

Building a research infrastructure for Food, Nutrition and Health Research (FNH-RI) in Europe

Karin Zimmermann, on behalf of EuroDISH, DISH-RI and RICHFIELDS consortia

Nordic & Baltic 2018 Food & Nutrition Initiative, Workshop Norway



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- Research leader Research Infrastructure Food & Health at WUR
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- Vice-chair of the EMB board of European Food, Nutrition and Health Research Infrastructure
- Member of the FNH-RI Dutch national node DISH.nl
- Research interests: marketing, consumer driven product development, innovation
- RM - European expert in marketing karin.zimmermann@wur.nl



Societal trends

Digitalisation

- Data platforms, linked open data, standards
- Apps, sensors, wearables

Integration

- Fragmentation in sectoral policies and practices to be overcome

Personalisation

- Individual feedback structures
- Quantified self

Citizen science

- Citizens become engaged in research

Globalisation

- Global markets and global SDGs
- Internet

Consumers & Data



Societal challenges (Food 2030)

Open Innovation

Investment; Regional; Private partnering

Open Science

Open access and data sharing; engagement, education, skills

Research Breakthroughs

“Smart” FNS via ICT; Food system science and trans disciplinarity

Open to the World

Global collaboration; MS policy alignment and support

Data: BIG data, integration, standards

Science: Reversed paradigm

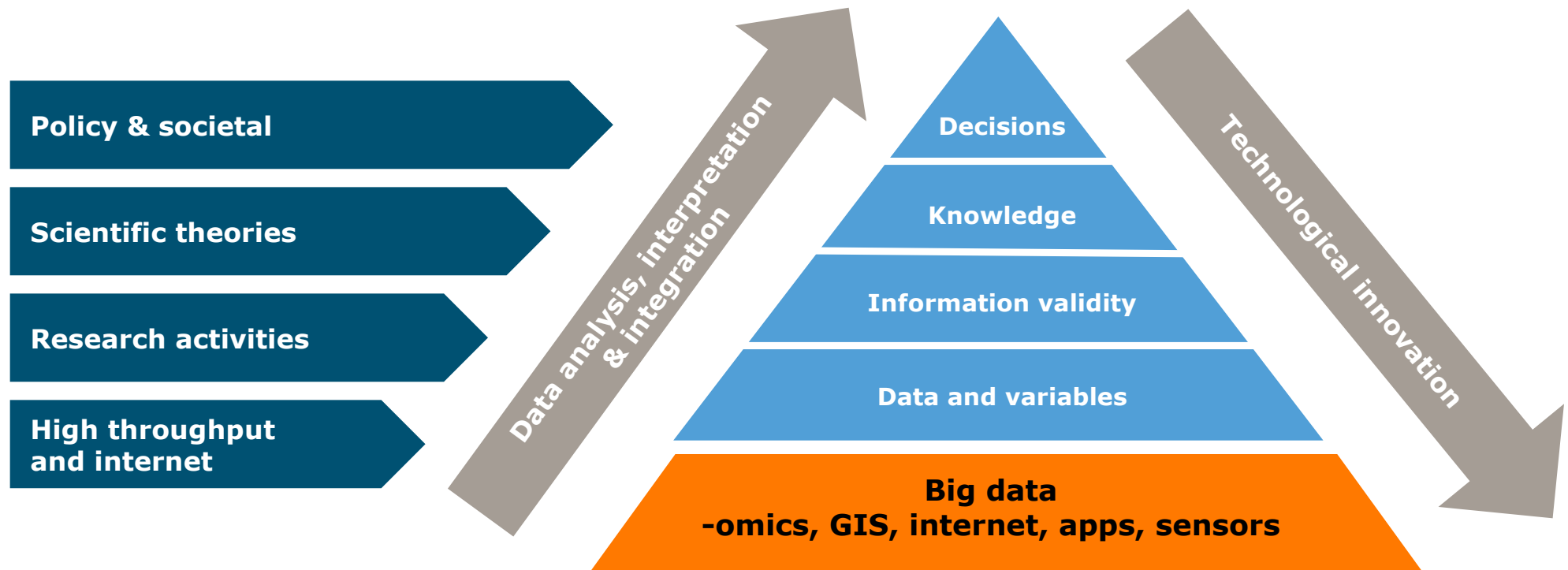
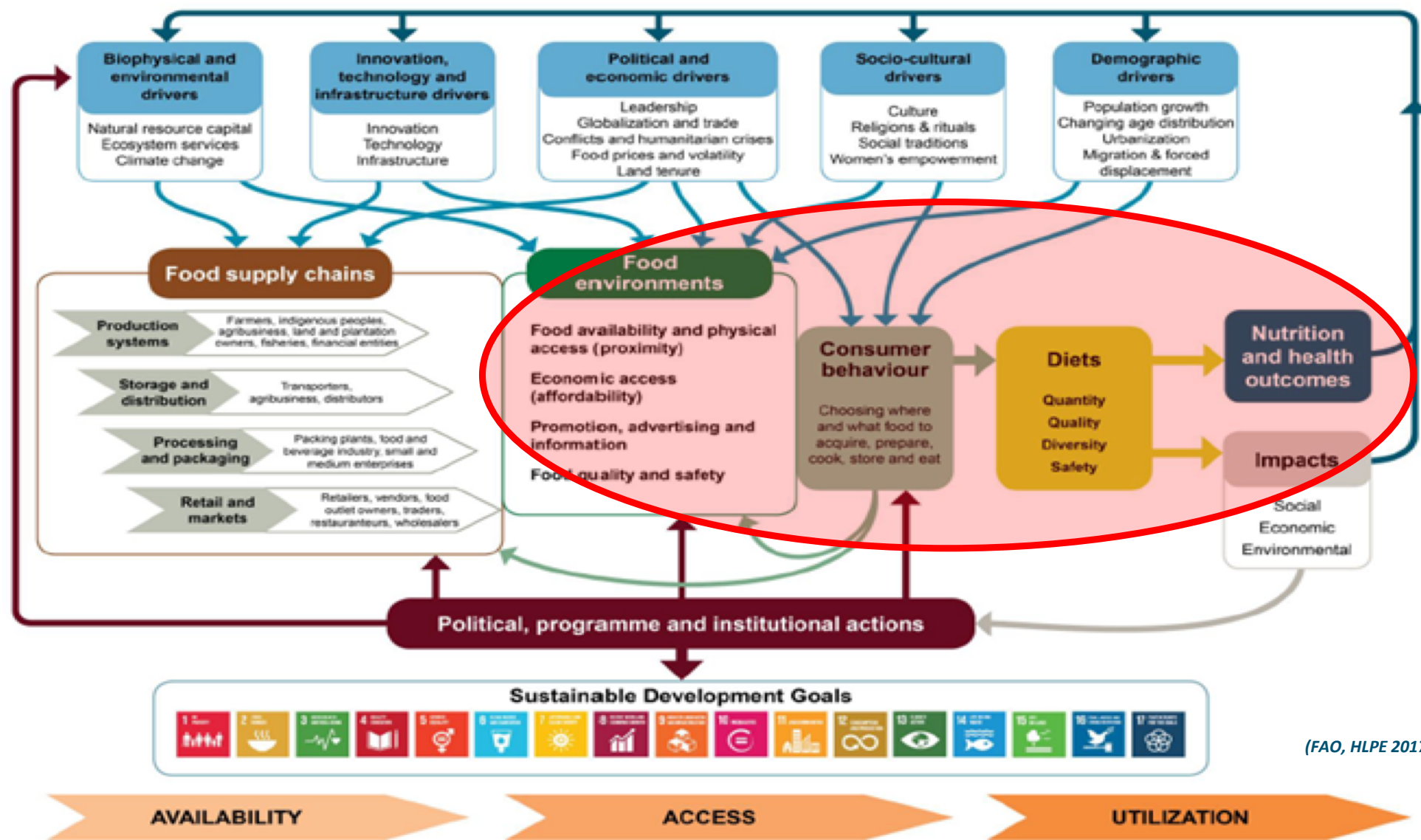


