



THE LANDSCAPE OF
Of RIs ON HEALTH &
FOOD AND HOW THE
ESFRI PROJECTS
IMPACT ON IT

Strategy Report on Research Infrastructures
ROADMAP 2018

Maria Anvret
ESFRI HF SWG Vice-Chair

Info Day – 17th January 2017

Málaga
Spain

Health and Food Strategy Working Group

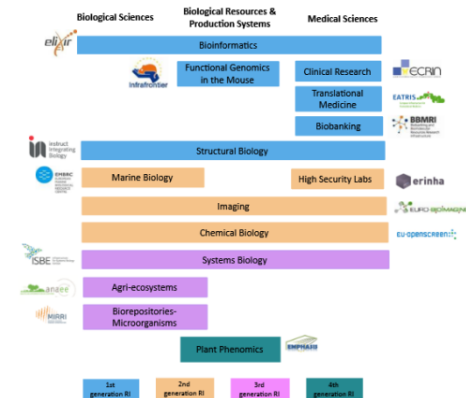
Health and Food Sector

- **The economic impact of investments in large-scale biomedical research, e.g. 3.75 bn € investment in the Human Genome Project, has spurred an estimated 900 billion € in economic growth.**
- **The bioeconomy is estimated to be worth at least 2 trillion € in the EU.**
- **Distributed Research Infrastructures are at the heart of these and other large investments in the sector.**

Health and Food Strategy Working Group

The Health and Food landscape keeps evolving and our challenges remain

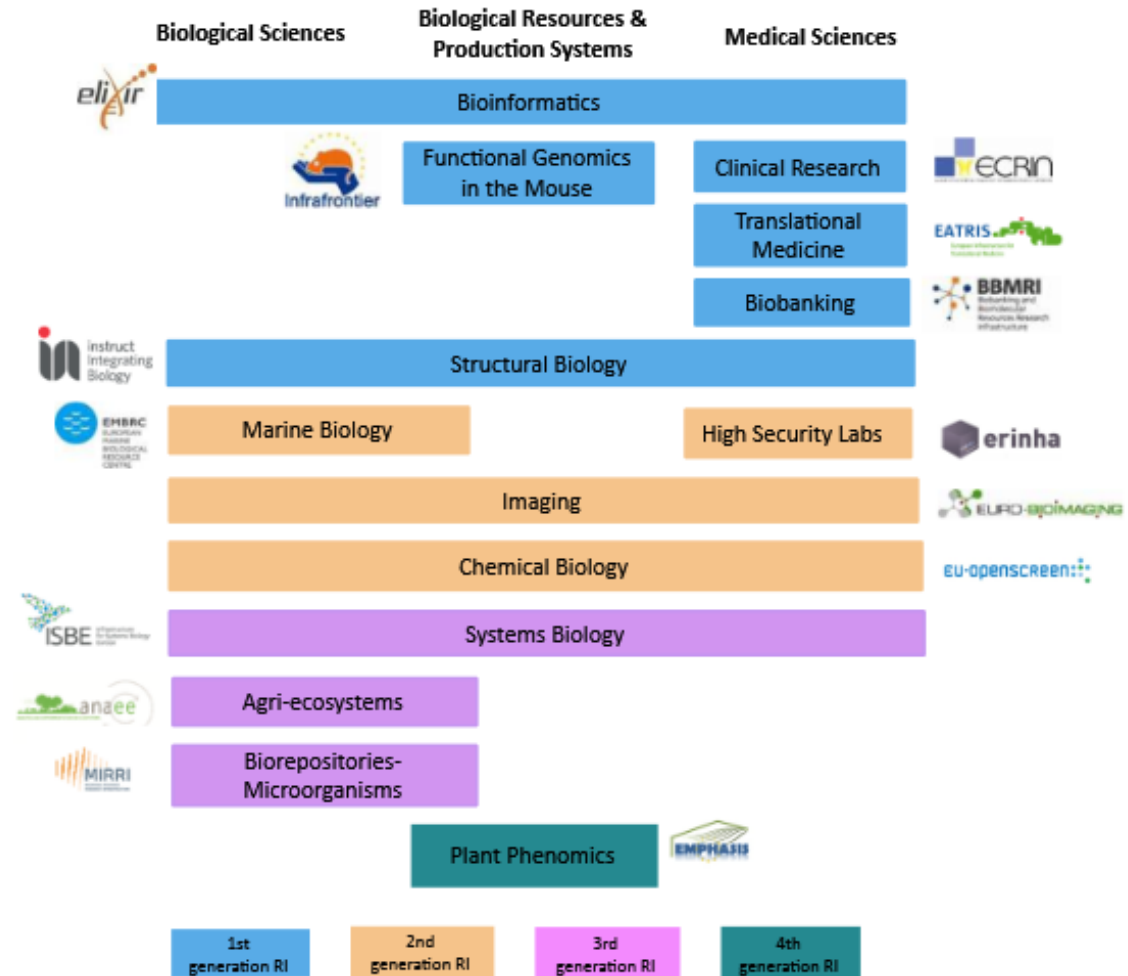
- There is a rising demand for health care in Europe and worldwide, brought by an ageing population with increased disease burden, especially with chronic diseases.
- The global demand for food is predicted to increase 50% by 2030 and 100% by 2050. We need to produce more food, prevent and manage livestock pathogens, improve nutritional and health benefits of foods, make food accessible and affordable, globally, and minimise food waste.



