

LifeWatch ERIC

**the e-Science European Infrastructure for
Biodiversity & Ecosystem Research**

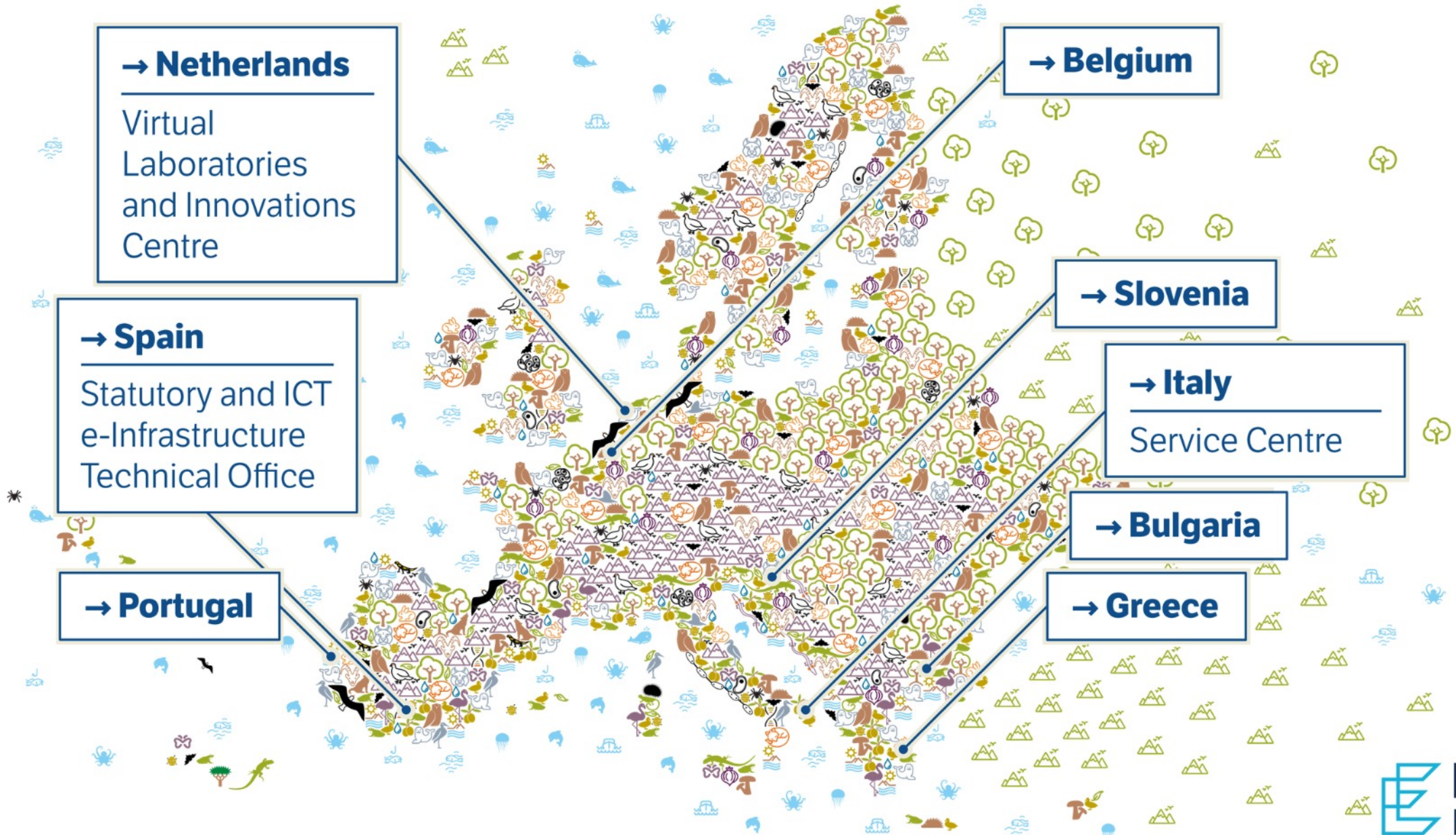


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Antonio Jose Saenz Albanes | Online, 31/08/2026

From Research Infrastructures to Impact: ERICs and EIROForum contributing to the Green and Digital Transition



What is LifeWatch ERIC?



