



Microbial resources in the European Open Science Cloud: MIRRI contribution to the EOSC Life project

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Microbial resources in the European Open Science Cloud: MIRRI contribution to the EOSC-Life project



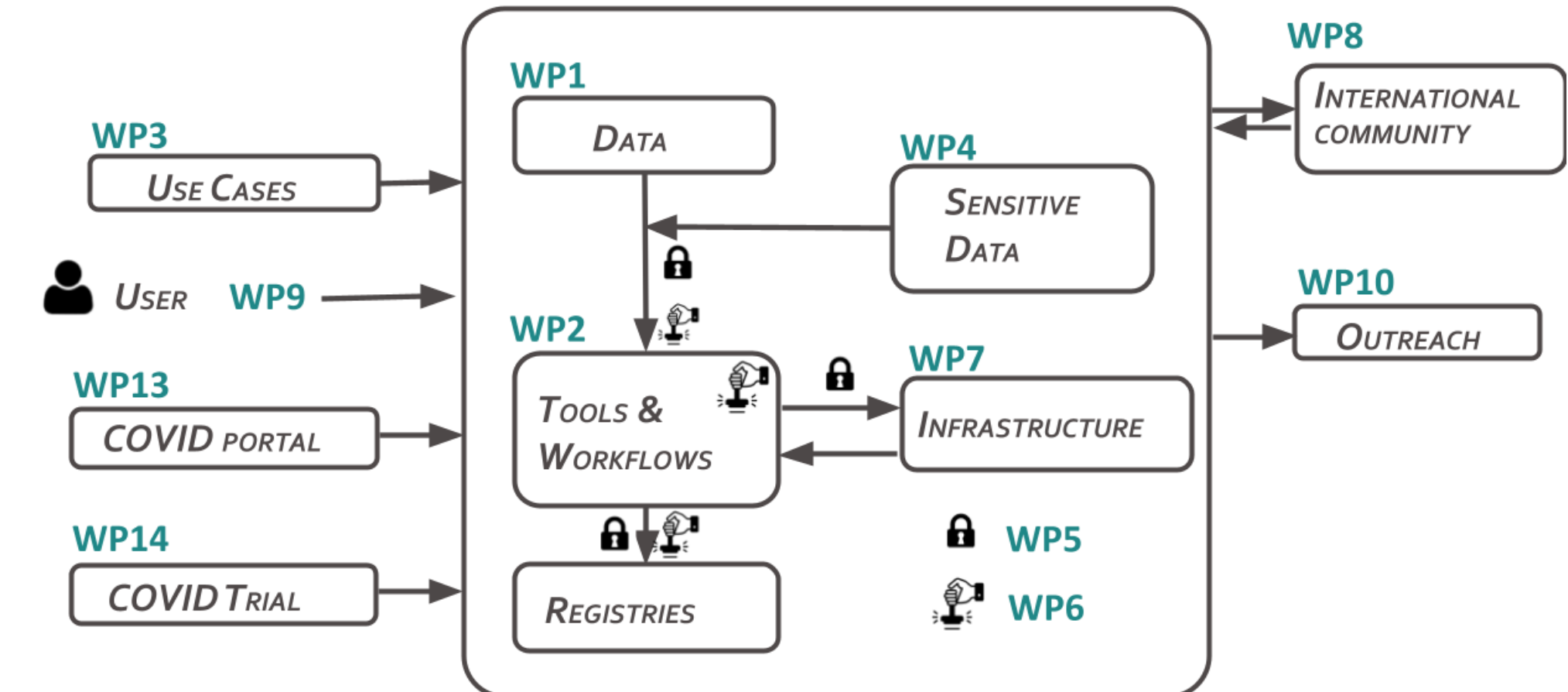
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EOSC-LIFE has been funded by the EU in the context of initiatives for the empowerment of Research Infrastructures. It brings together the **13 Life Science RIs** to create an **open, digital and collaborative space** for biological and medical research. It aims at enabling **interoperability of the RI data and workflows**, in line with the FAIR principles, by leveraging appropriate technologies such as APIs, ontologies and workflow management systems.



We present here some of its most recent achievements, along with some of the contributions of MIRRI to the project.