Health and Food Strategy Working Group

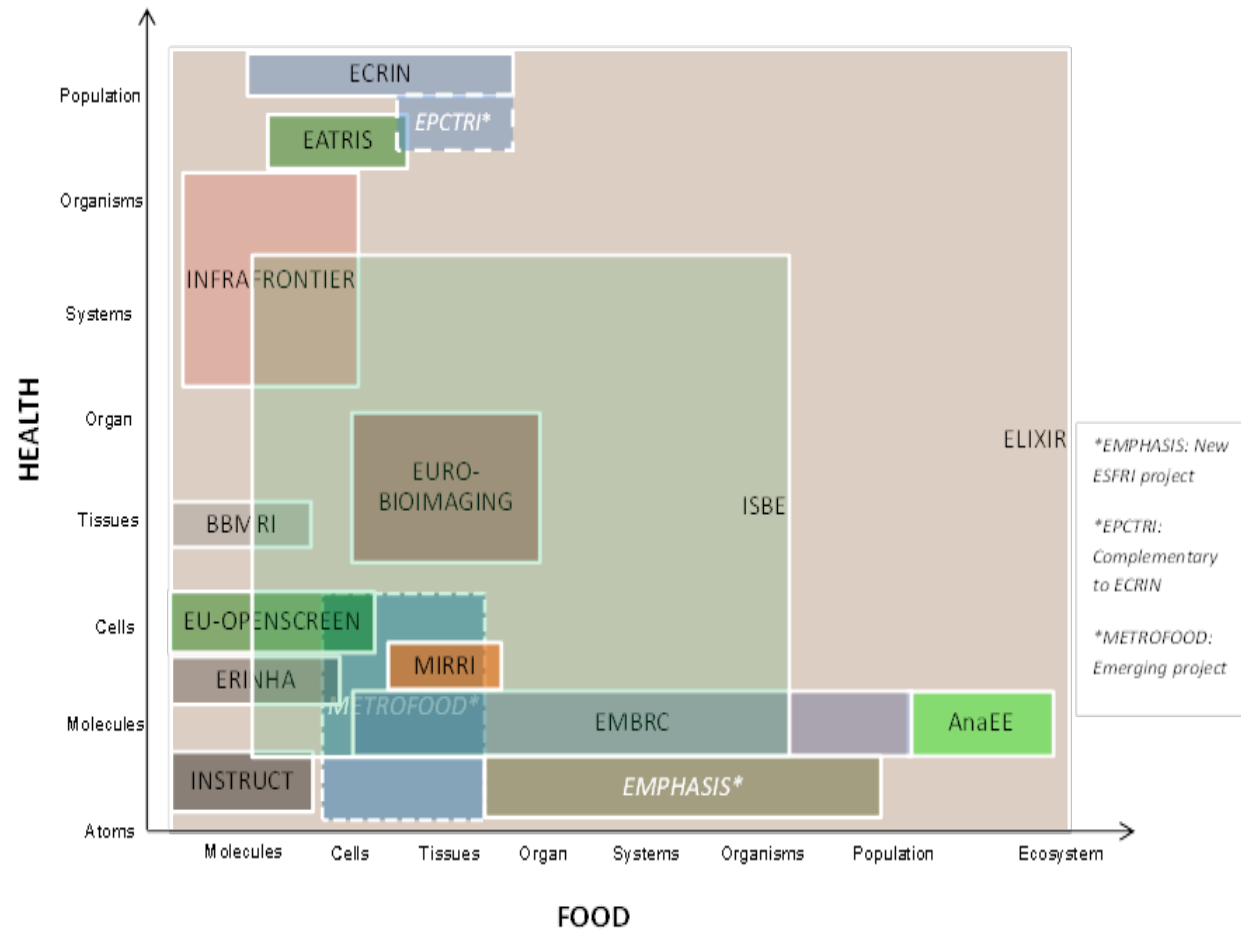
Health and Food Landscape

Landmarks and Projects



Health and Food Strategy Working Group

The indicative position of ESFRI RIs relative to the different levels of organisation in the 'Health and Food'



Landmarks and Projects

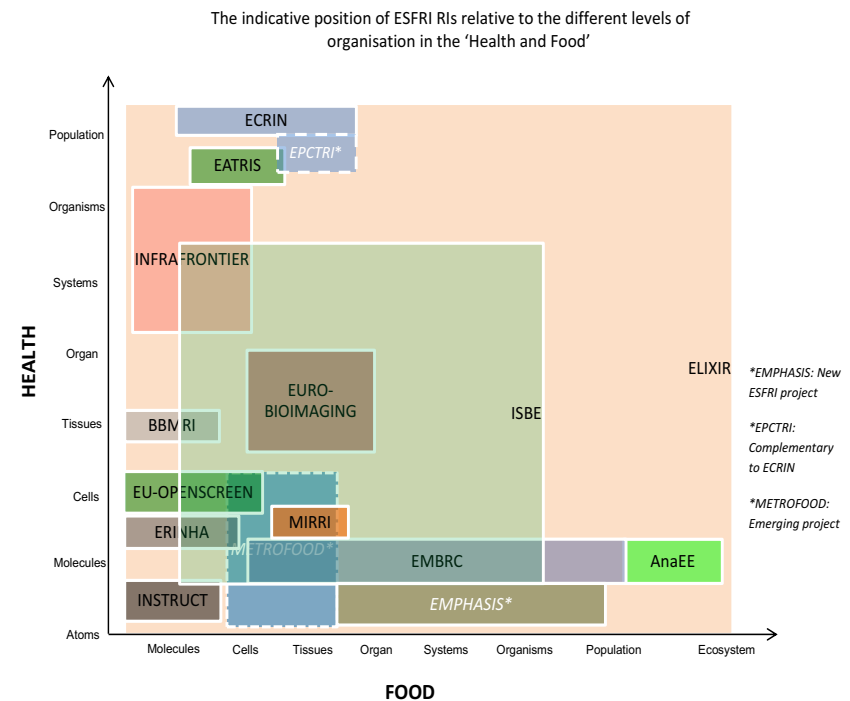
Complementary Emerging



Health and Food Strategy Working Group

Since 2002, significant impact of ESFRI on RI landscape. This is highly visible in Health and Food.

