



MEMORANDUM OF UNDERSTANDING

between

ELIXIR

and

Euro-BioImaging ERIC

FY 2024-2029

1. Preamble

This Memorandum of Understanding (MoU) outlines the framework for collaboration between Euro-BioImaging ERIC and ELIXIR, two leading European research infrastructures, to foster scientific and technological advancements. Both organisations are committed to promoting Open Science in alignment with the FAIR (Findable, Accessible, Interoperable, and Reusable) data principles and the Lund Declaration on maximising benefits of research data¹. By combining their complementary expertise and services, ELIXIR and Euro-BioImaging ERIC aim to strengthen their contribution to European and global research ecosystems, enhance interdisciplinary collaboration, and maximise the societal impact of their efforts.

Euro-BioImaging ERIC (hereinafter, "Euro-BioImaging") is a European Research Infrastructure Consortium composed, at the time of signature, by 19 Members (18 Member States and EMBL, as of January 2025). Euro-BioImaging provides open user access to distributed Nodes, comprising over 230 state-of-the-art imaging facilities offering a comprehensive range of cutting-edge technologies in biological and biomedical imaging for scientists across Europe and beyond. It offers key services around generation, analysis, management and archiving of FAIR image data together with its network of Nodes, and provides training opportunities to its Nodes, Users and wider scientific community. Euro-BioImaging's Hub coordinates the infrastructure and represents the interests of the imaging community in the European and global research landscape.

ELIXIR Europe (hereinafter "ELIXIR") is an intergovernmental organisation that at the date of signature brings together life science resources from across its 22 Members (21 Member States, EMBL) and three Observer countries, as of January 2025. Legally established as an international organisation, with Headquarters in Hinxton, UK, ELIXIR is

¹<https://www.government.se/contentassets/69ab5c1102d5435ea24ce18da837b17d/lund-declaration-on-maximising-the-benefits-of-research-data.pdf>



a sustainable infrastructure for managing and analysing large, nationally distributed datasets based on global standards, adding value to national investments. It connects over 200 national institutes dedicated to developing and operating services that enhance data access, integration, management, training, and analysis for the life science research community.

ELIXIR provides a wide range of services to users. These include databases, tools and workflows, registries, interoperability resources, compute, training and data management.

2. Shared Vision

Euro-BioImaging and ELIXIR share a vision of enabling transformative interdisciplinary research by integrating imaging data with multi-omics datasets. This MoU outlines our shared commitment to advancing cutting-edge technologies, promoting Open Science, and supporting professional development across our research communities working in a rapidly evolving research landscape. Euro-BioImaging and ELIXIR share a common vision to enable excellent interdisciplinary research across Europe and globally, based on the wealth of knowledge also derived from combining imaging data with other multi-omics life science data. The MoU shapes the collaboration between the two RIs and aims to strengthen their common impact by bringing together their specialised expertise towards cutting-edge service provision and technology development in a rapidly evolving research landscape. These activities will build on commonly developing and promoting community-driven solutions for data management, standardisation, and interoperability. Additionally, key interactions will promote professional development, training, and upskilling of RI staff and users to meet the future needs of scientific research.

ELIXIR and Euro-BioImaging agree:

1. To renew their strategy of bridging imaging data with biomolecular data.
2. On the importance of ensuring cooperation between European Scientific Research Infrastructures, as well as establishing links between bioinformatics and imaging research in the life sciences;
3. Recognising the joint membership of 15 Member States and EMBL in both organisations as of December 2024, the strengthening of links will support the alignment of activities in areas of mutual scientific and technical interest across Members;



This MoU stipulates mutually beneficial areas of collaboration between Euro-BioImaging and ELIXIR by bridging cutting-edge bioimaging and bioinformatics infrastructure and services, towards strengthening and advancing life science research in Europe and across the globe.

3. Scope of collaboration

Both parties identify the following principal areas of shared interest to strengthen joint activities for mutually beneficial cooperation within the scope of the *ELIXIR Scientific Programme 2024-28*² and the *Euro-BioImaging Strategic Plan 2024-28*³.

Bridging Imaging and Omics Data

Integrate imaging data and genomics, proteomics, metabolomics, and other omics data to accelerate advancements in curiosity-driven research, personalised medicine, AI technologies, and other emerging trends.

- Develop joint standards and formats to enable semantic and technical interoperability across platforms.
- Align research data management (RDM) and research software engineering (RSE) practices, tools & services by co-developing cross-research infrastructure projects.
- Enhance data integration and usage through shared design and participation in initiatives related to life science, health, biodiversity and other research areas, building on relevant expertise, projects, and achievements.

Collaborative Infrastructure and Framework Development

Align both infrastructures and individual service provisions within European and global frameworks. Consider how to enhance cross-project collaboration and combine efforts across governance bodies and legal entities in the European spaces.

- Participate in European and global programs, including the European Open Science Cloud (EOSC), the European Cancer Imaging Initiative, Global BioImaging, and the Global Biodata Coalition.
- Collaborate to ensure European Research Council (ERC) grant guidelines are updated to reflect priorities in basic and applied, including cancer, research, and mechanisms by which researchers in the field can fulfill open data mandates.

