



ROADMAP 2016

European Strategy Forum
on Research Infrastructures

ESFRI

ESFRI Roadmap process, links with national RI roadmaps and Smart Specialisation Strategies

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STR ESFRI

1st Exchange of Experience Workshop (EoE)
Making effective use of Horizon 2020 Preparatory Phase Funding
Wednesday, March 9th 2016, Amsterdam

ESFRI

PL
Projects Landmarks
ROADMAP 2016

EoE,
Amsterdam

9/3/2016

ESFRI Roadmap

- Roadmap identifies new pan-European Research Infrastructures or major up-grades to existing ones, corresponding to the needs of European research communities in the next 10 to 20 years, in all fields of Research, regardless of possible location
- ESFRI to provide help and best practice, but **MS and AC must be the major source of funding**
 - First Roadmap published in 2006
 - Followed by two updates in 2008 and 2010
 - Requires major financial investment (~20 b€) and long term commitment for operation (~2 b€/year)
 - **New ESFRI Roadmap 2016 TOMORROW !**



Method part 1

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- Definition of Research Infrastructures, Open Access
- Indicators of Pan-European Relevance, requirement of 3 Govs/EIROs
- Communication of rules and criteria, fixed lifetime on roadmap
- Landscape Analysis
- Lifecycle stages and monitoring/assessment practice
- Well balanced SWGs and IG composition and experts
 - Independent work of SWG on science/innovation and IG on maturity
 - International peer review
 - Merging of Critical Questions and Hearings of projects
 - Harmonization conference with all SWGs + IG



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Section 1

mm/dd/aa



Part 3



LANDSCAPE ANALYSIS

The Landscape Analysis provides the current context, in each domain, of the operational national and international research infrastructures open to European scientists and technology developers through peer-review of competitive science proposals. It represents an impression of the European RI ecosystem. This responds to the invitation by the Competitiveness Council to broaden the view of ESFRI beyond the Roadmap list of projects. It has been produced by the five Strategy Working Groups (SWGs) of ESFRI that are composed of well-recognized scientists and are coordinated by a member, or a permanent expert, of the ESFRI Forum. The e-infrastructures landscape, transversal to all domains, has been elaborated by the e-Infrastructure Reflection Group (e-IRG). The Landscape Analysis is a key ingredient of the new ESFRI evaluation methodology as it supports the understanding of the impact of new projects. It does not represent in any way the view or prioritization of ESFRI or of any Member State for commitments or future investments. ESFRI in no case acts as an advocate of specific potential future projects. ESFRI and its Member States have taken note of it.

P and L highlighted marks in the text are toggles for direct access to the relevant cards of Part 2.

Status and Perspective of Astroparticle Physics in Europe

OECD Global Science Forum Large Research Infrastructures



Report on
Roadmapping of Large Research Infrastructures
(2008)

Report on
Establishing Large International
Infrastructures: Issues
(2010)



