CORBEL — shared services for life-science

Coordinated Research Infrastructures Building Enduring Life-science services

In 2015, eleven ESFRI Research Infrastructures from the field of BioMedical Science (BMS RI) joined their scientific capabilities and services to transform the understanding of biological mechanisms and accelerate its translation into medical care.

- biobanks
- data
- marine organisms
- systems biology

- translational research
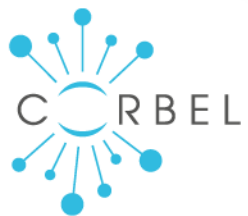- mouse disease models
- small molecules
- microorganisms

- clinical trials
- structural biology
- biological/medical imaging

- 4 year project: 2015-2019

- 35 partners in 11 BMS RIs

- budget: €14.8 million

- builds on BioMedBridges (2012-2015)

- co-coordinated by ELIXIR and BBMRI-ERIC

Modern biological and biomedical research involves complex projects and a variety of different technologies.

Some of the most **important discoveries** are made at the **interface between different disciplines.**

➡ CORBEL will **harmonise access and services** for complex research projects involving more than one RI that offer:

- biological and medical technologies
- biological samples and
- data services
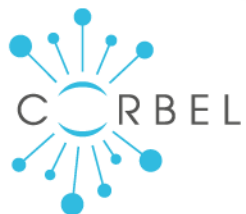
By creating a platform of user-aligned services, CORBEL will support European research in **bridging the translation gap** between the **understanding of biological mechanisms** and innovative medicines and **personalising diagnostics and treatments**.
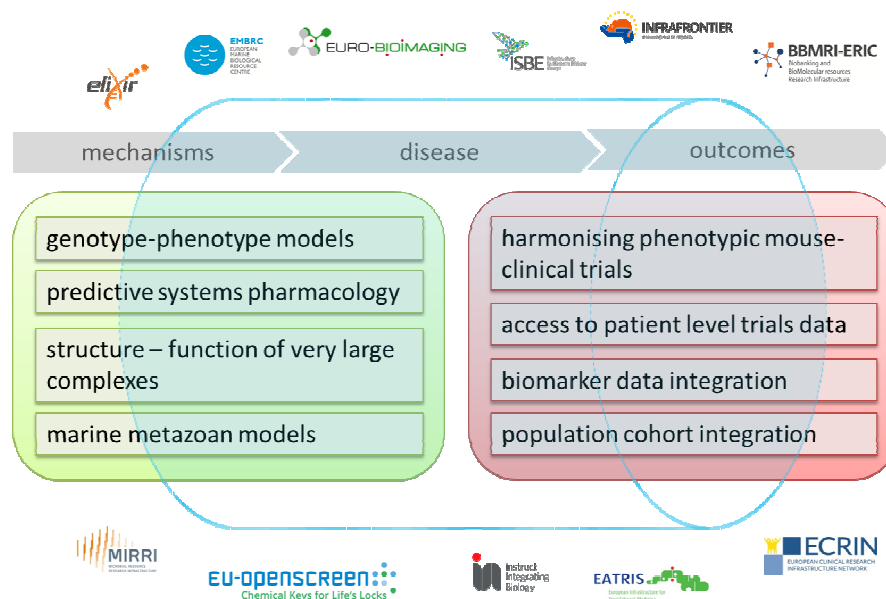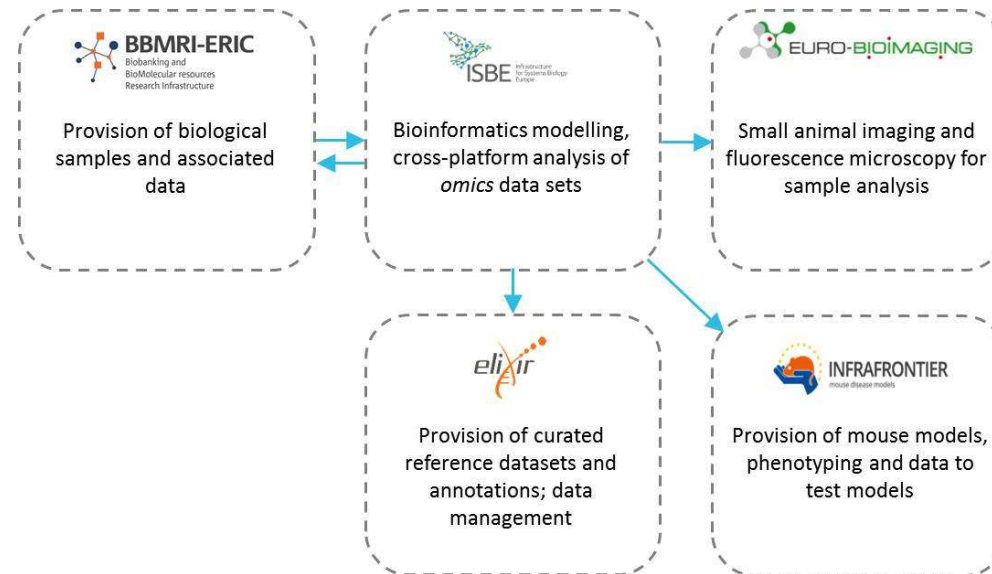
Selected **use cases** in health and bioscience, developed as part of certain work packages (WPs), will identify the optimal pathway (**innovation pipeline)** and the needed **underlying services** for the translation of basic biological research to societal innovation.
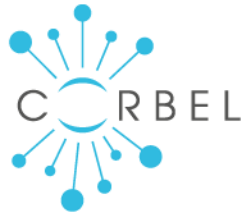
example for an Innovation Pipeline:

- **Individually,** the services offered by the BMS RIs are critical to their own user communities.

