

# Open Research Information: An Ethical Necessity

## OpenAIRE's Role in Advancing Open Science

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Research integrity demands transparency not only in scientific outputs but also in the metadata that describes them. This principle requires that research information is collected through transparent methods and remains open and available for verification, enabling evidence-based monitoring and public decision-making. OpenAIRE maintains a “scholarly knowledge graph” of interconnected research metadata and provides a catalogue of services that support Open Science by facilitating knowledge discovery and research assessment.

### What is Open Research Information and why it is important

In scientific work, access and transparency are essential not only for literature, data, software, and other research products, but also for the metadata describing these products. Research Information refers to all the metadata detailing research outputs, including authors, affiliations, citations, discipline, funding streams, and more. This information is crucial for product discovery, informed decision-making, monitoring scientific impact, career advancements, addressing fraud, and supporting evaluation and review processes.

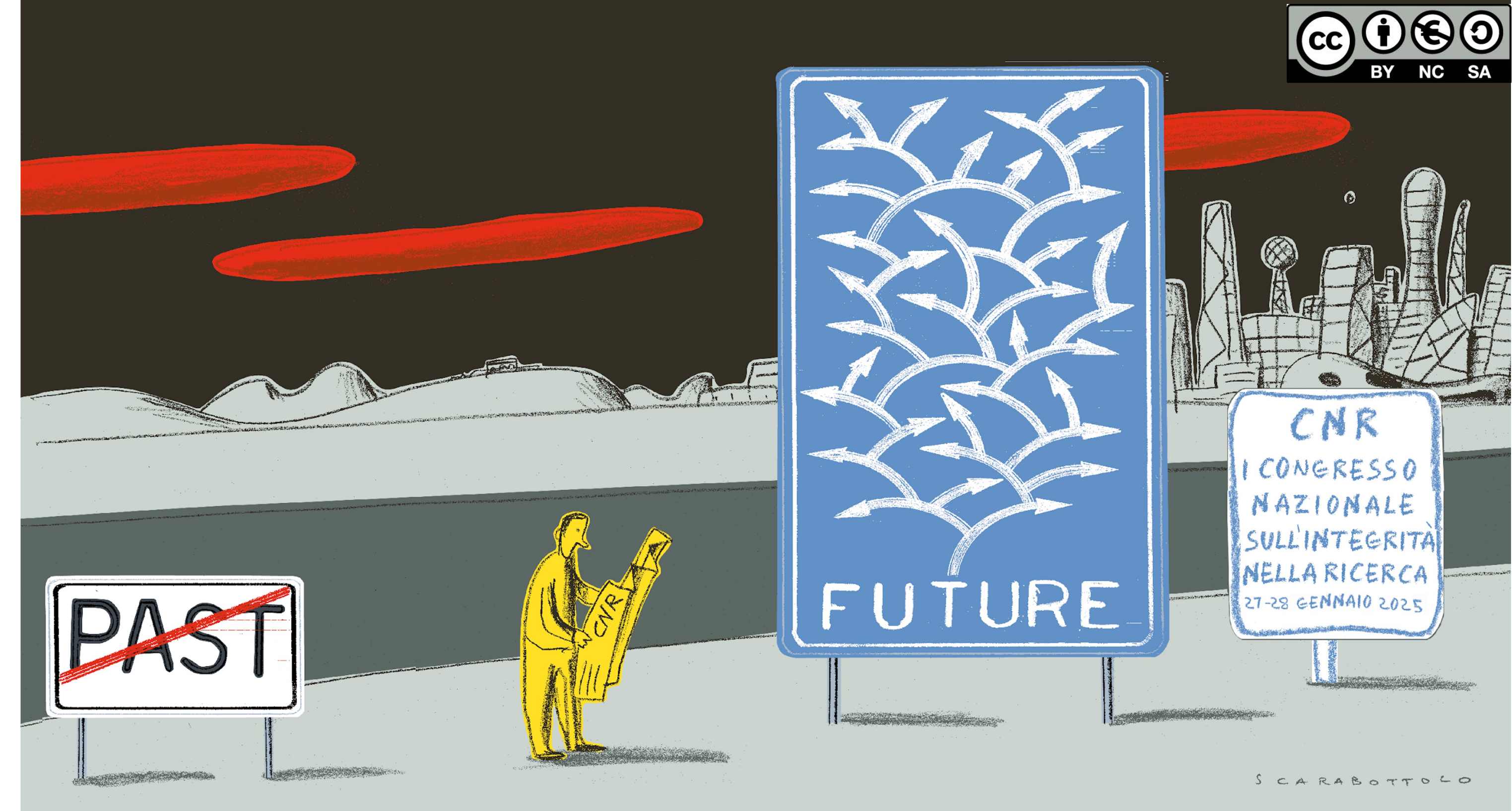
Traditionally, this information has been available through closed commercial databases, which are non-transparent in their collection methods and unverifiable. Since strategic decisions cannot continue to rely on these databases, in late 2023 various scientific institutions and service providers have advocated through the Barcelona Declaration that Research Information should be open and transparent.

