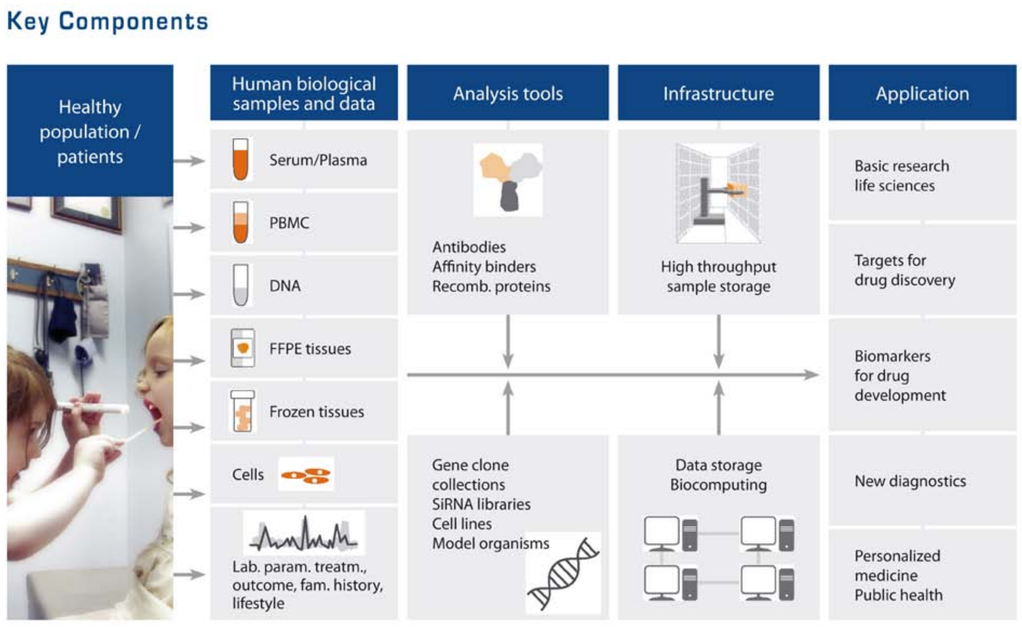
# BBMRI
Biobanking and Biomolecular Resources Research Infrastructure

## Project Summary

Human biological samples, including associated medical data, and biomolecular research tools are key resources in unravelling the interplay of genetic and environmental factors causing diseases and impacting on their outcome. Furthermore these resources are required for identification of new targets for therapy and may help to reduce attrition in drug discovery and development. The European Strategy Forum on Research Infrastructures (ESFRI) foresaw in its roadmap the pan-European Biobanking and Biomolecular Resources Research Infrastructure (BBMRI) to further develop these resources and to provide access to academia and industry. BBMRI will build on existing sample collections, resources, technologies, and expertise, which will be specifically complemented with innovative components and will be properly embedded into European scientific, ethical, legal and societal frameworks. Sustainability will be achieved by appropriate funding and financing solutions. A web-based catalogue of existing biobanks in Europe (www.bbmriportal.eu) shows the extend of the existing sample collections: in more than 280 biobanks within 27 countries 20 milion specimens are available. 99 biobanks contain cancer biospecimens with overall 7.9 milion samples, including 420k crypreserved tissues, 2.6 milion sera and 4.3 million tissue paraffin blocks.

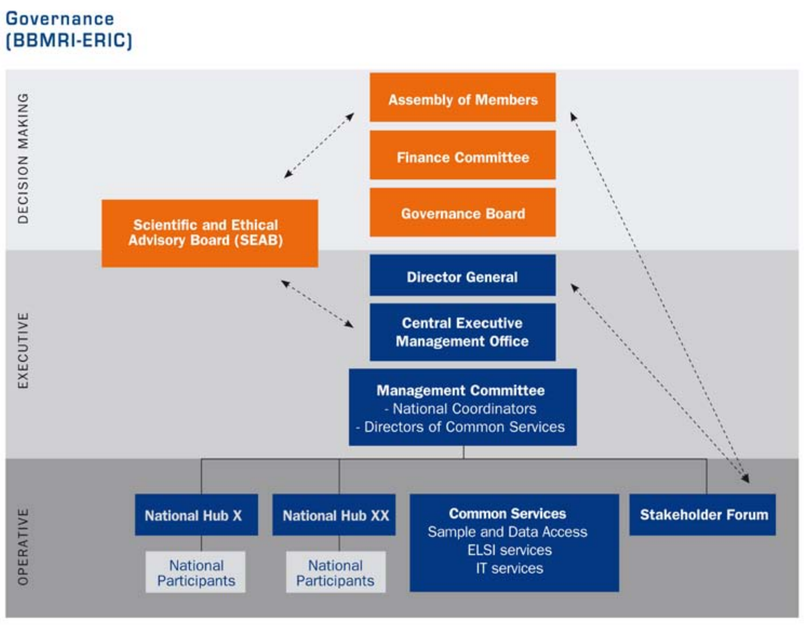
## The Key Components




## Global Interactions and Benefits for Research and Health Care

BMRI will integrate several ongoing international activities, such as those pursued by the Public Population Project in Genomics (P3G), the Innovative Medicines Initiative (IMI), International Society for Biological and environmental Repositories (ISBER), the OECD, and the WHO, as well as research projects funded under FP5/FP6 and new projects under FP7. To avoid duplication of activities, BBMRI will exchange concepts and experience with these activities. Ultimately, this will favour the study of important biomedical research questions that are beyond the scope of a single effort. Short-term benefits will appear soon, such as increased quality and reduced cost of research through better coordination, while longer perspectives include increased efficacy of drug discovery and development, and finally novel possibilities in health care (such as personalised medicine) and secured European competitiveness in research and industry.