NuPECC HANDBOOK 2012

INTERNATIONAL ACCESS TO
NUCLEAR PHYSICS FACILITIES

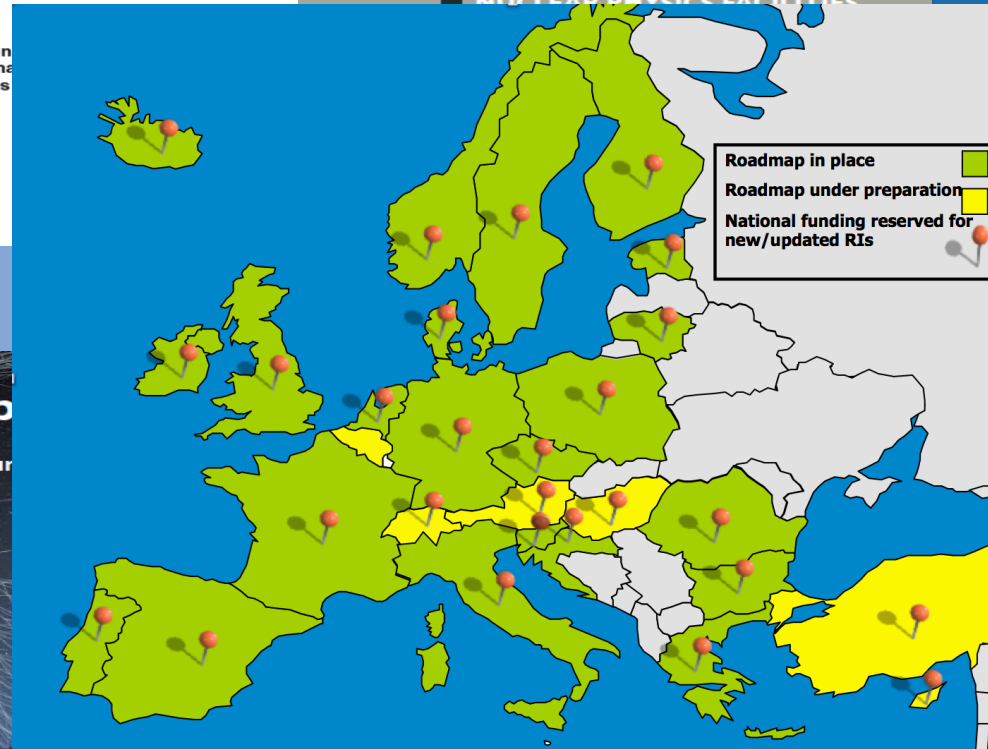
Europe's Intergovernmental Research Organisations
– a Key Pillar of the ERA



Establishing New Research Infrastructures in Europe – The EIROforum Experience

March 2010

Part 3 e-book LANDSCAPE ANALYSIS



Astroparticle Physics Roadmap Phase I



FORWARD LOOK
Perspectives of Nuclear
Physics in Europe
NuPECC Long Range Plan 2010