Figure 1 Conceptual framework of food systems for diets and nutrition



(FAO, HLPE 2017)

Sustainable Food & Preventive Health Care in the context of Food & Nutrition Security

Food Supply Chain

- Food enrichment (salt, saturated fat, sugar)
- Environmental sustainability, animal welfare, food waste linked to product quality and consumer behaviour
- Economic sustainability of SMEs, food companies, fair-trade linked to product attributes, pricing and choice of diet
- Food policy and nudging by consumer driven and responsive supply chains

Preventive Health Care

- Health - physical, social, mental; as ability to adapt, fitness, well-being
- Physiology and rewards of consumption, food matrix, digestion, energy balance
- Nutrient adequacy and prevention of chronic diseases
- Metabolism of nutrients, genetic make-up and disease pathways
- Functional markers & health status: Macro & micronutrients, bioactives

Knowledge gaps and breakthroughs

Knowledge gaps:

- Personalized feedback
- Psycho-social & evolutionary mechanisms
- Interventions in food supply chain chain and food environment
- Relation between food & health (fundamental research)

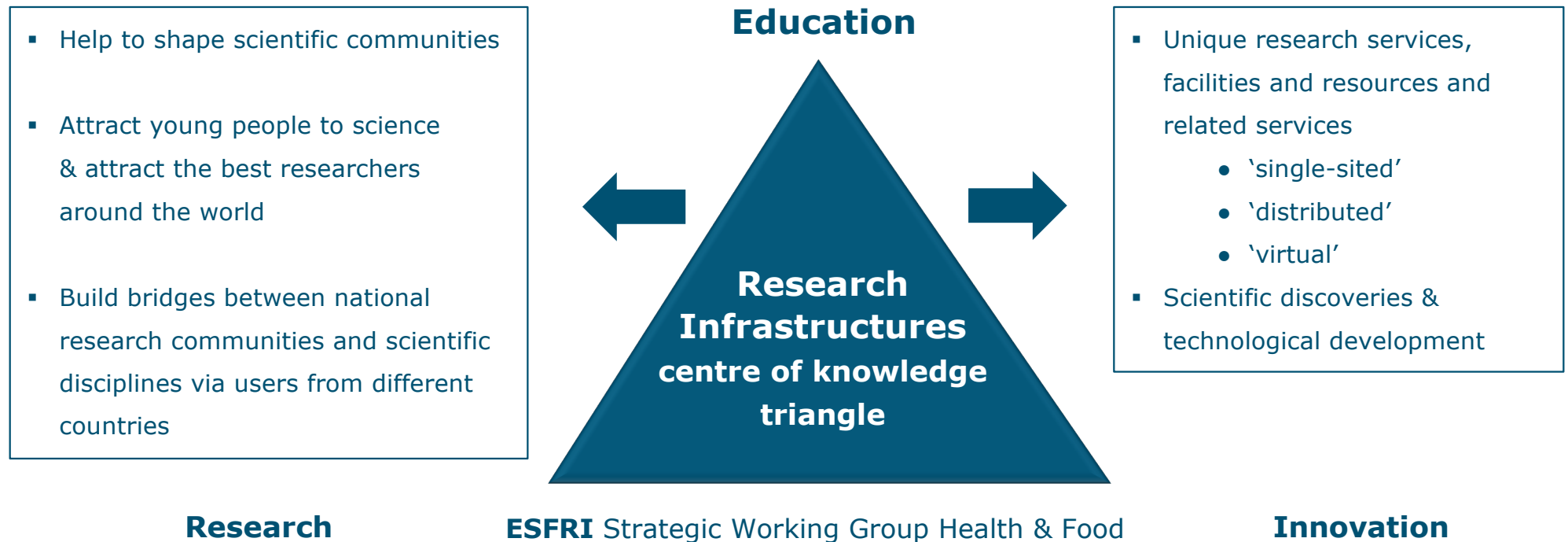
Breakthrough potential by:

