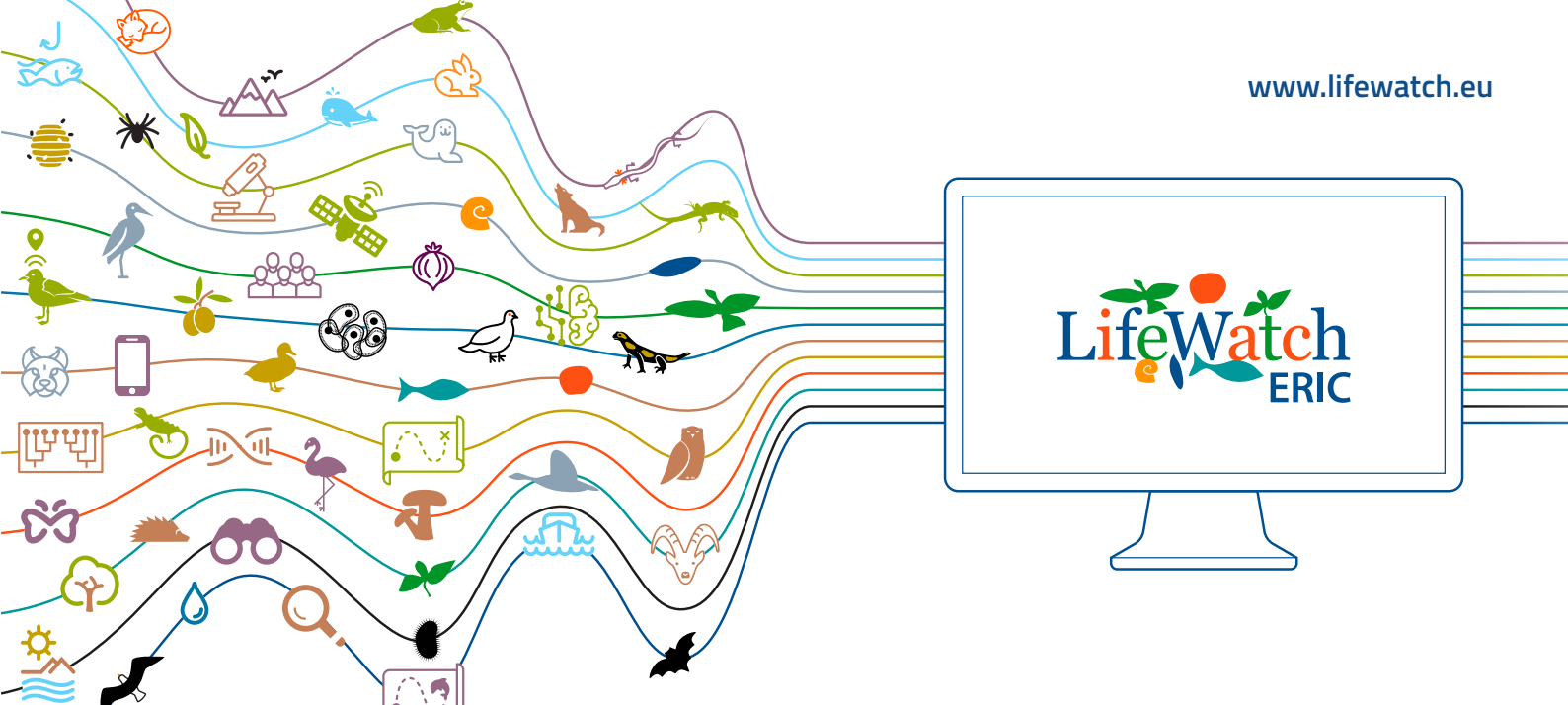




FACT SHEET FOR GOVERNMENTS AND POLICY MAKERS

The e-Science Infrastructure for Biodiversity & Ecosystem Research

LifeWatch ERIC provides scientists and researchers access to biodiversity and ecosystem data, services and research products to derive evidence-based knowledge for scientific and policy purposes.

LifeWatch ERIC is composed of **3 Common Facilities**, hosted in Spain, Italy and the Netherlands. Each of the **8 Member States** hosts a Distributed Centre which contributes with expertise and resources to LifeWatch ERIC, enabling its operations at national, European, and global levels, as a single Research Infrastructure. LifeWatch ERIC membership consists of Belgium, Bulgaria, Greece, Italy, Netherlands, Portugal, Slovenia and Spain.



Vision

To be the European research infrastructure providing seamless access to biodiversity content, services, and communities: where any user can create science-based and reliable answers to global ecosystem challenges.