Astroparticle p The Eur



www.esf.org
www.nupecc.org

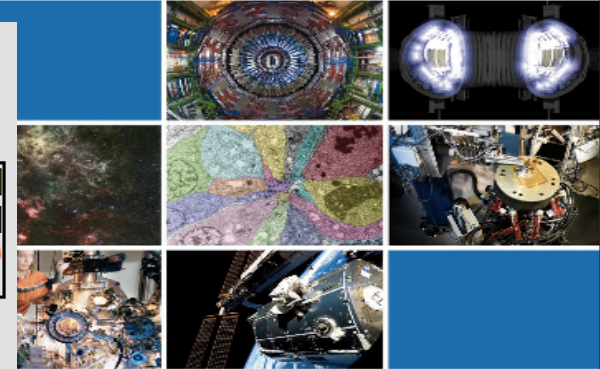
www.aspera-eu.org ASPERA

The CERN Roadmap Frédéric Bordry

Future Circular Collider Kick-off Meeting
Geneva - 12th February 2014



www.cern.ch



Science Europe Roadmap



DECEMBER 2013



SCIENCE
EUROPE
Shaping the future of research

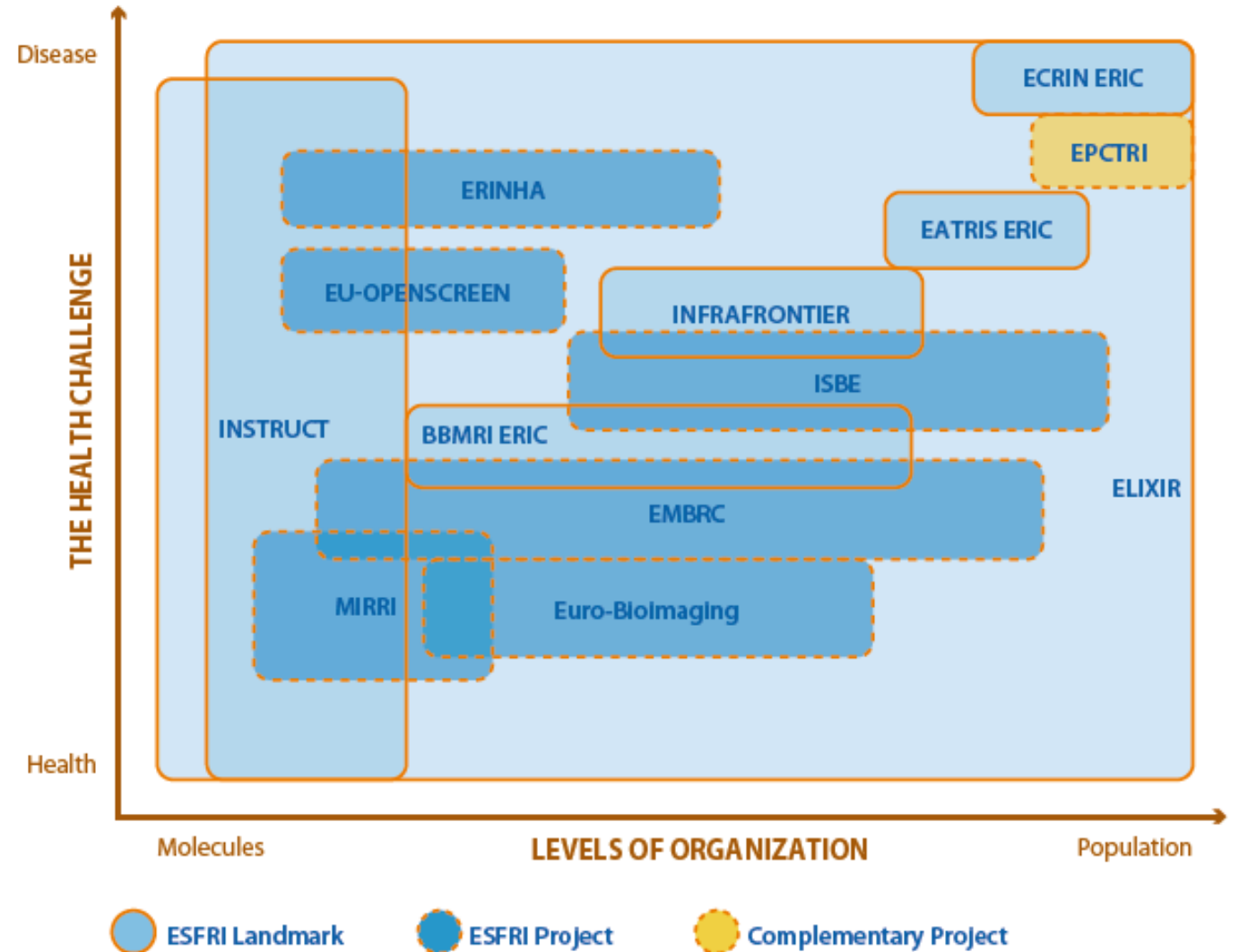
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THE HEALTH CHALLENGE : data collection and stewardship for precision medicine faces the pan-European infrastructures, including ethical, legal and social implications.

ICT for health is indispensable for proper storage and smart retrieval of these data and knowledge. Data for precision medicine are not only generated in the laboratory and clinic.

Citizens and patients are increasingly users of social media and app technologies to share information about their own health and lifestyle: citizen-networking can serve to accelerate clinical research.