- Biology & behaviour
- Health & sustainable environment
- Multilevel (local-global)
- Inter & transdisciplinary
- Public & private data

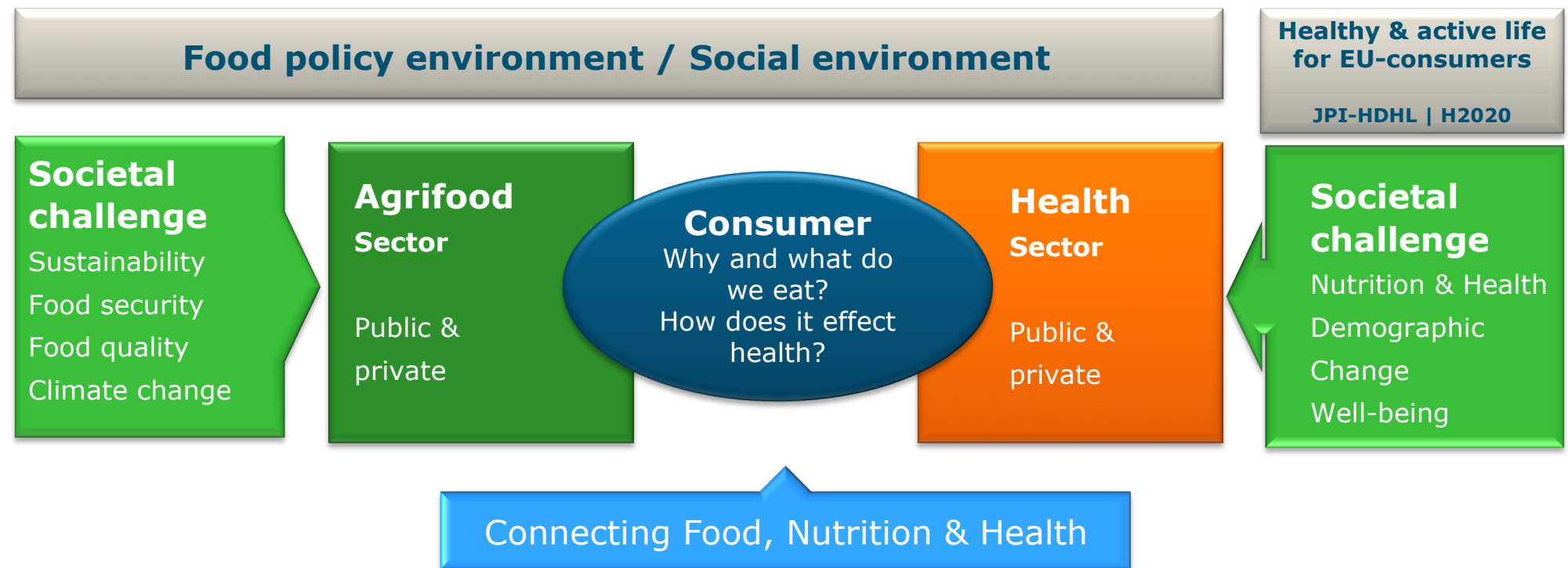
Supported by:

- Trends in ICT
- Citizen science
- Real-time data
- Consumer engagement

RIs: enabling response to scientific & societal challenges



The consumer as link between the agri-food and health sector



Food Nutrition and Health RI

- To enable **top-level research**, breakthroughs and innovations that promote personal, public and planetary health, in innovative and inclusive communities.
- To serve the pan-European research community to **overcome fragmentation** to collate, connect and share innovative and existing research data, tools and labs & experimental facilities.



unpins the design of our
plate of the future

FNH-RI model

Data platform

added value by scientific integration of fragmented and locked data via services to stakeholders