Now the impact of Health and Food landscape is visible in the ERA

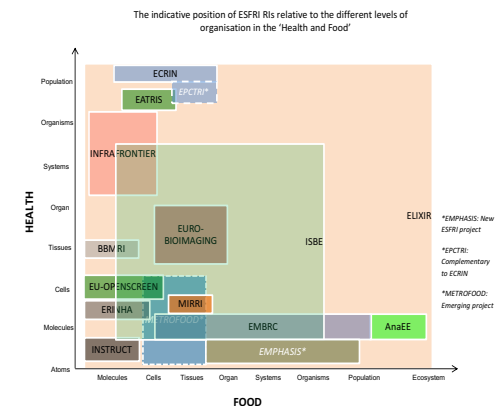


Health and Food Strategy Working Group

Landmarks and Projects

...are contributing to building the European Research Area:

- Pan-European **open access** to cutting-edge technology platforms for academia and industry
- Interdisciplinary research across Europe, **harmonising and standardising** the research landscape and reducing fragmentation
- Translating findings from **basic science to new applications** in health, food and bioeconomy sectors
- High **interoperability** of research processes, creating seamless value chains
- **Opportunities** to maximise the competitiveness of Europe's knowledge-based industry – e.g. the pharmaceutical and biotechnology industries
- **Training and education** to future professionals in the life sciences;
- Attracting and retaining **world-leading scientists**
- **International impact** and outreach
- Helping co-ordinate national RI **budgets and leveraging** additional MS investments