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Vision

LifeWatch ERIC's vision is 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 to design, operate, and continuously evolve virtual research environments and intelligent digital workbenches that integrate biodiversity and ecosystem data, models, and analytical services. These environments enable the scientific community to explore, understand, and predict patterns and trends in biodiversity across spatial and temporal scales, their natural and anthropogenic drivers, and their impacts on ecosystems and human well-being.



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.

What is LifeWatch ERIC?



Unique features and multidimensional approach

Unique Niche

The only biodiversity and ecosystem e-Science Infrastructure at **national, European**, and **global** levels

Multidimensional

From genes to ecosystems, from local to global: different **levels of organisation** and **scales of observation**

Virtual Research Environments

Tecnological push for researchers to test hypotheses, **scientific pull** to derive evidence-based knowledge

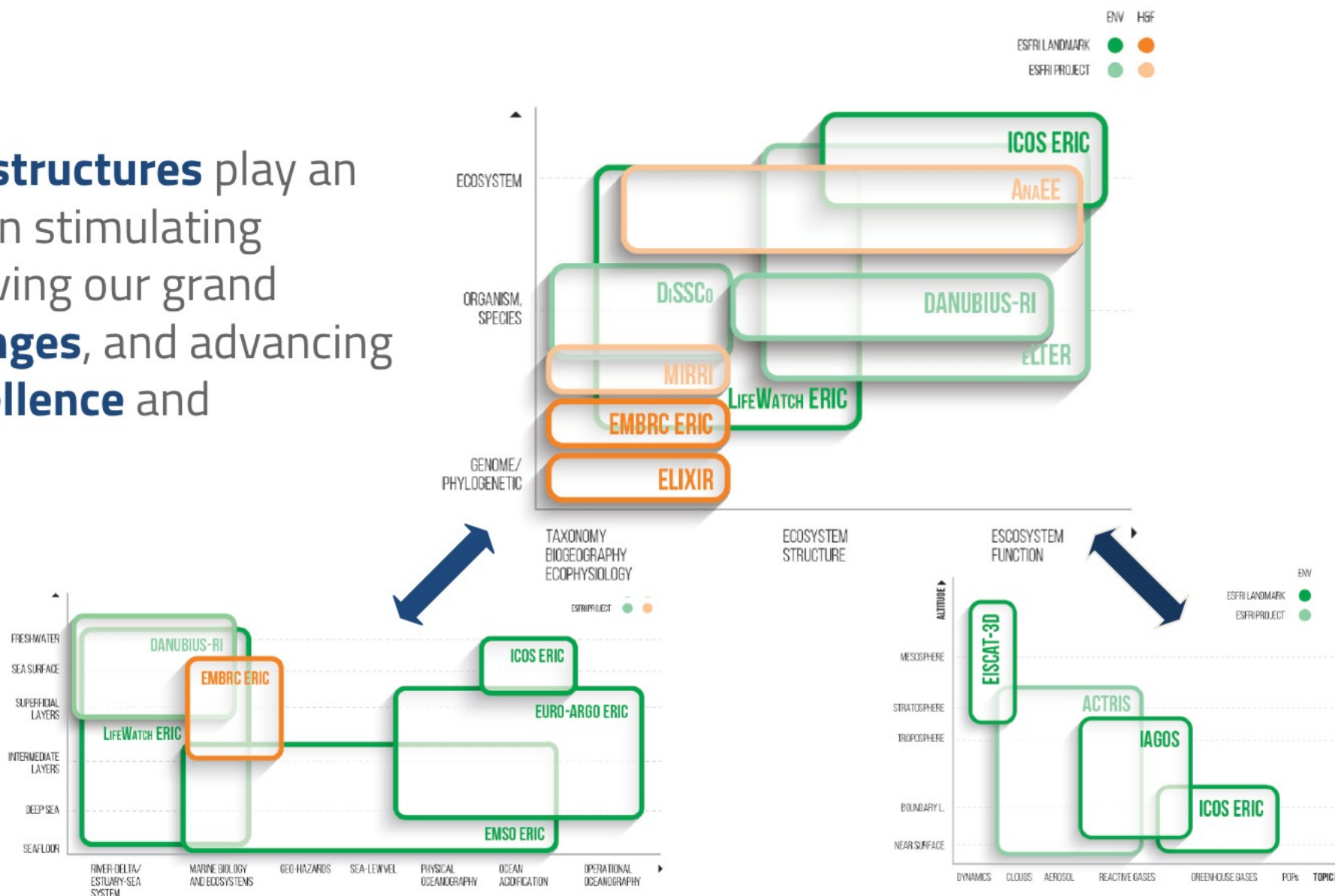
FAIR Compliant data

Cutting-edge e-infrastructure technology federates **FAIR data**, **reproducible analytics** and **mobilised research communities**