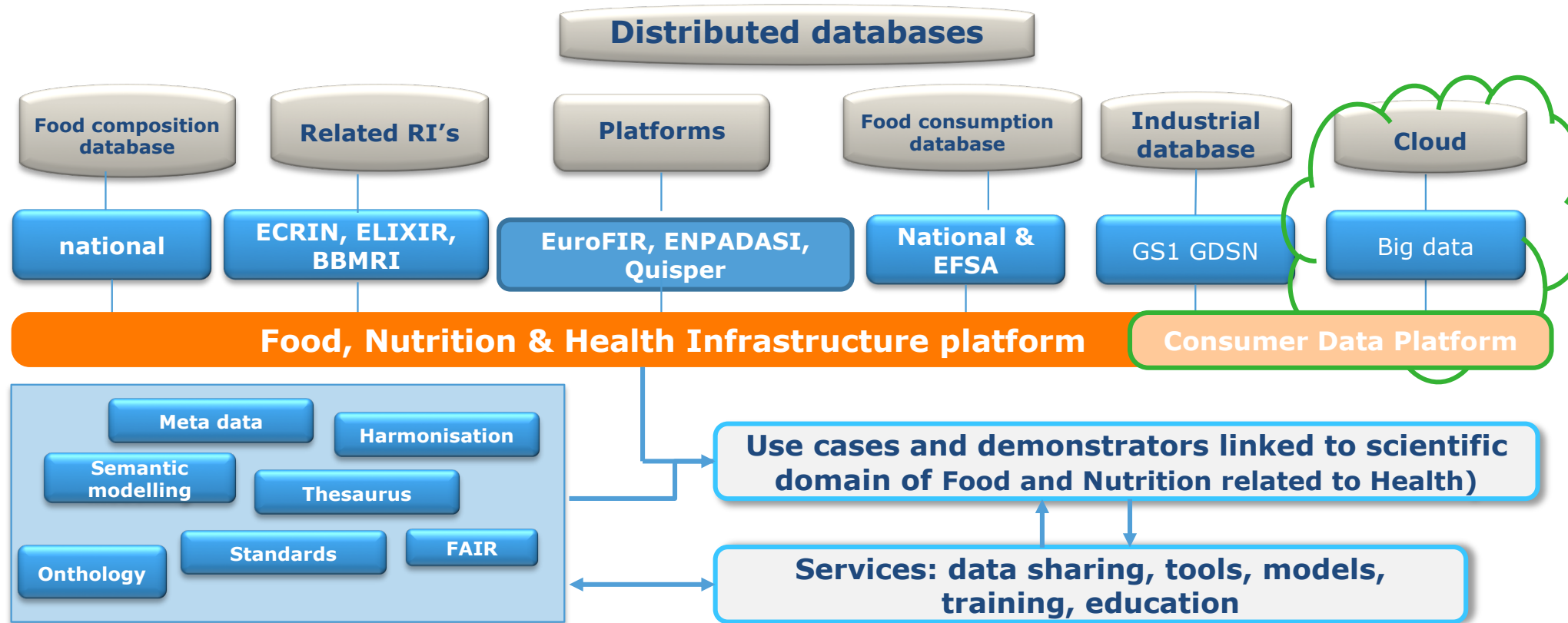
ICT backbone

supporting the interoperability of standardization and quality management of data and tools

Governance structure

conditions for access, organizes centralized and distributed activities, and enables flexibility regarding innovation within the RI