Mission

To accelerate scientific discovery and policy impact by integrating biodiversity and ecosystem data, services, and other research products into interoperable digital environments: enabling open science, interdisciplinary and cross-domain collaboration, and AI-driven innovation.



Core Business

The core business of LifeWatch ERIC is the construction of virtual "workbenches" with e-services that allow its user communities to analyse patterns and trends in biodiversity in space and time, its (natural or man-made) drivers and the impacts on ecosystems.



Value proposition

LifeWatch ERIC provides researchers, policymakers, and stakeholders with access to biodiversity and ecosystem data, services and other research products by using and contributing to its advanced infrastructure to derive evidence-based knowledge for scientific and policy purposes.

European Research Infrastructure Consortium (ERIC)

The European Research Infrastructure Consortium (ERIC) is a specific legal form that facilitates the establishment and operation of Research Infrastructures with European interest. ERIC has a legal capacity recognised in all EU countries; it provides the necessary flexibility to adapt to specific requirements of each infrastructure, it ensures a faster process than creating an international organisation, and ultimately grants exemptions from VAT and excise duty.

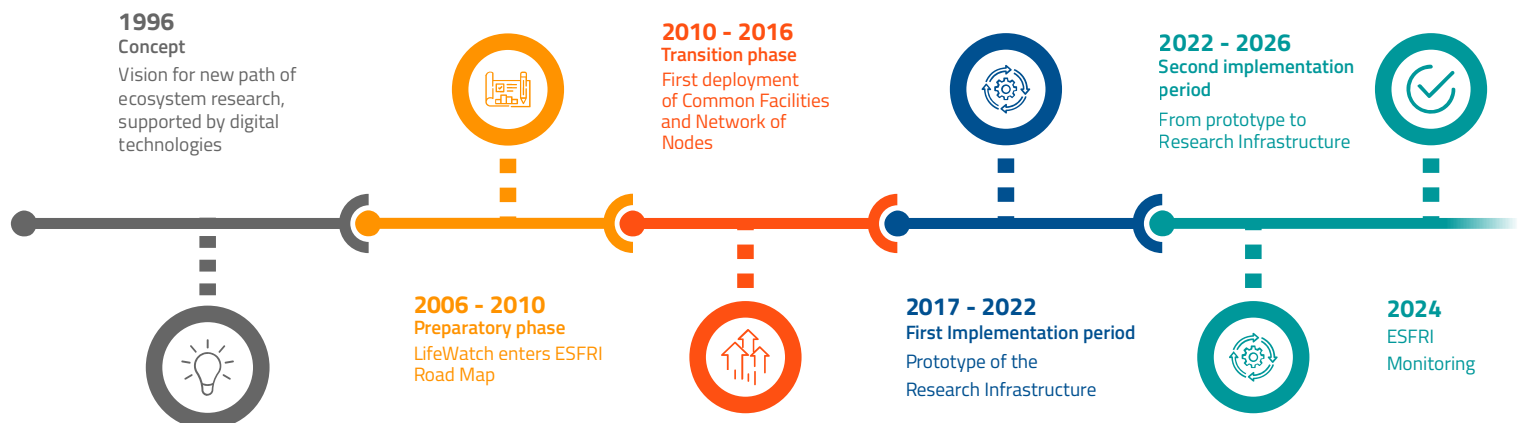
Research infrastructures are organisations that enable the research community to use specific facilities, resources and services in order to **accelerate scientific achievements** and **promote sustainable research**.

To find out more about the structure, roles of each component and governance of LifeWatch ERIC, please visit: www.lifewatch.eu/organisation-governance

From vision to action

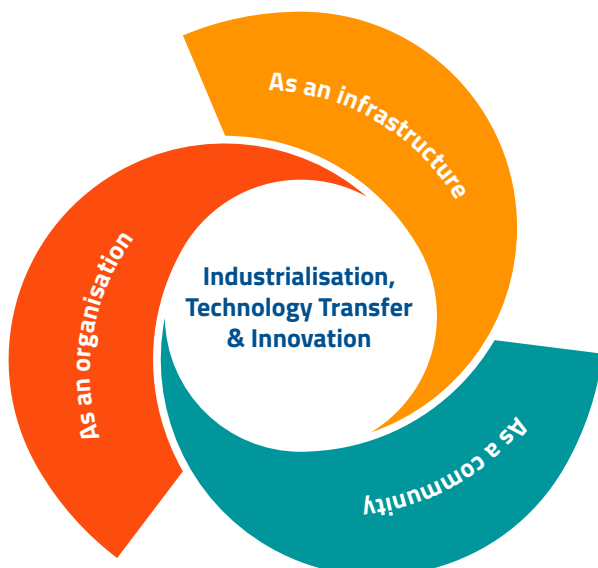
In 1996, a group of pioneering European scientists and ICT experts envisioned a new path forward for biodiversity and ecosystem research. They recognised that **digital technologies could do more than store data**: they could empower researchers to simulate, analyse, and understand the complex living systems of our planet. This vision evolved into LifeWatch ERIC, Europe's e-Science Infrastructure for Biodiversity and Ecosystem Research.