Health and Food Strategy Working Group

Working at the boundaries

New opportunities and new questions

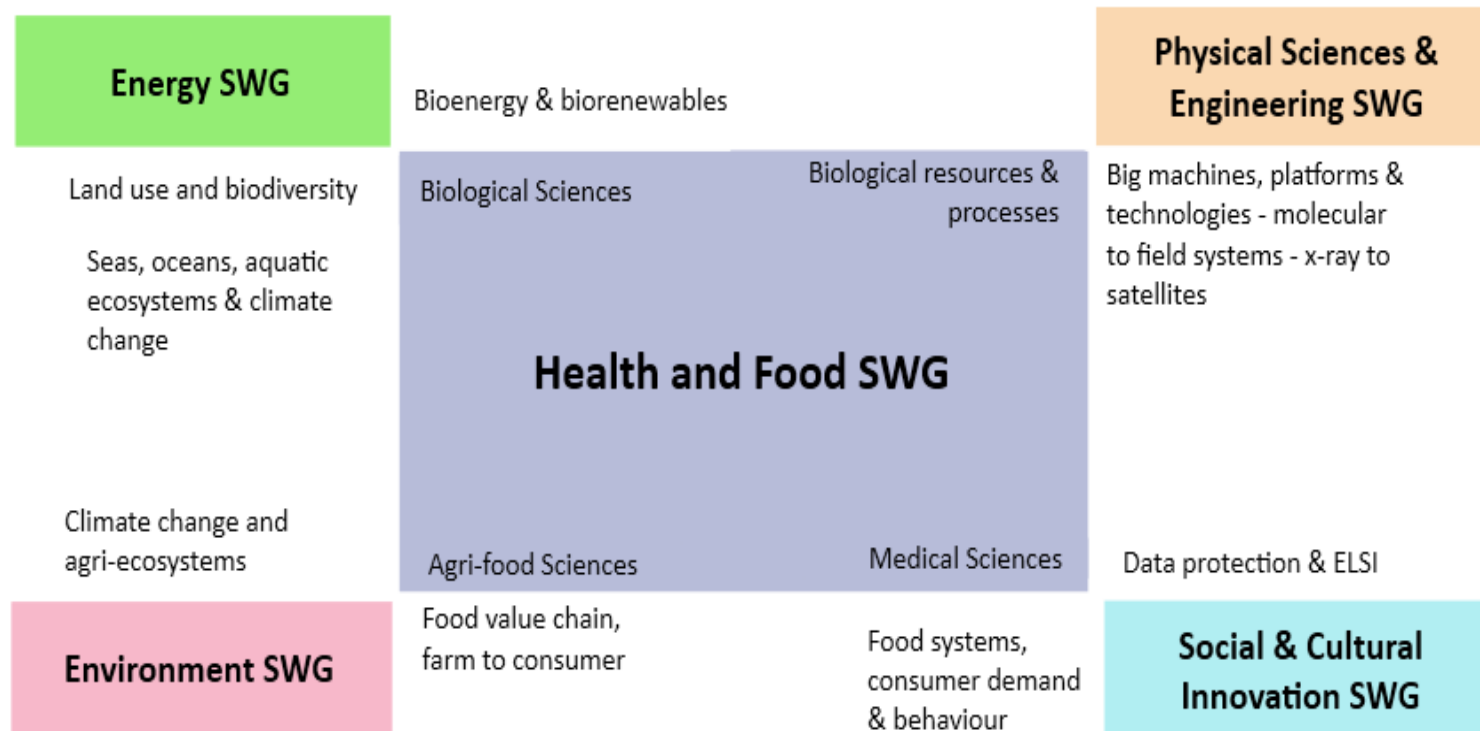


Fig 6: Some interconnections of Health and Food Strategic Working Group Remit with other domains

Strategy Report on Research Infrastructures

Health and Food Strategy Working Group

Working at the boundaries