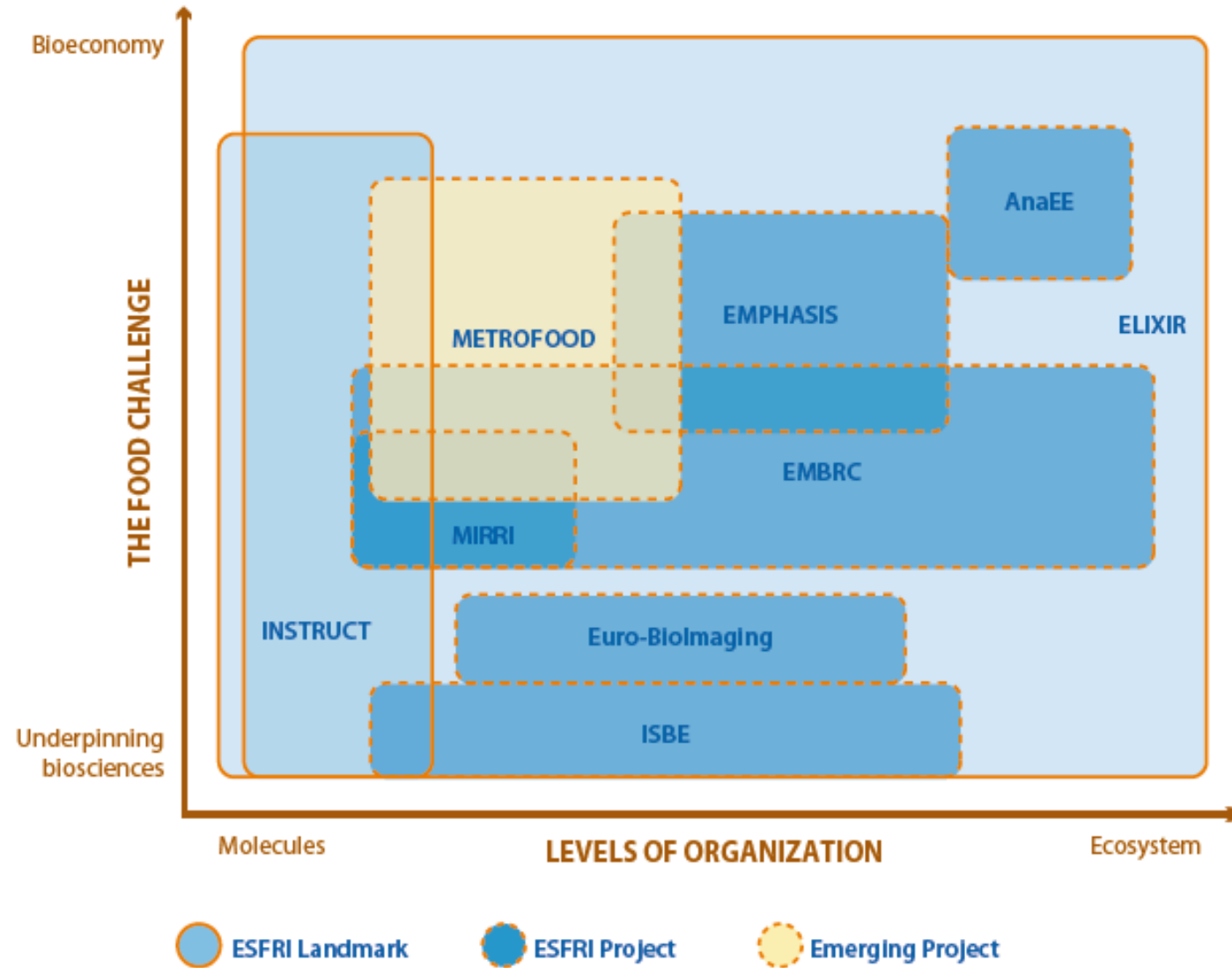


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THE FOOD CHALLENGE :

The RIs on the Roadmap are the starting point to face the 100% increase in food demand by 2050. The ESFRI Project **AnaEE** on experimental manipulation of managed and unmanaged ecosystems, **EMBRC** on marine biological resources, **ICOS ERIC** on high precision monitoring of greenhouse gas fluxes, **MIRRI** on microorganisms-oriented services to biotechnology and food production, **Euro-Biolmaging** on integrating imaging technologies and crop phenotyping), **ECRIN ERIC** on clinical trials and nutritional trials, **INSTRUCT** on the use of structural biology to support plant and animal sciences, and **ELIXIR** on life sciences large-scale data and knowledge management (applied to agriculture and bioindustries), must be linked, and also to other multidisciplinary RIs.





interconnections
of Health and
Food with other
domains.

