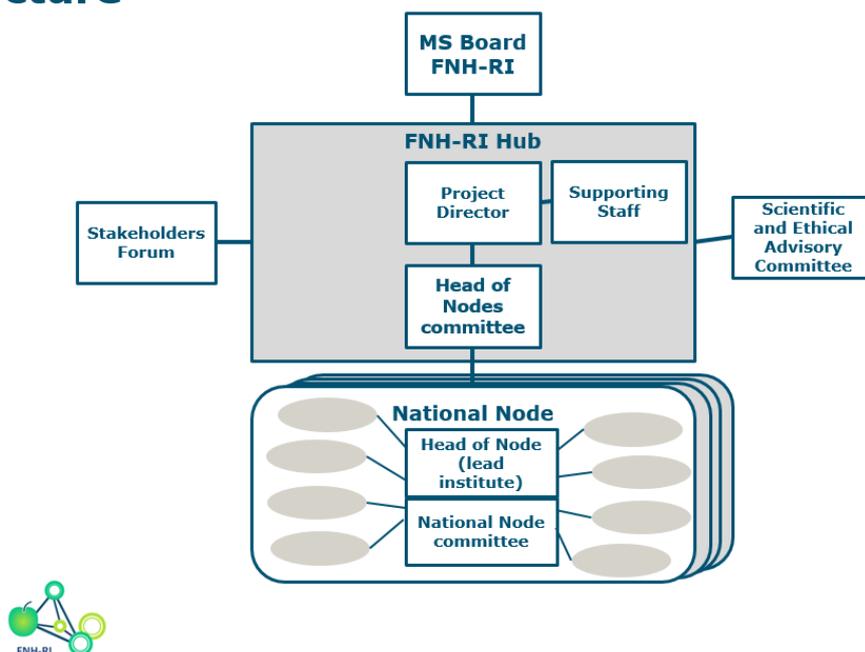


Figure 3. Annex C – Governance

## ESFRI roadmap: WUR project organisation

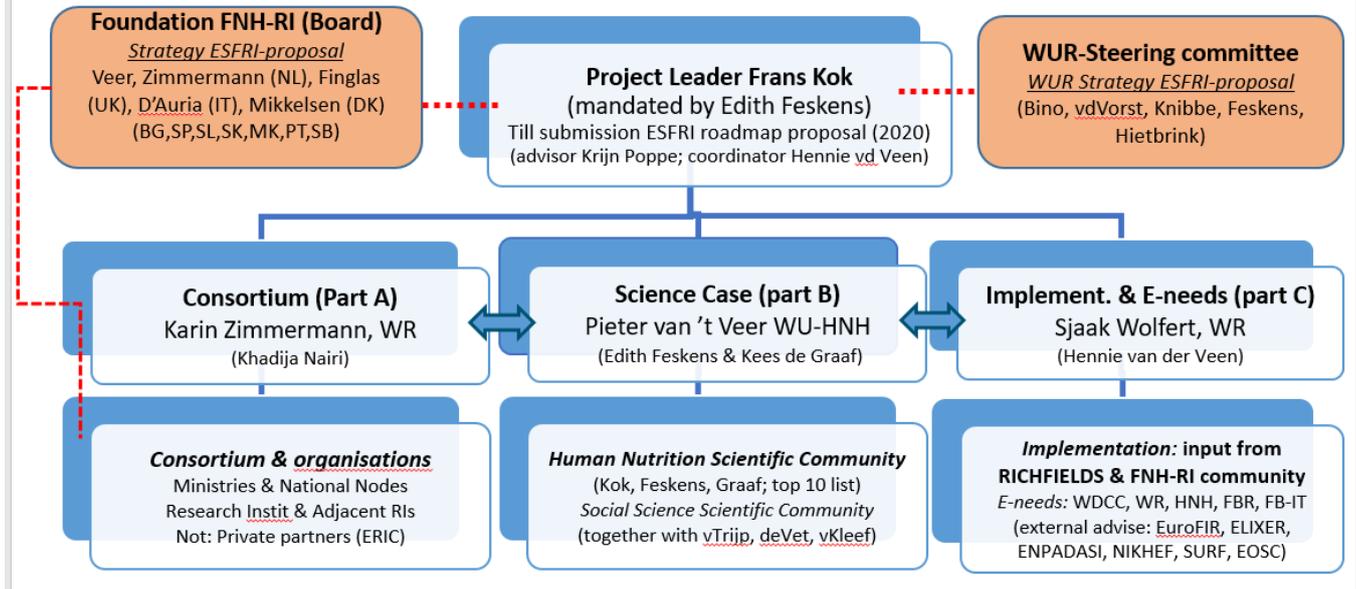


Figure 4. Annex D - ESFRI roadmap

### For Newsletter report

In the previous newsletter it was announced that preparations were underway for the participation of Czech Republic. We have created the conditions for the creation of the Czech National node lead by the Mendel University in Brno. The head of Czech Node Dr. Miroslav Jůzl, selected and addressed all relevant partners suitable for co-creating the node and informed the Czech partners about FNH-RI. Apart from the Mendel University in Brno, the partners will be: the Czech Society for Nutrition and Research Institute of Food Industry.

In addition, sub-lines will be created to connecting this node, so that this new platform will include all important institutions that deal with issues related to the functioning and objectives of the FNH-RI structure.

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## **Areas of interest and substructures:**

### **Food and Nutrition**

- **Mendel University in Brno (Mendelova univerzita v Brně)**
- **Research Institute of Food Industry (Výzkumný ústav potravinářského průmyslu, Praha)**
- University of Chemistry and Technology, Prague (Vysoká škola chemicko-technologická v Praze)
- University of South Bohemia in České Budějovice (Jihočeská univerzita v Českých Budějovicích)
- Czech University of Life Sciences Prague (Česká zemědělská univerzita v Praze)
- Tomas Bata University in Zlín (Univerzita Tomáše Bati ve Zlíně)

### **Health and Nutrition**

- **The Czech Society for Nutrition (Společnost pro výživu)**
- Charles University (Univerzita Karlova)
- Masaryk University (Masarykova univerzita)
- University of Veterinary and Pharmaceutical Sciences Brno (Veterinární a farmaceutická univerzita Brno)
- Veterinary Research Institute (Výzkumný ústav veterinárního lékařství)

### **Connection of Supervisory and Government authorities**

- Ministry of Agriculture of the Czech Republic (Ministerstvo zemědělství ČR)
- Czech Agriculture and Food Inspection Authority (Státní zemědělská a potravinářská inspekce)  
= Ministry of Agriculture
- Institute of Agricultural Economics and Information (Ústav zemědělské ekonomiky a informací)  
= Ministry of Agriculture