New opportunities and new questions

**CONNECTING THE
LANDSCAPES**
e.g. from ageing to food
systems; from food and
non-food systems to
satellites

**Our Landmarks and
Projects have a role in this**

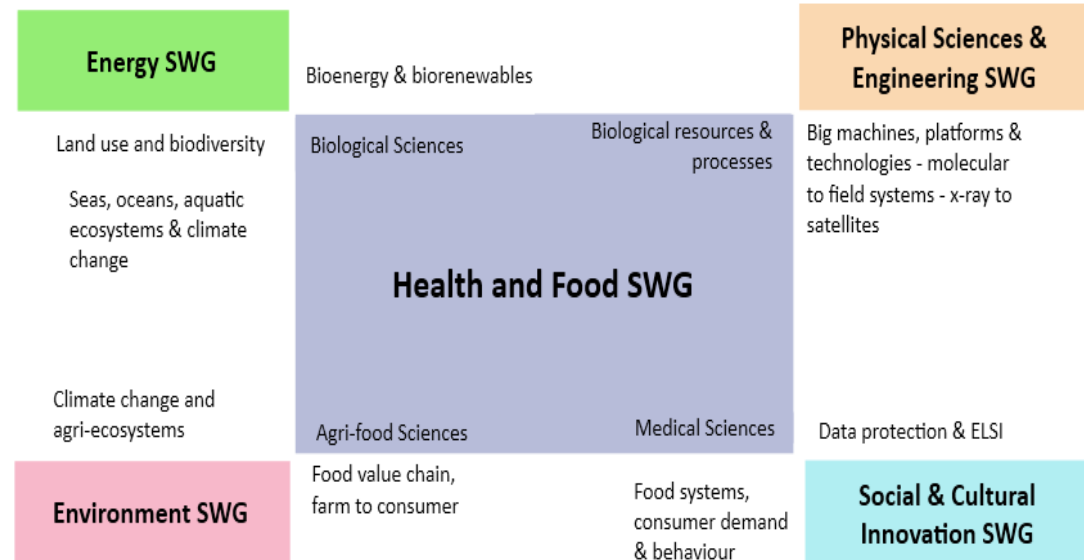


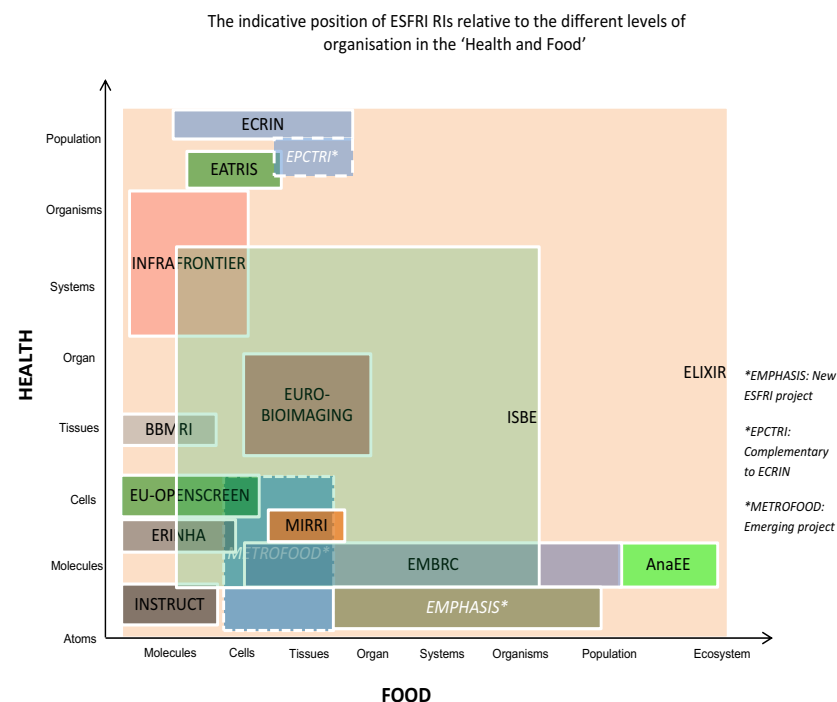
Fig 6: Some interconnections of Health and Food Strategic Working Group Remit with other domains