Cross-domain

Resources enabling testing of the same hypothesis with data and analytics of **multiple disciplines**. New, **synthetic knowledge**

Research infrastructures play an important role in stimulating **innovation**, solving our grand **societal challenges**, and advancing **openness, excellence** and **collaboration**.



Interrelated thematic B&E ERIs

Scientific Excellence

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



Biodiversity and Ecosystem
Responses to Climate Change



Taxonomy



Animal Movement and Biologging



Biogeography



Biodiversity Observatory Automation



Habitat Mapping



Metagenomics in Biodiversity and
Ecosystems



Modelling & Workflows



> 95,000

platform
users (total till 2025)



> 16,000

workflows
executed



> 1,800

datasets
(90.36% FAIR compliant)



238

web services



> 730

scientific
publications



31

active
EU projects

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.

Principal horizontal services

<  > **Eco**Portal



My  **LifeWatch**
ERIC

The logo for LifeBlock, featuring the word "LifeBlock" in a stylized font with a blue pixelated background and several 3D cubes in orange, green, and blue around it.

Getting started



STEP 1

Open the LifeWatch
ERIC Metadata
Catalogue or Search



STEP 2

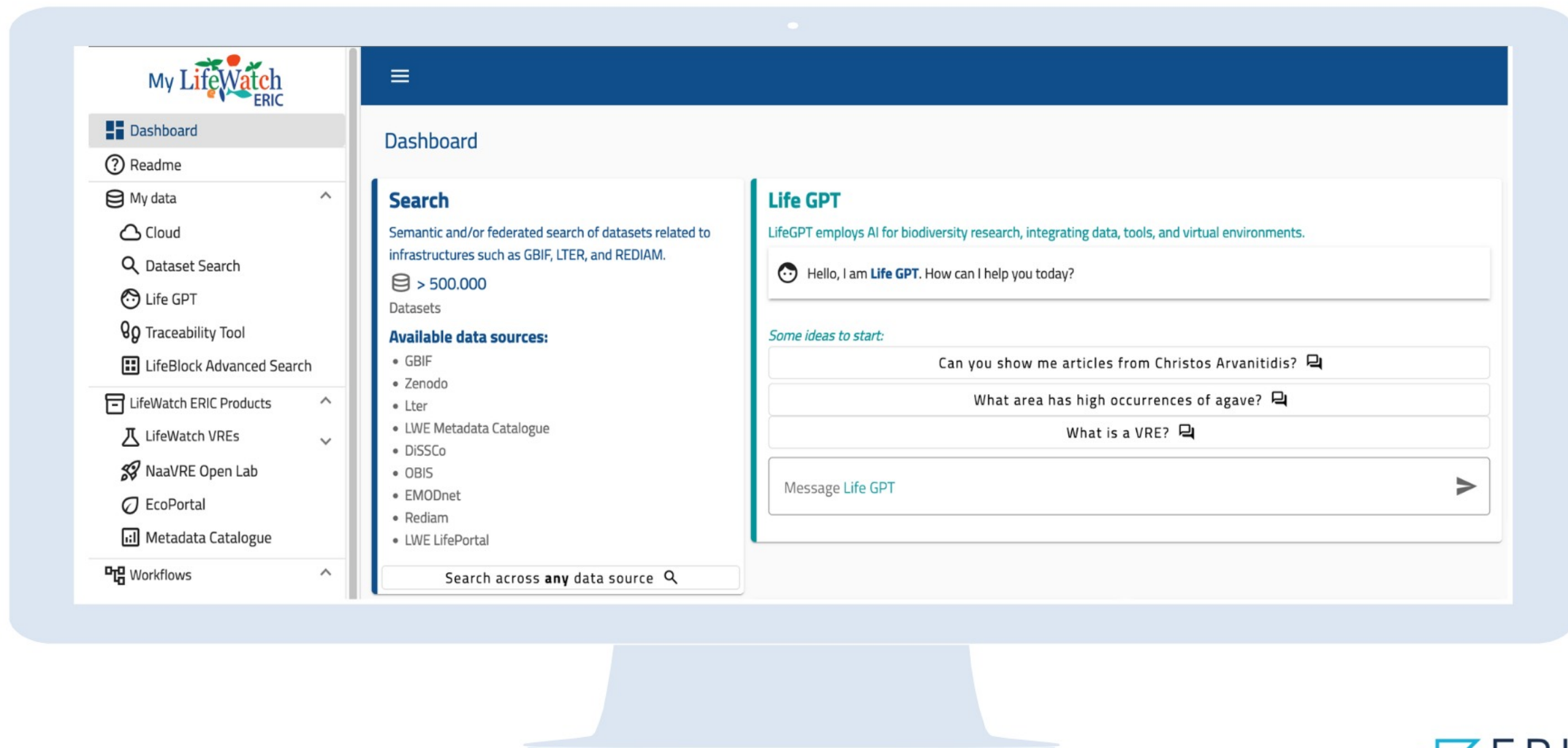
Access
MyLifeWatch



STEP 3

Run the
Workflow

Latest developments



Green & digital in LifeWatch ERIC's mission

Digital by design

LifeWatch ERIC is an e-Science Research Infrastructure: its core mission is to integrate biodiversity and ecosystem data, services, workflows and communities into interoperable digital environments.

Green by purpose

The scientific purpose is biodiversity and ecosystem knowledge: evidence for conservation, restoration, sustainability and environmental policy.

Mission anchors

- FAIR, interoperable biodiversity and ecosystem resources
- Virtual Research Environments for reproducible analytics
- Open science, cross-domain collaboration and AI-driven innovation
- Evidence-based knowledge for global ecosystem challenges

Policy relevance

- Green transition: biodiversity restoration, climate resilience and ecosystem management
- Digital transition: reusable services, traceable workflows and scalable knowledge products

Digital transition: biodiversity intelligence

LifeWatch ERIC turns digital infrastructure into usable biodiversity knowledge.



**Fragmented
biodiversity resources**



**Decision-ready
biodiversity intelligence**