- National Institute of Public Health (Státní zdravotní ústav) = Ministry of Health

### **Associations**

- Federation of the Food and Drink Industries of the Czech Republic (Potravinářská komora České republiky)
- Czech-Moravian Dairy Union (Českomoravský svaz mlékárenský)
- Czech Meat Processors Association (Český svaz zpracovatelů masa)

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## **FNH-RI BOARD**

On the 8th of June 2020 a next Board meeting of the FNH-RI Foundation is scheduled. The FNH-RI Foundation was established in 2018 to create and maintain a research infrastructure on Food, Nutrition and Health. The foundation forms the formal governing body of the FNH-RI community. According to the statutes the aim of the foundation is: “ to support scientific analysis of the relations between the food supply chain and food innovation, dietary behaviour and its determinants, and food consumption as related to intake of nutrients, food constituents and nutritional health in terms of bodily functions, risk factors and underlying mechanisms. This scientific analysis is targeted to increasing knowledge on healthy diets and lifestyles enabling health maintenance and disease prevention, and to the corresponding fallbacks on policy and industry”.

The Board of the FNH-RI foundation meets six times a year and consists of representatives of seven member states and is chaired by Pieter van Veer of Wageningen University in the Netherlands.

Other Board members are: Sabato D’Auria (vice-chair, IT), Karin Zimmermann (NL, secretary), Paul Finglas (UK, treasurer), Bent Egberg Mikkelsen (DK), Adriana Kolesárová (SR), Igor Spiroski (MKD) and Biotza Gutierrez Arechederra (ES).

Aspiring Board members are: Duarte Torres (PT), Angel Angelof Bulgaria (BG) and Barbara Korousic Seljak (SL).

## **FNH-RI COMMUNITY**

The state of affairs regarding the FNH-RI Community building is as follows: the community includes one hundred and twenty (120) institutes from nineteen (19) national nodes in thirteen (13) EU Members States and six (6) non-EU Member States. Eight (8) nodes (seven (7) from EU Member States and one (1) from an Associated Country) have expressed their financial support to FNH-RI by 2025 (implementation phase) and six (6) countries are committed to financially support FNH-RI once an ERIC status is achieved.

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