Building the foundations for an open, interoperable and sustainable European infrastructure for Citizen Science

Organization: EU Consortium
Data Type: Citizen data, Monitoring and evaluation, Data for SDG monitoring, Cross cutting
Region: Regional
Timeline: The commitment covers the RIECS-Concept project period, from 1 January 2025 to 31 December 2027. The first phase maps existing technologies, services and stakeholder requirements. During the second phase, these findings will inform the infrastructure's conceptual architecture, data and metadata model, governance arrangements, sustainability roadmap and impact-assessment framework.
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Sponsoring Organization:

RIECS-Concept Consortium

Supporting Organization(s):

All consortium partners

Objective:

RIECS-Concept commits to developing, by the end of 2027, an evidence-based blueprint and implementation roadmap for a permanent, shared and federated European Research Infrastructure for Excellent Citizen Science. The proposed infrastructure will connect existing platforms, datasets, tools, expertise and communities rather than replace them. Its design will support the responsible production, stewardship, discovery, validation, sharing and reuse of citizen-generated data. It will promote interoperability with European research infrastructures, the European Open Science Cloud, official data systems and relevant international frameworks. Through participatory design, RIECS will also develop approaches to inclusive governance, sustainable financing and impact assessment, helping CS become a trusted, accessible and durable component of European and globally connected data ecosystems.

Description:

Citizen Science (CS) generates valuable data, knowledge, methods and technologies across fields such as environmental monitoring, health and climate change. However, the CS landscape remains fragmented as projects frequently operate through short-term funding, disconnected platforms and incompatible methods, metadata and quality-assurance procedures. This limits the findability, interoperability, reuse and long-term preservation of citizen-generated data and makes it difficult to connect these data with scientific infrastructures, official statistics and policy-reporting systems. Smaller and community-led initiatives also often lack access to sustainable hosting, technical expertise and data-stewardship support. At the same time, weak governance, inconsistent standards and limited institutional anchoring undermine trust and long-term collaboration. RIECS-Concept is developing a coordinated, inclusive and federated European approach,

connecting and strengthening existing resources, platforms, data infrastructures and communities.

RIECS-Concept will produce the concept for a trusted, inclusive and interoperable infrastructure that improves the visibility, quality, reuse and policy relevance of citizen-generated data while reinforcing existing CS communities and capacities.

Activities include, among others:

- publish an open catalogue of relevant CS services, resources and technologies;
- develop a conceptual model for interoperable CS data and metadata, incorporating FAIR and responsible principles;
- co-design governance, access, stewardship and sustainability arrangements with citizens, researchers, civil-society organisations, public institutions, research infrastructures and international organisations;
- develop a multi-year implementation and sustainability roadmap;
- create an impact-assessment framework;
- strengthen pathways through which citizen-generated evidence can contribute to research, official data ecosystems, SDG monitoring and policy processes.

Progress will be monitored through the project's established governance, quality-assurance and Horizon Europe reporting processes. Achievement will be assessed against the completion and quality of six principal results: the catalogue of services and resources; technological feasibility study; data and metadata conceptual design; implementation and sustainability roadmap; impact-assessment framework; and stakeholder-engagement model.

The consortium will also monitor the diversity and extent of stakeholder participation, the traceability of stakeholder requirements into the infrastructure design, alignment with relevant standards and policy frameworks, and the validation and potential uptake of the results by CS communities, research infrastructures, public institutions and international organisations.