FNH-RI Platform overarching and interoperability

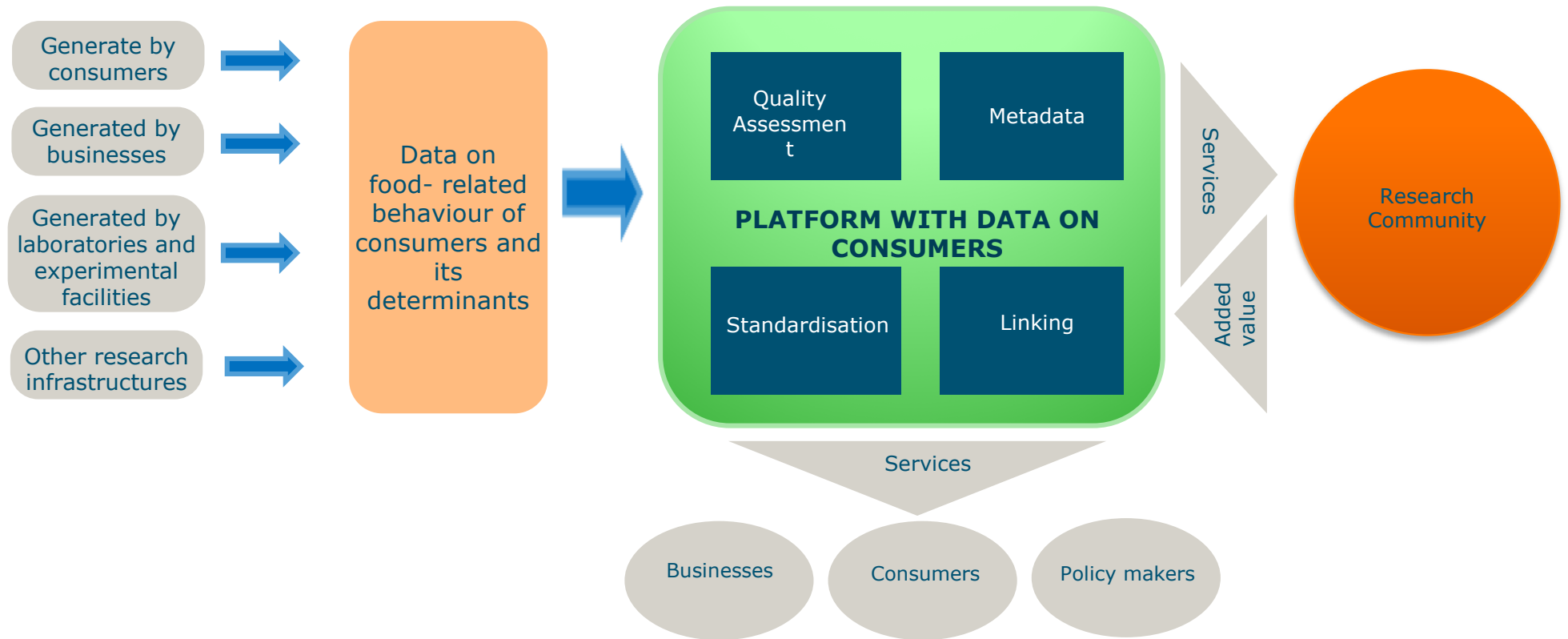


Data of the future - Big data on consumers

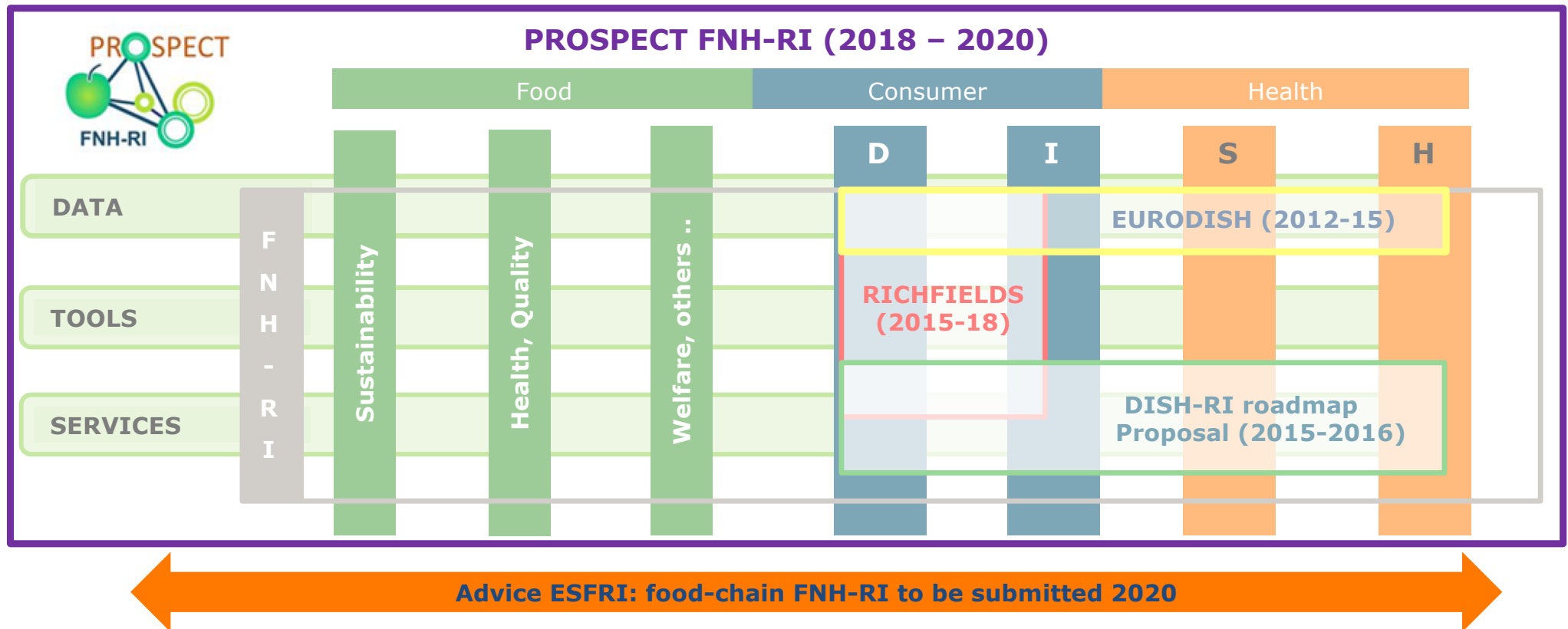


Increase understanding in monitoring the differences

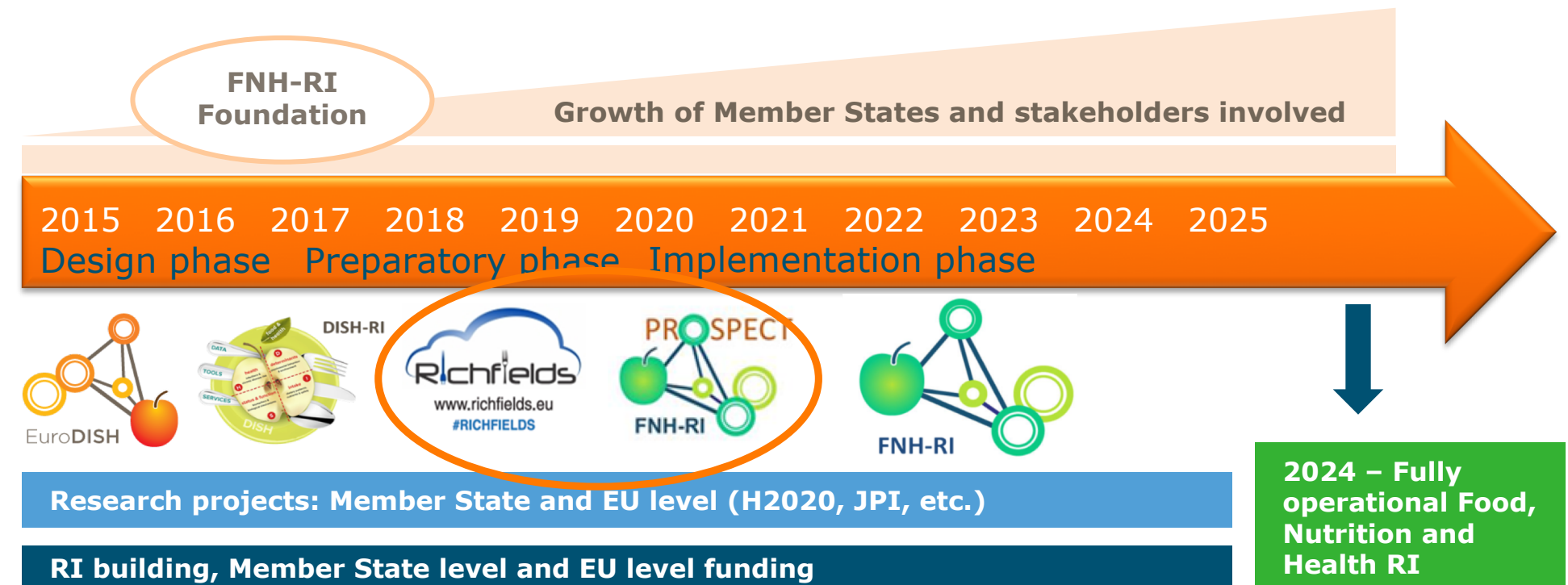
Conceptual design of the Consumer Data Platform (RICHFIELDS, 2015)