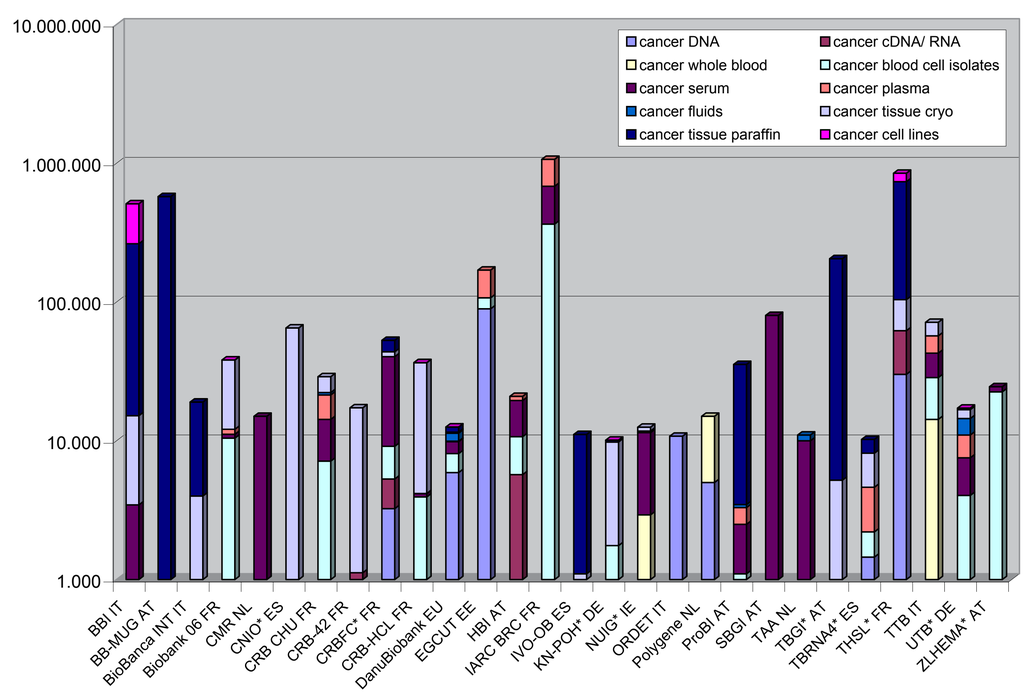
## The Organisation




■ Established under the ERIC legal framework

SEVENTH FRAMEWORK PROGRAMME

## Biobanks containing more than 10.000 cancer samples




## BBMRI will consist of...

- Biobanks of different formats (based on collections of DNA, tissue, cells, blood and other body fluids, together with pertinent medical, environmental, life-style and follow-up data)
- Population cohorts, including prospective and twin cohorts Clinical case/control cohorts including disease-focused cohorts Cohorts from isolated populations
- Biomolecular resources (comprising antibody and affinity binder collections, ORF clone collections, siRNA libraries, proteins, cellular resources etc.)
- Enabling technologies and high-throughput analysis platforms and integration of sites specialized in development of molecular tools to decipher gene, protein and metabolite functions and their interactions
- Harmonized standards for sample collection, storage, preanalytics and analysis
- Harmonized data collection, logistics and database- and biocomputing infrastructure
- Ethical, legal and societal guidance and platform

## The Concept

The format of BBMRI will be a distributed hub structure in which the hubs coordinate activities, including collection, exchange and analysis of samples and data for the major domains. The States are the Members of the new legal construct with a HQ of the Secretariat in Graz, Austria (similar to the EMBL or CERN model).

This structure provides great flexibility so that new members and partners can be connected at any time and that the structure can easily be adapted to emerging needs in biomedical research. The IT-infrastructure which employs federated database architecture and grid computing technology will integrate the complex network of hubs, members and partners into a single virtual infrastructure. National Hubs will be coordinated and directed by a National Coordinator. At the executive level these hub directors form together with Common Services the Management Committee, which is chaired by a Director General. This office is supported by a a high-calibre scientific and ethical advisory board and receives input from the stakeholder forum to guarantee clear responsibilities as well as open and transparent decision-finding processes. Organizational and financial decisions are taken by the Assembly of Members, the governing level of BBMRI.

## The Team (preparatory phase)

Coordination: **K. Zatloukal**, AT, M.Yuille, UK
Executive Manager: E.Vuorio, FI
Global Interactions: **M. Pasterk**, FR
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WP 6: A. Cambon-Thomsen, FR
WP 7: G. Dagher, FR, J.Ridder, NL, C. Bréchot, FR

Governance Council Chair: L. Peltonen, FI
Scientific Advisory Board Chair: G-J van Ommen, NL
Stakeholder Forum Chair: M. Griffith, IR
Coordination Board Chair: K. Zatloukal, AT

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Yuille M, et al. Biobanking for Europe. Brief Bioinform. 2008; 9(1):14-24.


IPRI International Prevention Research Institute

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