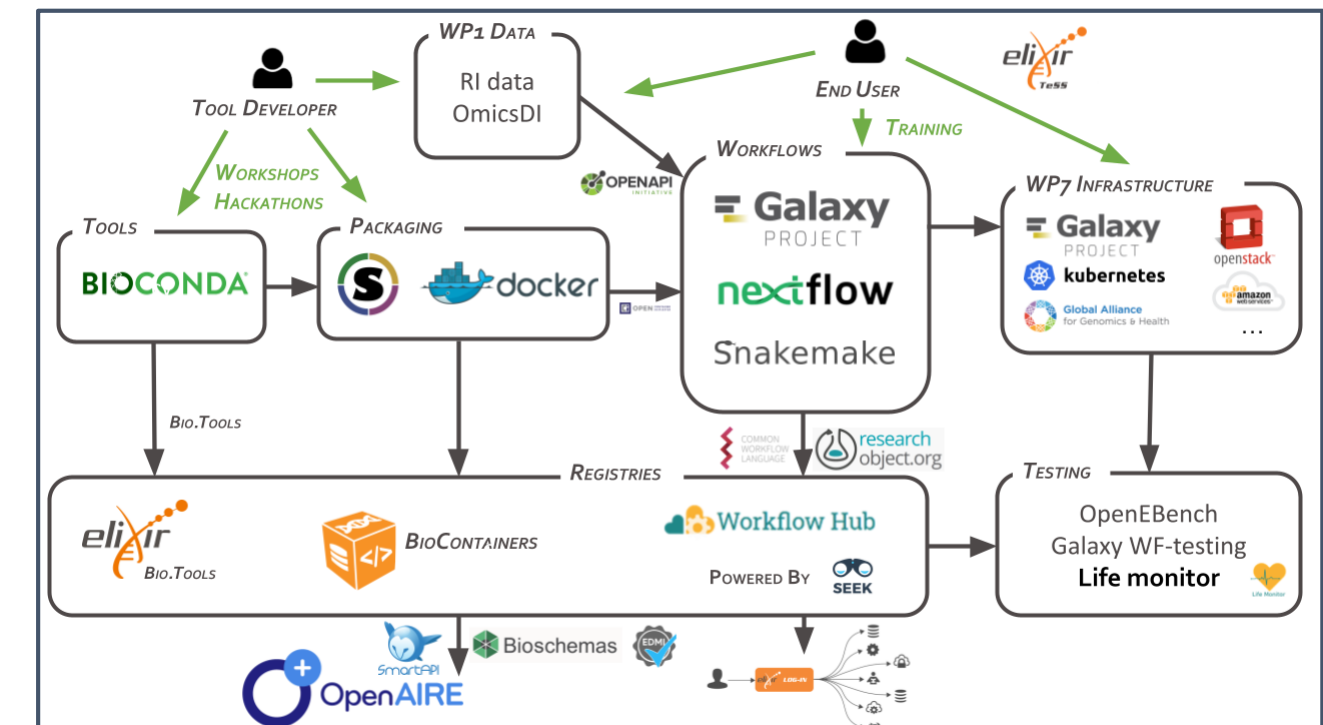
The project is active working on **research topics** related to **sensitive and non-sensitive data** management (WP4, WP1), software **tools, workflows** and related **registries** (WP2), **access to data and resources** (WP5) and **cloud storage and compute** (WP7).



Moreover, new activities were started in 2020 to support the application of the EOSC-Life methodologies to the problems in data and workflow sharing, interoperability and reusability highlighted by the pandemic.