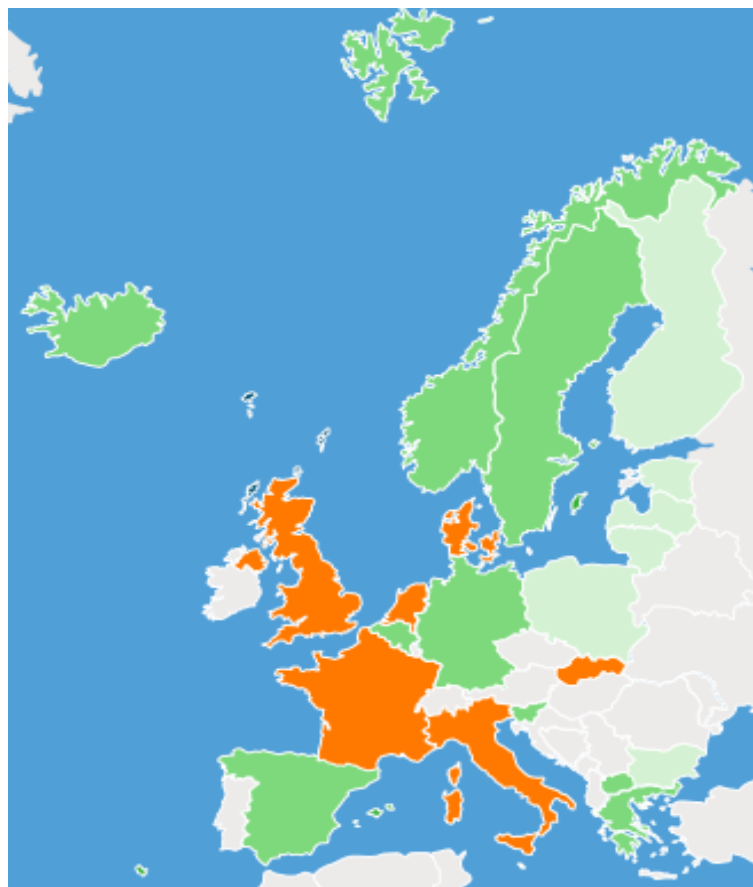
FNH-RI: Project family (European level)






Time line of FNH-RI



Lead countries, associated countries & Interested member states

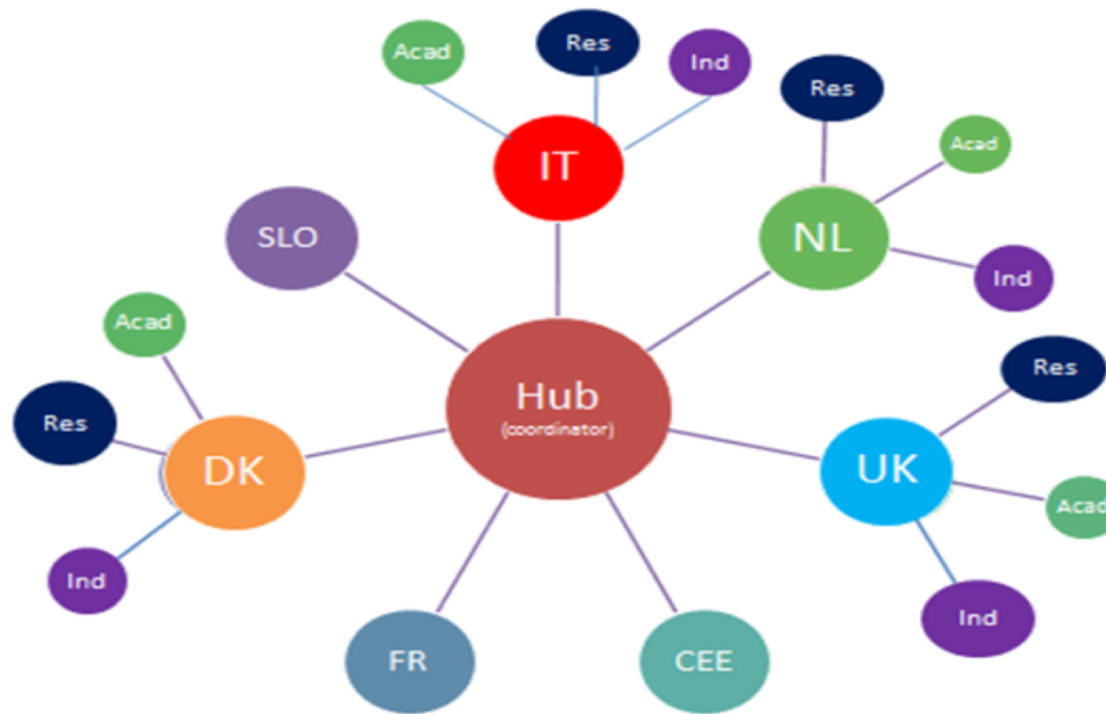


-  Lead member states
-  Associated and in-progress member states and countries
-  Interested member states



FNH-RI – Governance Principle

Hub and spoke model



Development of a FNH National Node

Step by Step – Establish a platform

Step 1: Find a lead institute/university and spokes man/women with endurance!