² <https://elixir-europe.org/sites/default/files/documents/elixir-programme-24-28-full.pdf>

³ <https://drive.google.com/file/d/1M69UNUiyAhHZ4tshDUDFXKGHAY-Nwz6/view>



- Support the development and sustainability of key European research and data infrastructure initiatives, such as Cancer Image Europe (EUCAIM) and Genomics Data Infrastructure (GDI), during their project phases and their establishment as legal entities, such as European Digital Infrastructure Consortia (EDICs).
- Develop and sustain current and future collaborations in the EOSC, following on from EOSC-Life and especially as the EOSC Federation & Nodes concept matures.
- Support initiatives like the European Health Data Space (EHDS).
- Provide complementary services to researchers in the field of the life sciences.

Artificial Intelligence

Recognise the transformative potential of AI and next-generation computing in areas from fundamental research to predictive modelling and disease diagnostics.

- Leverage communities such as Horizon Europe-funded AI4Life to foster AI-enabled research ecosystems that readily combine imaging and omics data.
- Share standards and good practice for openness and transparency in Artificial Intelligence (AI) and Machine Learning methods, such as the DOME guidelines and the AI4Life community standards.
- Align and integrate next-generation computing services, such as EuroHPC and relevant workflows, to address the demands of complex life sciences datasets.
- Collate illustrative use cases to guide the development of AI tools for data discovery and curation through frameworks like the European Cancer Initiative.

Training, Capacity Building, and Outreach

Build capacity to ensure long-term sustainability and impact through joint training programs and public outreach to raise awareness of imaging and omics data integration. Both organisations will also share expertise and collaborate in broader areas of mutual interest.

- Connect training resources and repositories, such as ELIXIR's TeSS portal, with Euro-BioImaging's repositories — including those that may be funded as part of broader EC projects — and share advantageous usages of the ELIXIR TeSS training portal with the image data community.
- Deliver training on data management, FAIR principles, and advanced analytics, while supporting professional development and mentorship programs.
- Organise joint events, campaigns, and outreach activities to engage researchers, policymakers, and the public, highlighting the societal benefits of imaging and omics data integration.



- Advocate for improved credit recognition and attribution mechanisms for research data and software.
- Follow innovations in impact assessment methodologies across platforms.
- Share experiences in developing and improving trans-national and virtual access mechanisms to maximise the reach of their respective infrastructures.

4. Mechanisms of Collaboration

4.1 Advisory and Exchange

- Regular advisory roles and consultations between Euro-BioImaging and ELIXIR leadership to align strategies and developments.
- Regular meetings and workshops to exchange updates on new technologies, methodologies, and infrastructure developments.

4.2 Joint Participation in Funding and Policy Initiatives

- Strive for joint outreach to funders and positioning for Horizon Europe and future FP10 opportunities.
- Coordinate efforts to explore and find joint project funding at the European and global levels.
- Mutual support for developing policies on data management, open science, and ethics.

4.3 Collaborative Outreach and Public Engagement Relations

- Joint communication strategies to increase visibility, including the dissemination of success stories and public engagement.
- Coordinated stakeholder engagement to enhance recognition from the European Commission, national funding agencies, and the broader scientific community.

5. Annex: Technical and Strategic Action Plan

ELIXIR and Euro-BioImaging have developed a Technical and Strategic Action Plan⁴ to be included and updated as an Annex to this MoU, outlining specific action steps for the collaboration, including:

⁴ [Technical and Strategic Action Plan](#): [DOI: 10.5281/zenodo.14743742]



- A roadmap for bridging imaging and omics data integration.
- A joint AI development plan covering analytics, data discovery, and technology innovations.
- A training and capacity-building programme focused on cross-RI synergies and emerging technologies.
- Tentative timelines for the implementation of collaborative projects, including milestone-driven reviews.

6. Financial Responsibilities

For activities in the proposed areas of mutual interest, ELIXIR and Euro-BioImaging will, unless otherwise specified, bear any costs of participation of their representatives from their own resources intended to ensure scientific and operational benefits from mutual activities.

7. Intellectual Property Rights and Confidentiality

Should any intellectual property arise from any collaboration activities, the parties will deal with this in a separate agreement.

The parties shall treat as confidential any information that is labelled as such during the collaboration activities.

8. Promotional Material and Use of Logos

The use of a name or logo of either party in external activities requires prior consent of that party.

9. General terms

If questions arise concerning the interpretation of this MoU, the parties shall consult with each other and find a mutually acceptable solution.

Each party may suggest written amendments to the MoU at any time.

The MoU shall enter into force when it has been signed by both parties and shall remain valid for five years, i.e. until 27 January 2030.

This MoU is not a legally binding document and is not intended to constitute, and shall not be construed, to create a legally binding agreement between the parties.



Signed for Euro-BioImaging: Prof. John Eriksson, Director General

Date: 28 January, 2025

Signed for Euro-BioImaging: Dr. Antje Keppler, Section Director Bio-Hub

Date: 28 January, 2025

Signed for Euro-BioImaging: Dr. Linda Chaabane, Section Director Med-Hub

Date: 28 January, 2025

Signed for ELIXIR: Prof. Tim Hubbard, Director

Date: 28 January, 2025