
European Research Infrastructure for Biobanking and Biomolecular Resources

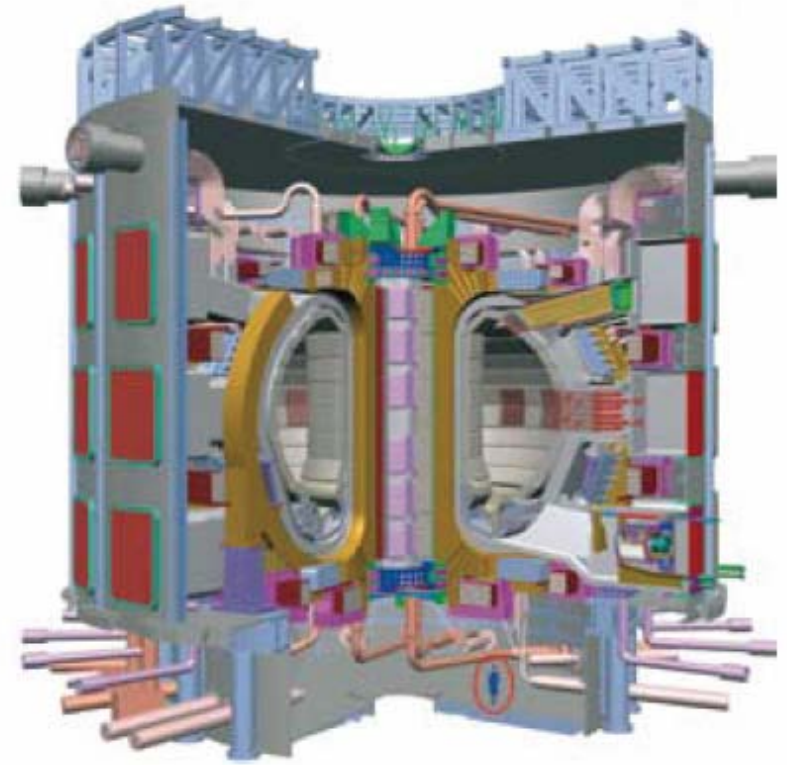
**Kurt Zatloukal
Inst. of Pathology, Med. University of Graz, Austria**