Step 2: Introduction workshop with broad invitations in the domain of food systems, consumer research, nutrition, preventive health (system)

Step 3: Find a joint interest in research and elaborate on it in terms of platform science case and RI

Step 5: Get acknowledgement by the relevant Ministry from perspective of the FNH-RI Science Case.

Development of a FNH National Node

Step by Step – National ESFRI ROADMAP

Step 6: Get acquainted with your national ESFRI representative.

Step 7: Apply with the national platform to the National ESFRI Roadmap to be listed and acknowledge in terms of National Node of FNH-RI

If on the next National Roadmap:

Step 8: Apply for funding for your national proposal to align FNH-RI and FNH National Node initiatives

Step 9: Transfer the budget into a workplan for the platform members

Development of a FNH National Node

Step by Step – European FNH-RI

Step 10: :Leading institute represent the FNH National Node in General Board of FNH-RI

Step 11: FNH-RI Board will apply for the ESFRI ROADMAP 2020 and start writing in April 2018 as a consortium PROSPECT FNH-RI

Step 12: On behalf of FNH community and FNH Board The Netherlands will submit the proposal to ESFRI in March 2019

Step 13: December 2019: Decision about the ESFRI ROADMAP 2020 and FNH-RI. May 2020: ESFRI 2020 Roadmap will be launched.

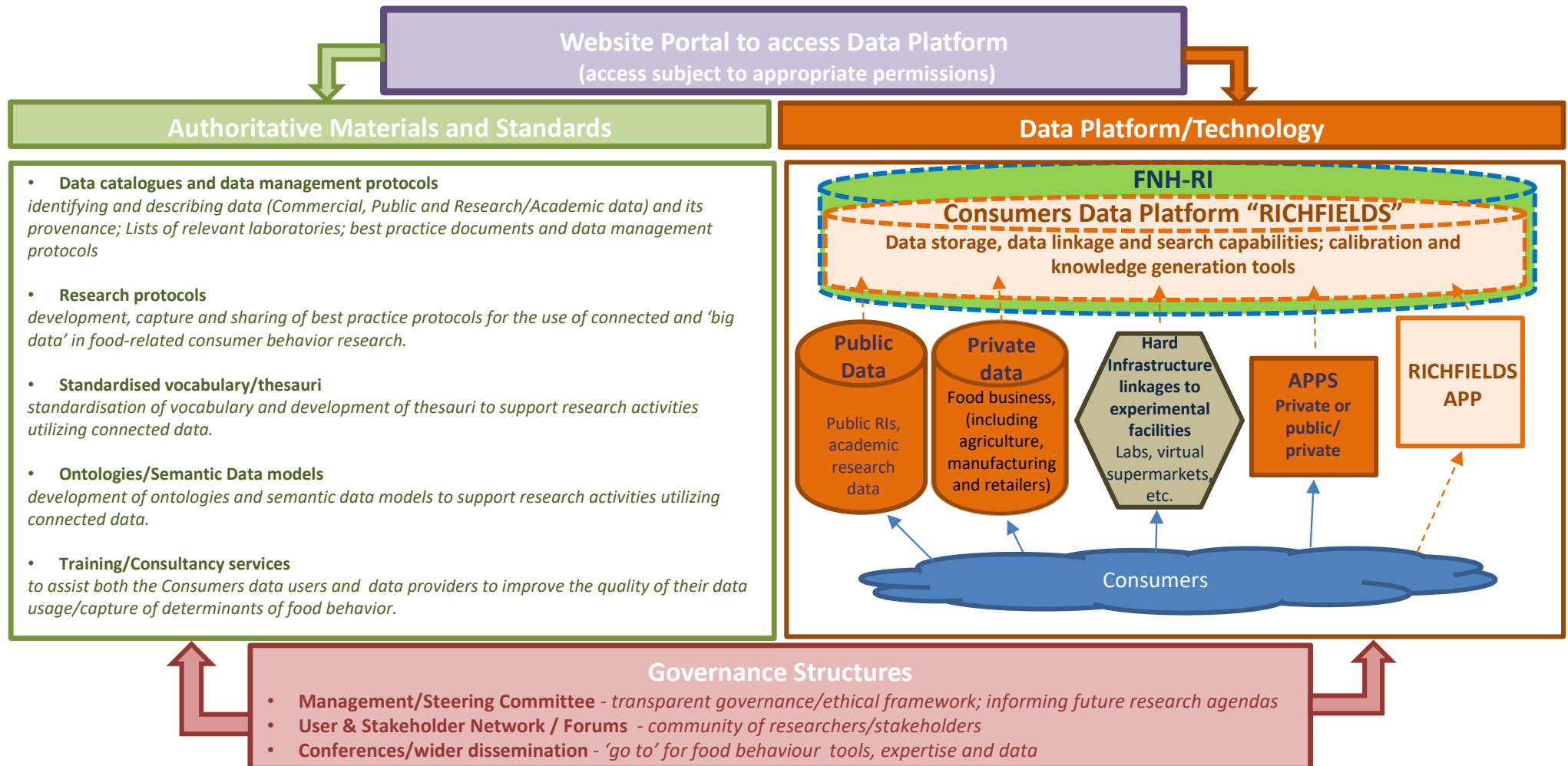
On behalf of all partners of the FNH-RI consortium and its partners from EuroDISH, DISH-RI and RICHFIELDS:

**THANK YOU FOR
YOUR ATTENTION**



FNH-RI will unpin the design of
our plate of the future

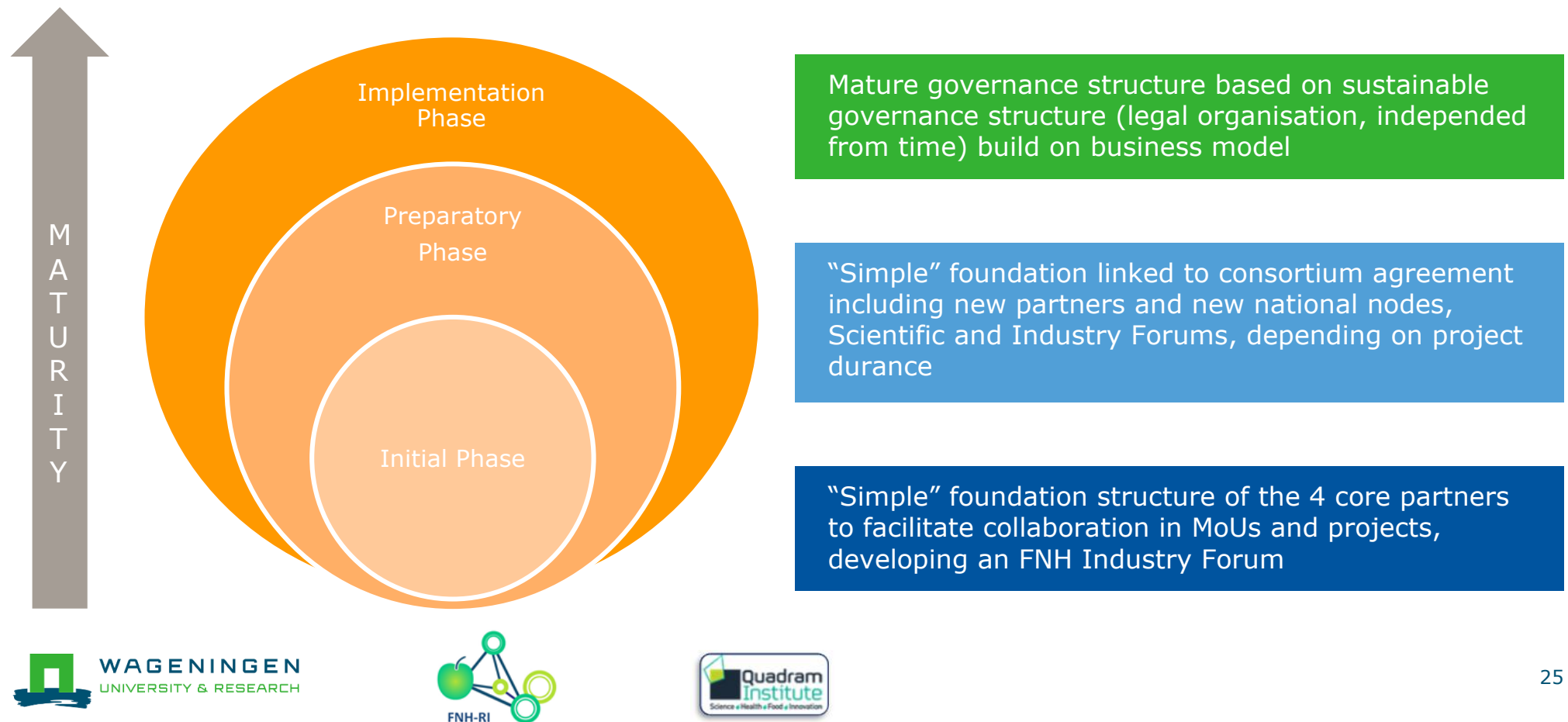
Core Offering - MVP



© Hodgkins C., Timotijevic, L., & Ge L. (2017) RICHFIELDS

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FNH-RI Roadmap to governance maturity



Poster Norway



Food Nutrition and Health Research Infrastructure Norway

SUSTAINHEALTH

Sustainability related to food supply chain, consumer behaviour and health

Goals

The main questions at this early state of development were:

- Initially sustainability related to food supply chain, consumer behaviour and health seems a good option for alignment.
- How can we develop a FNH community and benefit from working together in the Nordics & Baltics?
- How can we create an infrastructure attractive to research and at the same time offer added value for consumers, government agencies, retail and industry?

On the 4th of May 2018 a first meeting was organised by the department of Nutrition of the University of Oslo with participants from wide range of (possible) partners to introduce the Norwegian initiative and FNH-RI.

Participants

The Norwegian FNH-RI is coordinated by the University of Oslo.

Other (forseen) partners for the National Node of Norway are: Norwegian University of Life Sciences (NMBU), University of Agder, Oslo Metropolitan University, Arctic University of Norway (UiT), Norway Institute of Public Health (Folkehelseinstituttet), Institute of Marine Research, Nofima (applied research in the fields of fisheries, aquaculture and food), University of Bergen, SIFO (public consumer research organisation).

State of development of national node

The Norwegian FNH-RI is still in a preparatory phase and aims to be recognized as the National Node for Norway.

NIPH together with this consortium has submitted a 6 pager proposal to the Norwegian Roadmap for Infrastructures to establish a Center on food, health and sustainability. Definitive proposal need to be submitted in October 2018.