Today, LifeWatch ERIC embodies that ambition: to **connect scientists, data, and services** under a single digital ecosystem that makes knowledge actionable: from genes to ecosystems, and from local habitats to global biosphere trends.



Strategic Direction: integration, collaboration & impact

Guided by its Strategic Working Plan 2022-2026, LifeWatch ERIC is:



- **Integrating its distributed infrastructure across Europe,**
- **Streamlining access** across Common Facilities and National Distributed Centres,
- **Mobilising its distributed centres and scientific communities,**
- **Fostering partnerships** with both public and private sectors, and the engagement of civil society,
- Supporting **co-design and co-development of e-services** with end-users, enabling reproducible analytics for data-driven discoveries across biological and ecological scales,
- Contributing to **European and international biodiversity agendas.**

Scientific Excellence: a unique niche

LifeWatch ERIC is the only European Research Infrastructure focused exclusively on biodiversity and ecosystems, offering:

- Integration of **FAIR-compliant data**, **analytical workflows**, **simulation tools**, and other research products,
- Services for **multidisciplinary and cross-domain research**, from molecular biology to ecosystem services,
- Construction of advanced **Virtual Research Environments** for hypothesis testing and predictive modelling.

To align its services with evolving scientific and policy needs, LifeWatch ERIC launched the Thematic Services Working Groups **focused on priority areas of biodiversity and ecosystem research**.



Biodiversity and Ecosystem Responses to Climate Change



Biodiversity Observatory Automation



Taxonomy



Biogeography



Animal movement, Behaviour and Biologging



Habitat Mapping



Modelling & Workflows



Metagenomics in Biodiversity and Ecosystems



Agroecology

LifeWatch ERIC in the EU Research Area

LifeWatch ERIC plays a pivotal role in strengthening the ERA through:

- Active participation in **31 EU project consortia**, among which in ENVRI Community and EOSC Clusters,
- Integration with **global aggregators** (e.g. GBIF, OBIS) and **open data partners** (e.g. PLAZI, Species 2000) through its one-stop-over service of LifeWatch ERIC Search,
- Development of the **Biodiversity Knowledge Hub**, a single point of access for taxonomy and biodiversity information,
- Creation of a **Science Knowledge Graph** to federate and organise data from multiple sources,
- **Collaboration with other ERICs** and **research infrastructures** (eLTER, DiSS-Co, ELIXIR, EMSO, EMBRC, etc.).



more than
4,300
registered
users



more than
16,400
workflows
executed



more than
1,800
datasets
(90.36% FAIR compliant)



more than
230
web services



more than
890
scientific
publications



31
active
EU projects

Data collected up to 2025



Impact in action

Invasive Species Management

LifeWatch ERIC tools help forecast invasive species spread and guide policies for containment, changing biodiversity loss and economic damage.

Ecosystem Health Monitoring

Integrated data allow stakeholders to assess and model ecosystem responses to stressors like pollution and climate change, guiding targeted conservation actions.

Climate Resilience Planning

Simulations of ecosystem responses to climate scenarios support adaptive strategies like coastal protection and sustainable agriculture.



Value for governments

Strategic Advantage

Contribute to and benefit from cutting-edge infrastructure and tools to address diverse national biodiversity priorities, enabling the integration and composition of national services with those available within the infrastructure.

Policy Relevance

Gain access to evidence-based insights for environmental planning, conservation, and sustainable development.

Global Positioning

Be part of an integrated European effort tackling global ecological challenges.

Impact



90-95% reduction in data discovery time

Reduce dataset discovery and access time by up to 90-95% by enabling joint search and access to biodiversity data federated from 18+ distributed providers, avoiding fragmented manual data harvesting.



50-90% lower computational costs

Reduce computational costs per project by 50-90% through the reuse of optimised workflows, shared Virtual Research Environments, and centrally operated analytical services, compared to local or ad-hoc implementations.