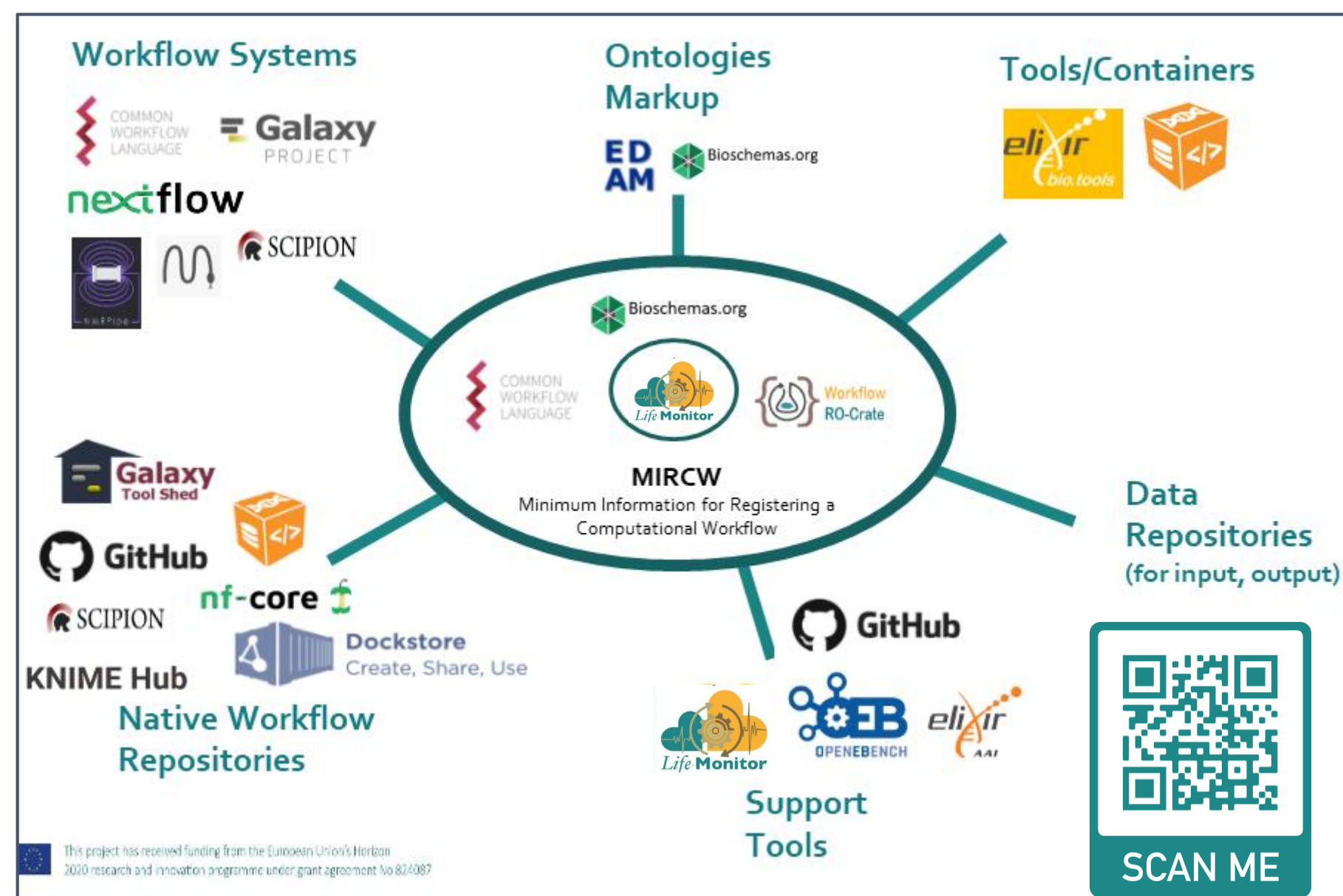
FAIR resources serving the needs of RIs' user communities are now registered in the FAIRsharing.org archive as a collection including 123 resources and 11 standards.

The project has fostered the adoption of technologies for the cloud deployment of workflows for data analysis and integration. The full software stack required to implement workflows is covered by addressing software and tools packaging, workflow composition and execution, and registries.



