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The Bigger Picture

This article puts forward recommendations for data and infrastructure service providers to support findable, accessible, interoperable, and reusable (FAIR) research data within the scholarly ecosystem. Formulating such recommendations is important to coordinate progress in realizing a FAIR data ecosystem in which research data can be easily shared and optimally reused, with the aim of driving down inefficiencies in the current academic system and enabling new forms of data-driven discovery. Key recommendations—ranked by their perceived urgency—resulting from an extensive community consultation process include that (1) funders and institutions should consider FAIR alignment and data sharing as part of research assessment, among other criteria; (2) services should support domain-specific ontologies by identifying disciplines that lack ontologies and enriching existing registries of ontologies; (3) repositories should support FAIR data by developing tools, such as APIs, sharing best practices, and undergoing FAIR-aligned certification; and (4) institutions should support FAIR awareness and implementation by establishing data stewardship programs providing simple and intuitive training for researchers. The recommendations outlined in this article are meant to help guide the way forward to putting into practice the FAIR guiding principles for data management.

The development and growing adoption of the FAIR data principles and associated standards as a part of research policies and practices place novel demands on research data services. This article highlights common challenges and priorities and proposes a set of recommendations on how data infrastructures can evolve and collaborate to provide services that support the implementation of the FAIR data principles, in particular in the context of building the European Open Science Cloud (EOSC). The recommendations cover a broad area of topics, including certification, infrastructure components, stewardship, costs, rewards, collaboration, training, support, and data management. These recommendations were prioritized according to their perceived urgency by different stakeholder groups and associated with actions as well as suggested action owners. This article is the output of three workshops organized by the projects FAIRsFAIR, RDA Europe, OpenAIRE, EOSC-hub, and FREYA designed

to explore, discuss, and formulate recommendations among stakeholders in the scientific community. While the results are a work-in-progress, the challenges and priorities outlined provide a detailed and unique overview of current issues seen as crucial by the community that can sharpen and improve the roadmap toward a FAIR data ecosystem.

Read the full paper here

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