ENERGY SWG

Bioenergy & biorenewables

Land use and biodiversity
Seas, oceans, aquatic
ecosystems & climate
change

Biological sciences
Biological resources
& processes

HEALTH & FOOD SWG

Agri-food Sciences

Climate change and
agri-ecosystem

Food value chain,
farm to consumer
Food systems,
consumer demand &
behaviour

**PHYSICAL SCIENCES
& ENGINEERING SWG**

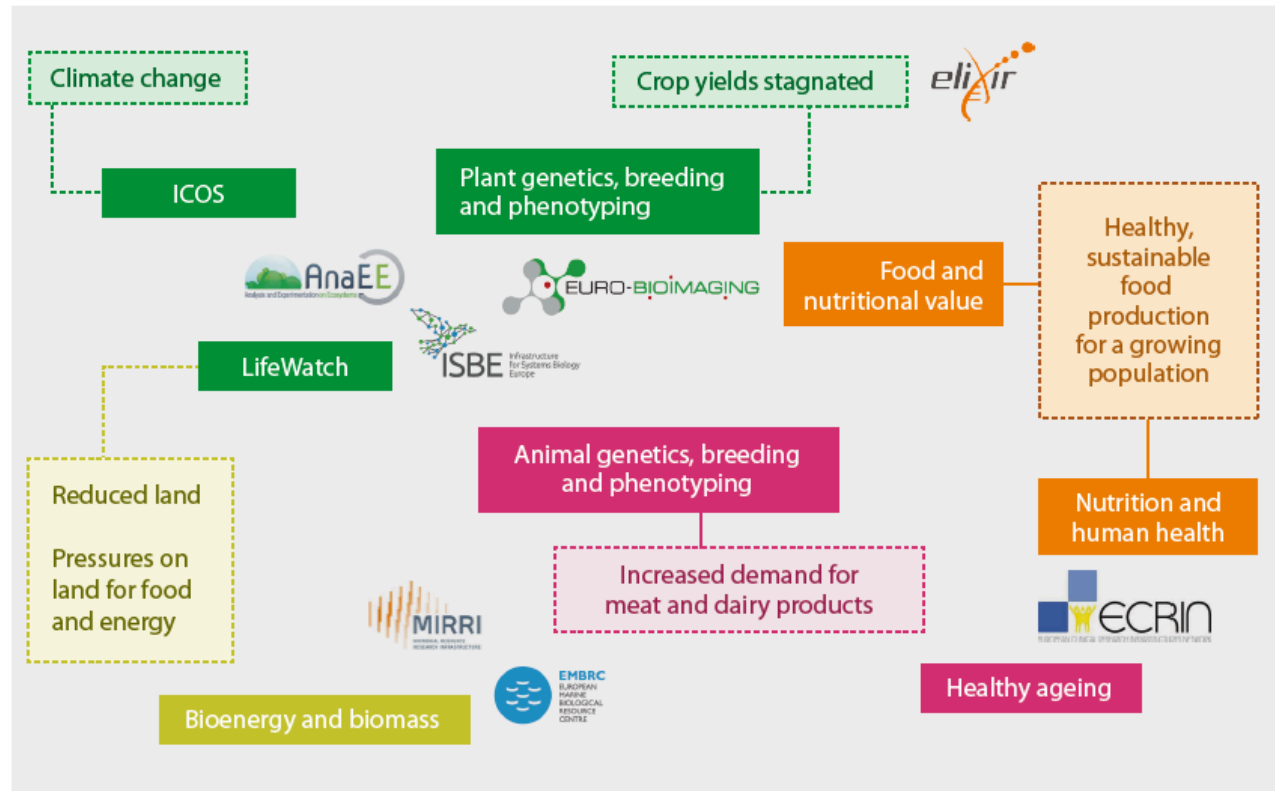
Big machines,
platforms & technologies -
molecular to field system -
x-ray to satellites

Data protection & ELSI

**SOCIAL & CULTURAL
INNOVATION SWG**

ENVIRONMENT

HEALTH AND FOOD



ENERGY

SOCIAL & CULTURAL INNOVATION

interconnections
among Health
and Food RIs