Up to 10x performance gains

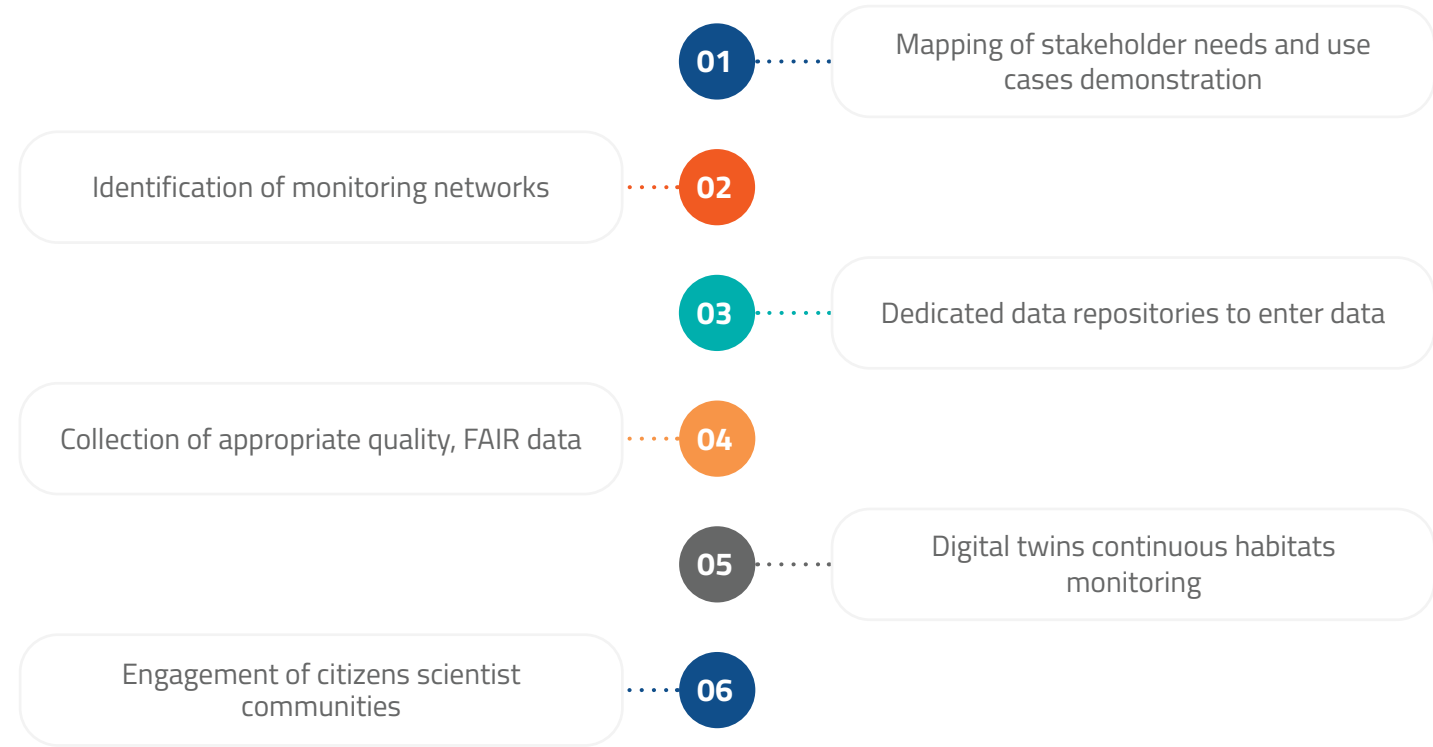
Improve efficiency and significantly lower the energy footprint of resource-intensive workflows, achieving up to 10x performance gains over initial standalone implementations, with cost savings of €10k-€50k per medium-scale project.



Community of 400+ active users

Connect researchers to a growing community of 400+ active users, facilitating collaboration, reuse of workflows, and exchange of expertise across disciplines and countries.

Benefits for stakeholders



User stories



Justine Pagnier
PhD Candidate in Marine Biology
Gothenburg University, Sweden

I collaborated with LifeWatch ERIC to develop and refine the ARMS workflow for processing ARMS-MBON data using the PEMA pipeline. Beyond the technical outcomes, this collaboration strengthened my expertise in bioinformatics workflows and connected me with international research networks, significantly advancing both my doctoral research and professional development in marine biodiversity monitoring.



Mark John Costello
Contact person of MBON Europe
(Marine Biodiversity Monitoring for Europe)
<https://mbon-europe.lifewatch.eu>

LifeWatch ERIC has supported MBON Europe by (a) providing training and support to researchers to publish their data into OBIS and GBIF, and (b) creating a marine biodiversity monitoring dashboard that enables people to discover, with a map and a tabular view, where marine biodiversity monitoring sites are located across Europe, and access the associated metadata like geographic coverage, habitat, and taxonomic classification.