Health and Food Strategy Working Group

Landscape analysis

In brief

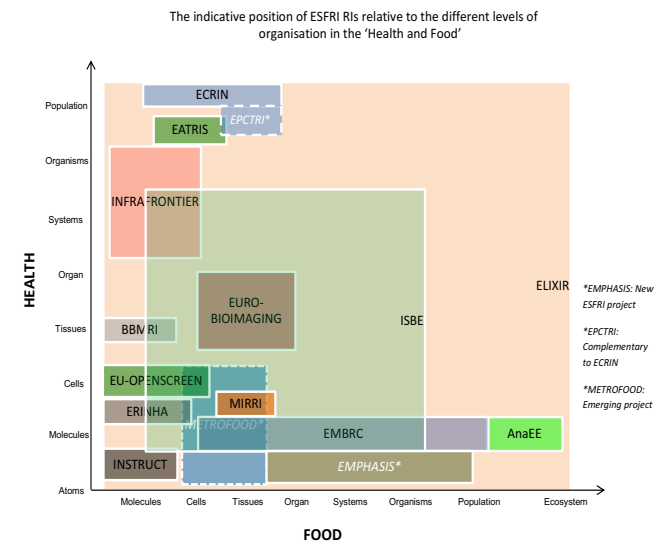
- Update the landscape analysis (Sep 2016 – Sep 2017)
- Provide an overview of RI ecosystems
- Identify gaps and promote inter- and cross- disciplinary aspects
- Explore complementarities and effectiveness at the boundaries
- Forward look and trends



Health and Food Strategy Working Group

Towards a methodology for measuring socio-economic impact of RIs

From generic...
to Health and Food specific



Aligned to value of RIs and connected to investment strategies

Health and Food Strategy Working Group

Towards a methodology for measuring socio-economic impact of RIs

- **Direct benefits:** Positive impact directly made by RIs
 - Examples: directly created jobs; direct outputs from using RI service; reduced time for data acquisition etc.
- **Indirect benefits:** Positive impact resulting indirectly from the RIs (*negative impact avoided due to the existence and use of RIs*)
 - Examples: commercial supplier's turnover due to procurement of equipment/resources for RI, reduced duplication of effort as a result of using RI services etc.
- **Near term benefits:** Benefits received in the near term (up to 5 years)
 - Examples: publications, professionals trained etc.
- **Long term benefits:** Benefits received in the longer term (beyond 5 years)
 - Examples: new spin offs as a result of scientific output through the use of RI services,
- **Private benefits:** Benefits to individuals and stakeholders directly affiliated to the RI
 - Examples: financial benefit to RIs, publication in journals, theses etc.
- **Public benefits:** Benefits to individuals and stakeholders not directly affiliated to the RI
 - Examples: impact on policy decisions as a result of research outcomes etc.



Health and Food Strategy Working Group

The landscape keeps evolving – our challenges remain urgent

- How will RIs continue evolving to respond to these?
- What will the future user needs be?
- European leadership and Internationalisation
- Visibility and Embedding
- Individuality, Connectivity and Convergence