Proteome Binders, Alpbach, 15.2.07

Classical Research Infrastructures

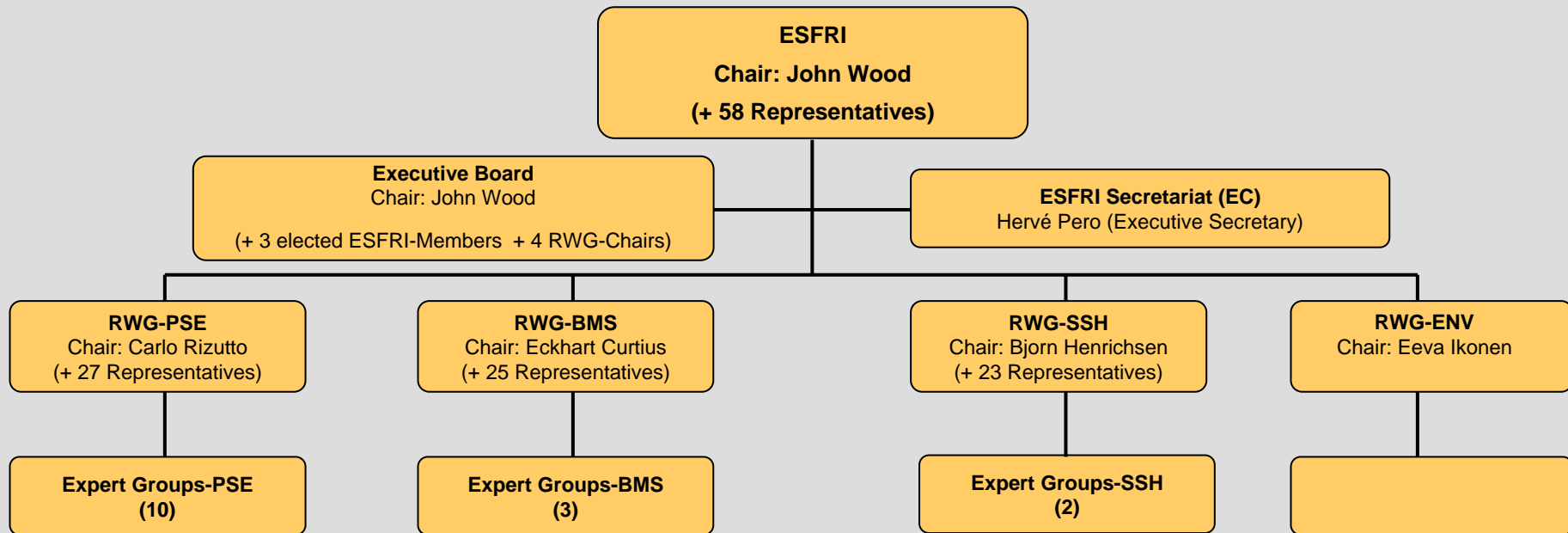


Telescopes



Reactors

ESFRI

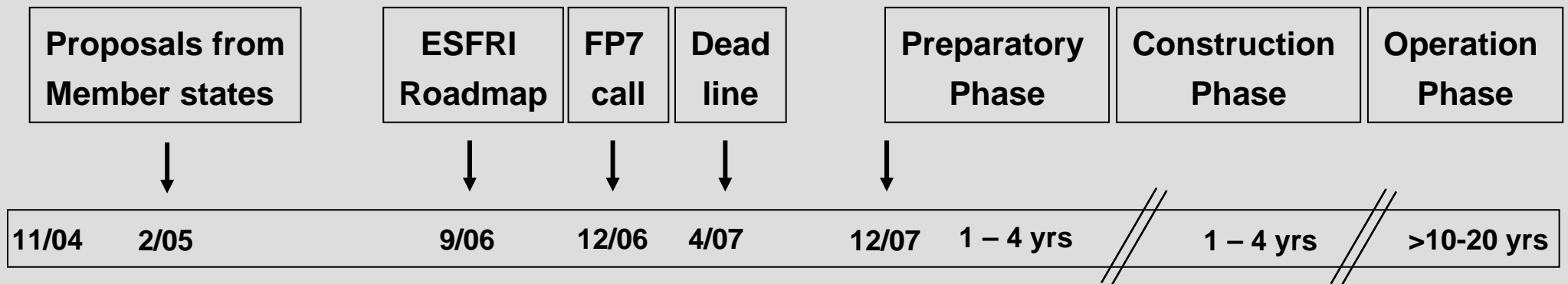


Astronomy Astroparticles
Computing Data Treatment
Environmental Monitoring
Hard X-Rays
High Power Laser
Large Neutron Infrastructure
Material Testing
Nanosciences
Nuclear Physics: Chair Rainer Koepke (DE)
Soft X-Ray Free-Electron Laser

Genomics, Bio-Informatics et al
Clinical and Translational Research
Biodiversity and Environment

EROHS Activities
 European Cultural
 Heritage

The ESFRI Process: Towards a Research Infrastructure



FP7 BMS Research Infrastructures

Biological and Life sciences

- **INFRA-2007-2.2.1.15:** EATRIS (European Advanced Translational Research Infrastructure for medicine)
- **INFRA-2007-2.2.1.16:** European Bio-Banking and Biomolecular Resources
- **INFRA-2007-2.2.1.17:** INFRAFRONTIER (Infrastructure for Phenomefrontier and Archivefrontier)
- **INFRA-2007-2.2.1.18:** Infrastructure for Clinical Trials and Biotherapy
- **INFRA-2007-2.2.1.19:** Integrated Structural Biology Infrastructure
- **INFRA-2007-2.2.1.20:** Upgrade of European Bio-Informatics Infrastructure

The banner features a yellow background with a faint map of Europe and several yellow stars. The text is centered and reads: EUROPEAN ROADMAP FOR RESEARCH INFRASTRUCTURES Report 2006.

EUROPEAN ROADMAP
FOR RESEARCH
INFRASTRUCTURES

Report 2006

The facility

A pan-European and broadly accessible network of existing and de novo biobanks and biomolecular resources. The infrastructure will include samples from patients and healthy persons, molecular genomic resources and bioinformatics tools to optimally exploit this resource for global biomedical research.

Biobanks and Biomolecular Resources

Biobanks (blood, DNA, tissue, cells, body fluids, and data)

- Population-based biobanks
- Clinical case-control biobanks
- Population isolates biobanks
- Twin registries

Biomolecular resources / analysis tools (examples)

- Antibodies
- Full-length ORF clone collections
- siRNA libraries
- Tools to decipher gene and protein functions
- Tools to study protein-protein interaction

Why a Research Infrastructure for Biobanking and Biomolecular Resources?

