

## OpenAIRE services in support of “Open Science as-a-Service”

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The effective implementation of OpenScience calls for a scientific communication ecosystem capable of enabling the “Open Science publishing principles” of transparency and reproducibility. Such ecosystem should provide tools, policies, and trust needed by scientists for sharing/interlinking (for “discovery” and “transparent evaluation”) and re-using (for “reproducibility”) all research products produced during the scientific process, e.g. literature, research data, methods, software, workflows, protocols, etc.

OpenAIRE fosters OpenScience by advocating its publishing principles across Europe and research communities and by offering technical services in support of OA monitoring, research impact monitoring, and Open Science publishing. Its aim is to provide Research Infrastructures (RIs) with the services required to bridge the research life-cycle they support - where scientists produce research products - with the scholarly communication infrastructure - where scientists publish research products - in such a way science is reusable, reproducible, and transparently assessable. OpenAIRE is fostering the establishment of reliable, trusted, and long lasting RIs by

compensating the lack of OS publishing solutions and

providing the support required by RIs to upgrade existing solutions to meet OpenScience publishing needs

The Research Community Dashboard. Thanks to its functionality, scientists of RIs can

find tools for publishing all their research products, such as literature, datasets, software, research products, and interlink such products manually or by exploiting advanced mining techniques, and integrate their services to automatically publish metadata and/or payload of objects into OpenAIRE. As a

The Catch-All Broker Service. Thanks to its functionality, data sources such as institutional repositories, data repositories, software repositories can be notified of metadata records relative to products (datasets, articles, software, research packages) that are “of interest to them”, i.e. metadata records that should be in the data source, or “linked to them”, i.e. a scholarly link exists between one of the data source product and the identified product. Notifications are sent only to subscribed data sources, following a subscription and notification pattern, and can be delivered by mail, OAI-PMH end-user interfaces, or, currently under investigation, via push APIs (e.g. SWORD protocol), FTP and ResourceSync. The idea behind the service is to disseminate and advocate the principle that scholarly communication data sources are not a passive component of the scholarly communication ecosystem, but rather active and interactive part of it. They should not consider themselves as thematic silos of products, but rather as hubs of products semantically interlinked with any kinds of research products and, more broadly, up-to-date with the evolving research ecosystem.

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