### OpenAIRE, the Open Research Infrastructure

OpenAIRE is a European infrastructure for scholarly communication, offering services that enable Open Science and Open Access, contributing to the creation of an open, transparent and thus ethically sustainable information framework. The OpenAIRE Graph, a free and open resource, connects hundreds of millions of metadata records from over 100k trusted sources. *Conceived as a public and transparent good, it brings discovery, monitoring, and assessment of science back in the hands of the scientific community.* All its information is accessible and freely reusable through public APIs, data snapshots, and user-friendly portals designed for specific purposes, including EXPLORE for discovering research products; MONITOR for tracking research activities and impact; CONNECT for building customized portals for research communities.

### SciLake and other OpenAIRE Graph-powered initiatives

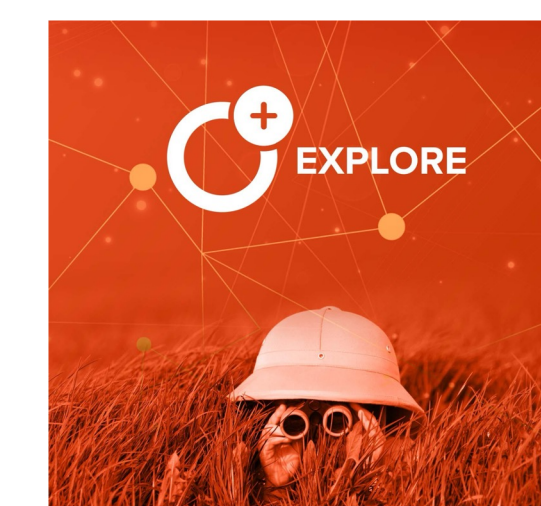
The OpenAIRE Graph continuously innovates to respond to community needs. Major developments are made possible through European-funded projects like the Horizon Europe SciLake, FC4E, OSTRails, GraspOS, and CraftOA. Among these, SciLake plays a pivotal role in enhancing the Graph's capabilities for research communities. Through the CONNECT service, SciLake is building subsets of the Graph, called "community gateways", for domain-specific research in the fields of Neuroscience, Cancer, Transportation, and Energy. By engaging domain experts and incorporating their feedback, these portals are tailored to meet each field's unique requirements while supporting cross-disciplinary collaboration.



**EXPLORE:** The OpenAIRE Explore portal is a comprehensive platform for discovering and accessing a vast array of research outputs linked to funding, projects, and institutions. All the research results available in the OpenAIRE graph are indexed, discoverable, and accessible via the EXPLORE portal.



**MONITOR:** OpenAIRE Monitor is a service for tracking research activities, evaluating Open Science trends, and measuring impact. It supports funders, research initiatives, and communities by identifying gaps, strengths, and costs, promoting Open Science uptake, and fostering collaboration. By uncovering trends, connections, and opportunities, it enables stakeholders to optimize actions and drive community building.



**CONNECT:** OpenAIRE Connect is a platform-as-a-service that enables research communities, research performing organizations, and research infrastructures to create customized web portals for discovering and sharing their research outcomes and Open Science practices. This service was created for use by research communities that want to gather their research outcomes, currently scattered across multiple repositories and archives, into a single entry point.

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