- Existing biobanks are a specific strength of Europe and an essential resource for
 - Discovery of gene function
 - Identification of disease relevance of genes
 - Exploration of gene-environment interactions
 - Identification of new targets for drug discovery
 - Identification of biomarkers for individualized therapy
- Biomolecular resources and analysis tools are required to deliver this potential

Why a Research Infrastructure for Biobanking and Biomolecular Resources?

- **The research infrastructure should further develop the potential of these resources and facilitate the access for academia and industry of all EU member states by**
 - **providing a pan-European inventory**
 - **facilitating transnational combination and exchange of biological materials and data**
 - **Ensuring coordinated development of resources and technologies**
 - **reducing the fragmentation of the scientific community**
 - **developing a sustained financial basis**

The Mission

To prepare to construct a pan-European Biobanking and Biomolecular Resources Research Infrastructure (BBMRI), building on existing infrastructure, resources and technologies, specifically complemented with innovative components and properly embedded into European ethical, legal and societal frameworks.

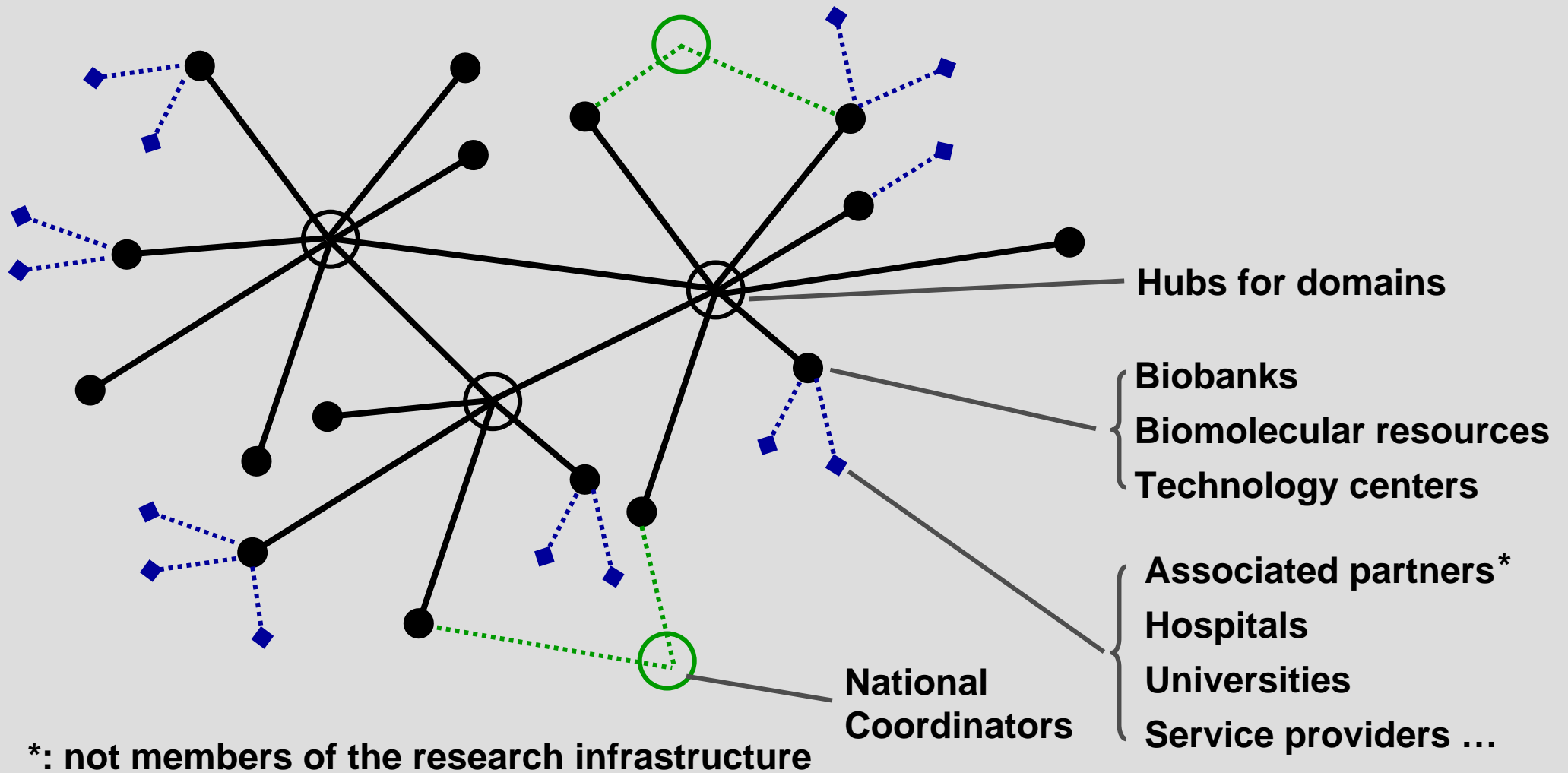
To have a sustained legal and financial conceptual framework for a pan-European BBMRI.