- **Collectively,** through CORBEL, they will be transformative across the range of life-science disciplines: from generation of knowledge at the bench to patient treatment at the bedside.
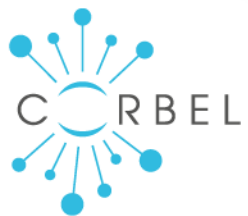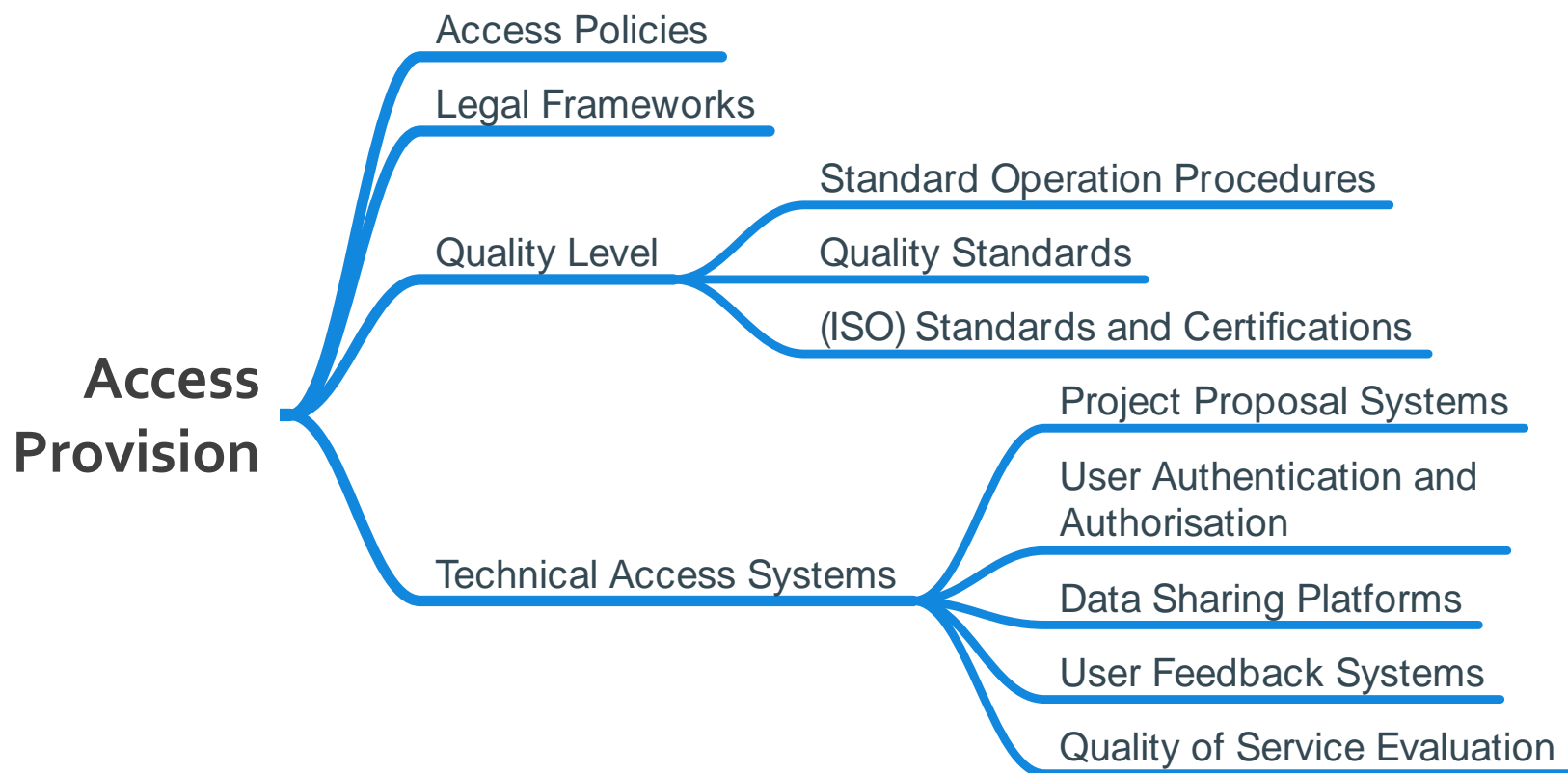
- Development of a **common access framework** that facilitates user access to services and resources across all eleven RIs
  - access in more than 25 countries
  - access via more than 120 national nodes

- Access to
  - Physical samples (cells, tissues, organisms)
  - Technology platforms
  - Data and data analysis tools
  - Expertise, knowledge and training

- Access by
  - Individual researchers (academia, industry)
  - Research programmes
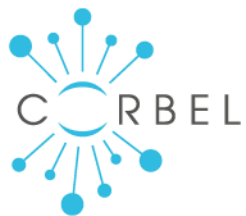 - RI operators (internal access)

CORBEL

Access Provision
- Access Policies
- Legal Frameworks
- Quality Level
  - Standard Operation Procedures
  - Quality Standards
  - (ISO) Standards and Certifications
- Technical Access Systems
  - Project Proposal Systems
  - User Authentication and Authorisation
  - Data Sharing Platforms
  - User Feedback Systems
  - Quality of Service Evaluation

- implementation of core, sustainable services necessary to support **inter-RI data standardisation, integration, management, deposition** and **access**
  - identifier standards and infrastructure supporting data management, deposition on access
  - access to semantic standards
  - secure access to sensitive data