EOSC-aligned interoperability makes results discoverable, reusable and traceable across Research Infrastructures and communities.

Green transition: lower-footprint digital science

Digital infrastructure can lower environmental impact when it is designed and operated responsibly.

Digital-first operations

- remote working and reduced travel
- digital collaboration tools
- remote access to services

Energy-aware technologies

- Proof-of-Stake blockchain standard
- energy-efficient compute patterns
- optimised workflows and resource allocation

Green IT practices

- baseline energy metrics with hosting partners
- storage and compute lifecycle management
- energy-efficient infrastructure planning

The key principle Reduce duplication, reuse services and optimise digital workflows so that biodiversity research becomes faster, more traceable and less resource-intensive.

Internal policy framework and KPIs

LifeWatch ERIC is moving from good practices to measurable environmental governance.

Environmental and Energy Policy LW-00105-1

Policy framework aligned with European environmental directives and ESFRI recommendations, integrating environmental considerations into operations, services and research activities.

Core principles

- compliance and continuous improvement
- sustainable resource use and circular economy
- sustainable procurement and lifecycle awareness
- research and innovation for sustainable technologies
- stakeholder engagement and transparency

KPIs

- 1 Annual seminar on environmental policy
- 2 $\geq 2/3$ domestic travel by sustainable transport
- 3 $\geq 2/3$ events attended digitally

From policy to evidence: the next step is progressive environmental reporting and trend monitoring.

Best practice: sustainability through reuse

Sustainability is not only about reducing impact; it is about enabling better environmental decisions.

Federate

connect distributed
biodiversity data, services
and communities

→ Reuse

avoid reinventing project-
by-project workflows

→ Preserve

transition valuable project
outputs into sustainable
services

→ Support policy

turn research products into
evidence for Green Deal,
restoration and One Health
needs

What LifeWatch ERIC can share

- a digital RI model that reduces fragmentation
- FAIR data, provenance and interoperability for trust
- LifeWatch-compatible research products and long-term reuse
- monitoring KPIs to move from intention to evidence

**Green transition needs biodiversity
knowledge.
Digital transition makes that knowledge
usable.**

Thank you for your attention and questions!

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