To increase scientific excellence and efficacy of European research in the life sciences.

To expand and secure competitiveness of European research and industry in a global context.

The Structure

a distributed hub structure,



How to Participate

■ **Members (founding and new members)**

- Scientific excellence and quality
- Critical size (including funding)
- Strategic assets

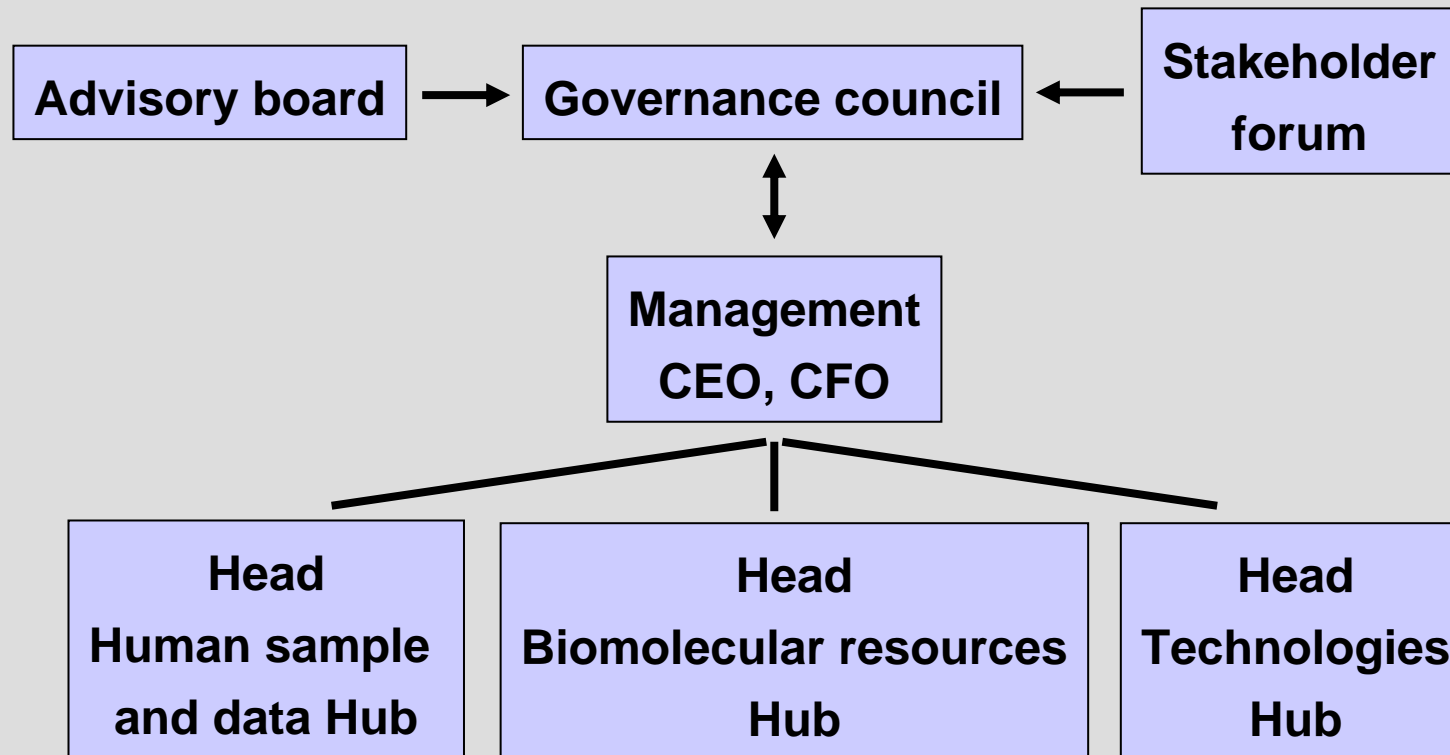
■ **Associated partners**

- Common standards
- Subcontractors

■ **Users (academia, industry)**

- Specific project
- Funding

Organization



Return of Investment

■ Short-term

- Increased quality of research
- Reduced costs of research (better coordination)

