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OSTrails: Connecting Tools and Communities for a Federated Open Science Ecosystem

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The EU-funded OSTrails project is building a federated Open Science infrastructure by enabling researchers and institutions to discover, plan, track, and assess their work in transparent and interoperable ways. With 41 partners and 25 pilots—including cross-domain, national, and Horizon Europe testbeds—OSTrails is piloting the practical integration of over 80 interoperable tools and services. This diversity reflects the scale needed to support a truly federated Open Science ecosystem.

At the core of the project are two key enablers: a modular Interoperability Reference Architecture and a tool independent Plan-Track-Assess (PTA) framework. Together, these provide a shared foundation for aligning diverse research management services—from Data Management Planning platforms to Scientific Knowledge Graphs and FAIR assessment tools—across distributed infrastructures.

To ensure long-term impact, OSTrails has launched a comprehensive training and capacity-building programme, equipping research communities and service providers with the knowledge and tools to adopt and extend project outcomes. These efforts build on the co-designed pilots, which validate interoperability across varied institutional, disciplinary settings.

For researchers, OSTrails simplifies cross-institutional Research Data Management workflows and clarifies pathways to Open Science best practices. For service providers, it offers a practical model for aligning with EOSC while retaining domain-specific autonomy.

This presentation will showcase how OSTrails contributes to a federated EOSC ecosystem by delivering standards-driven solutions that prioritise interoperability and FAIRness as essential components of a sustainable and inclusive infrastructure, supporting both federation and the development of the Web of FAIR Data and Services.

Tagline

OSTrails delivers a federated, standards-based Open Science infrastructure by integrating over 80 tools through interoperable frameworks, supporting EOSC with scalable, FAIR-aligned solutions for research planning, tracking, and assessment.

Keywords

Federated Open Science Infrastructure

Author: Ms PAPADOPOULOU, Elli (Athena Research Center)

Co-authors: Dr HIENOLA, Anca (Finnish Meteorological Institute); Dr FURCILA, Diana (Spanish Foundation for Science and Technology); Mr STAVROPOULOS, Tassos (OpenAIRE)

Presenter: Ms PAPADOPOULOU, Elli (Athena Research Center)

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