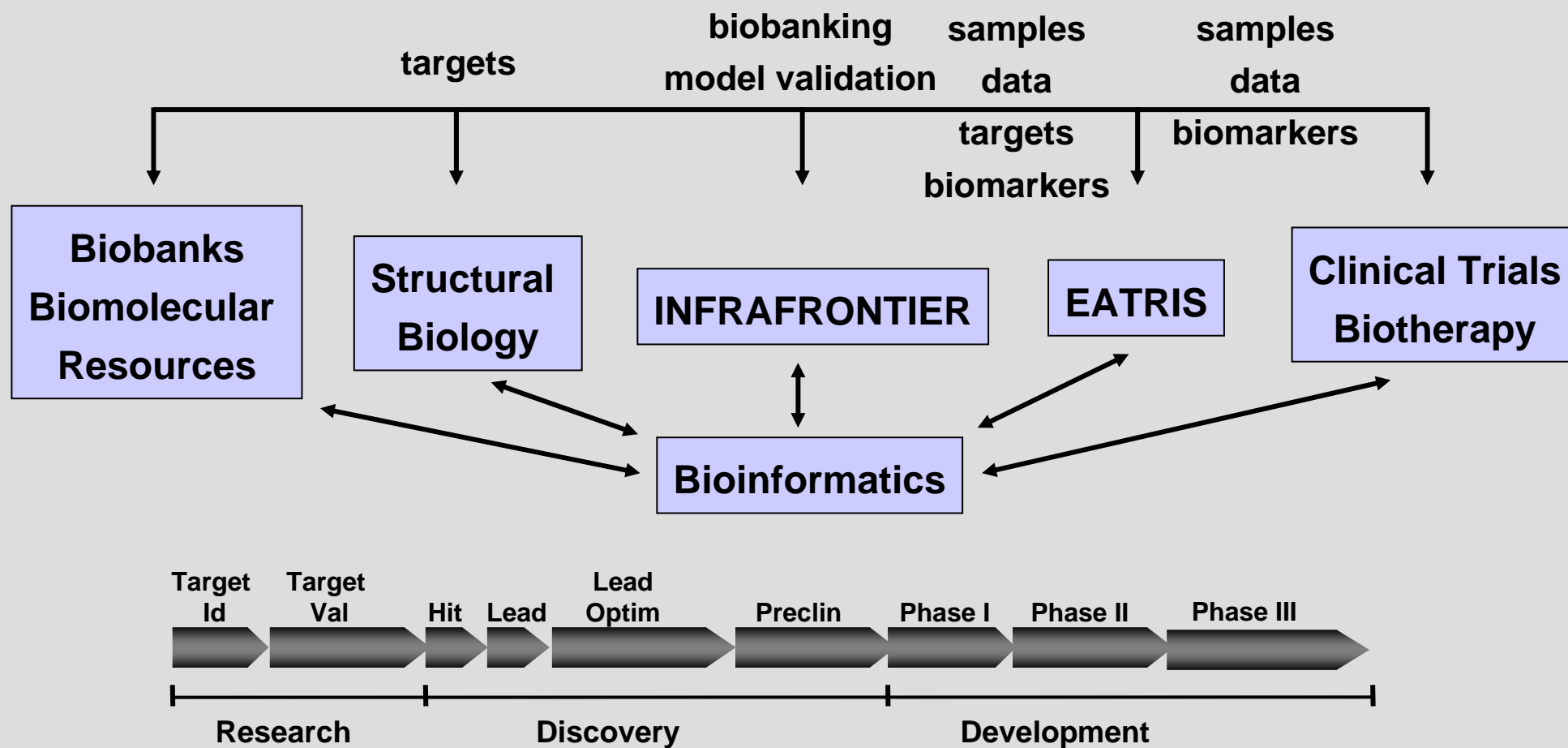
■ Mid-term

- Increased efficacy of drug discovery/development

■ Long-term

- Improved health care (personalized medicine)
- Secure European competitiveness in research and industry

Synergies with Other Research Infrastructures



Contact Persons

- **Biobanks (epidemiological, population genetics): Leena Peltonen-Palotie, Andres Metspalu, Erich Wichman**
- **Clinical sample collections: Kurt Zatloukal (chair), Thomas Meitinger**
- **Molecular methods and resources: Mike Taussig, Ulf Landegren**
- **Databases, analysis, harmonisation: Jan-Eric Litton, Paul Burton**
- **Technologies, biocomputing: Gert-Jan van Ommen**
- **ELSI: Anne Cambon-Thomsen, Jasper Bovenberg**
- **Secretariat: Martin Yuille**