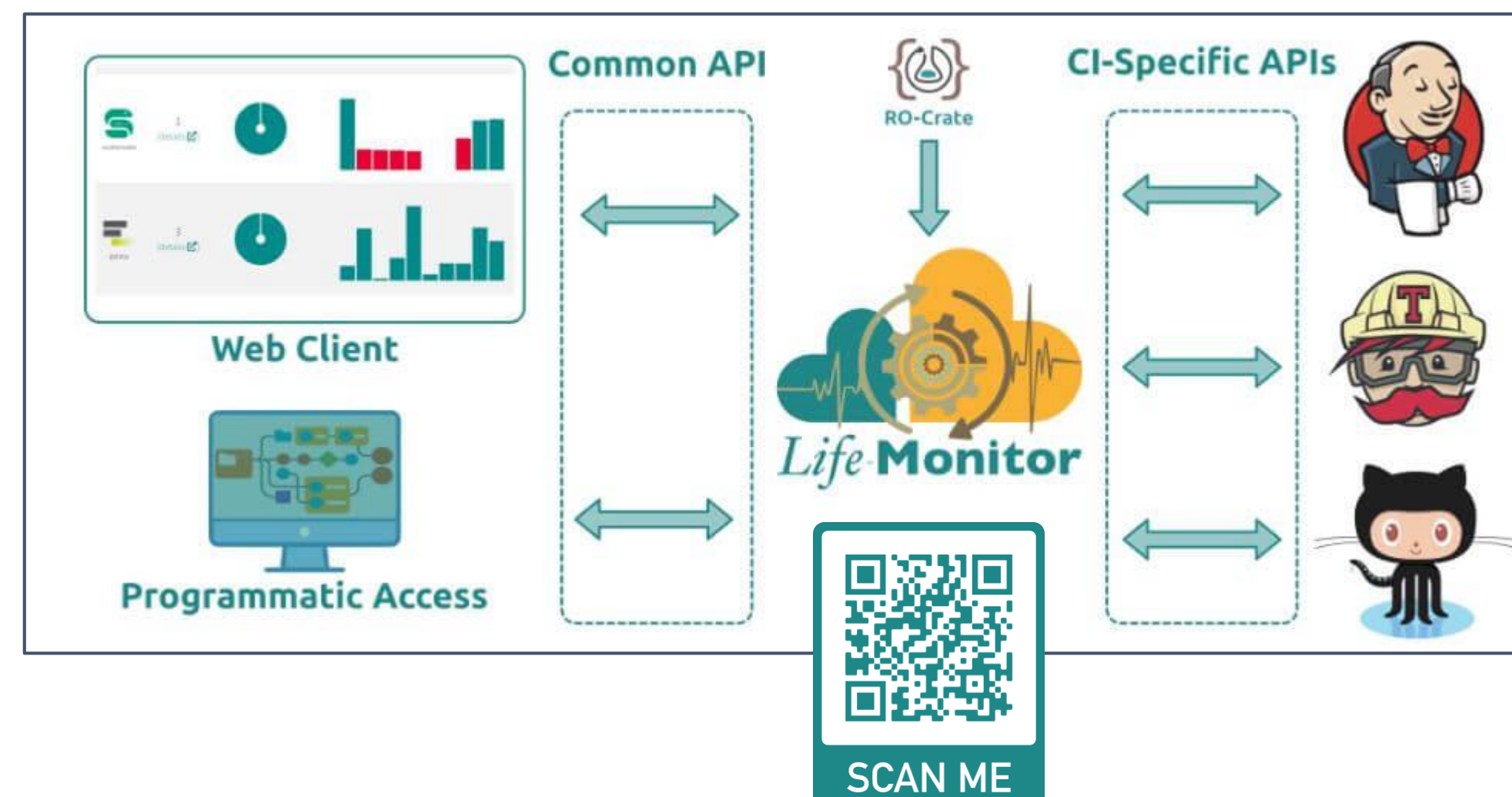
WorkflowHub

a registry to describe, share and publish scientific computational workflows.



LifeMonitor

a service to support workflow sustainability and reusability.



LS Login

an authentication and authorization infrastructure (AAI) for management of users by RIs supporting and enabling multi-RI applications and workflows in Life Sciences (LS). ELIXIR services have already moved to LS Login. Other RIs are preparing to move to LS Login.



MIRRI has contributed to these developments and is now deeply involved in implementing these technologies and tools for its needs. In this context, MIRRI:

- has implemented the public APIs for its information system MIRRI-IS,
- has registered in FAIRsharing.org the specifications for the MIRRI-IS, including datasets for microorganisms, plasmids and viruses,
- is improving the FAIRness of MIRRI-IS by implementing an associated platform based on the Dataverse system.

BioLMICS services

<https://webservices.bio-aware.com/mirri/swagger/v1/swagger.json>

BioLMICS Client API

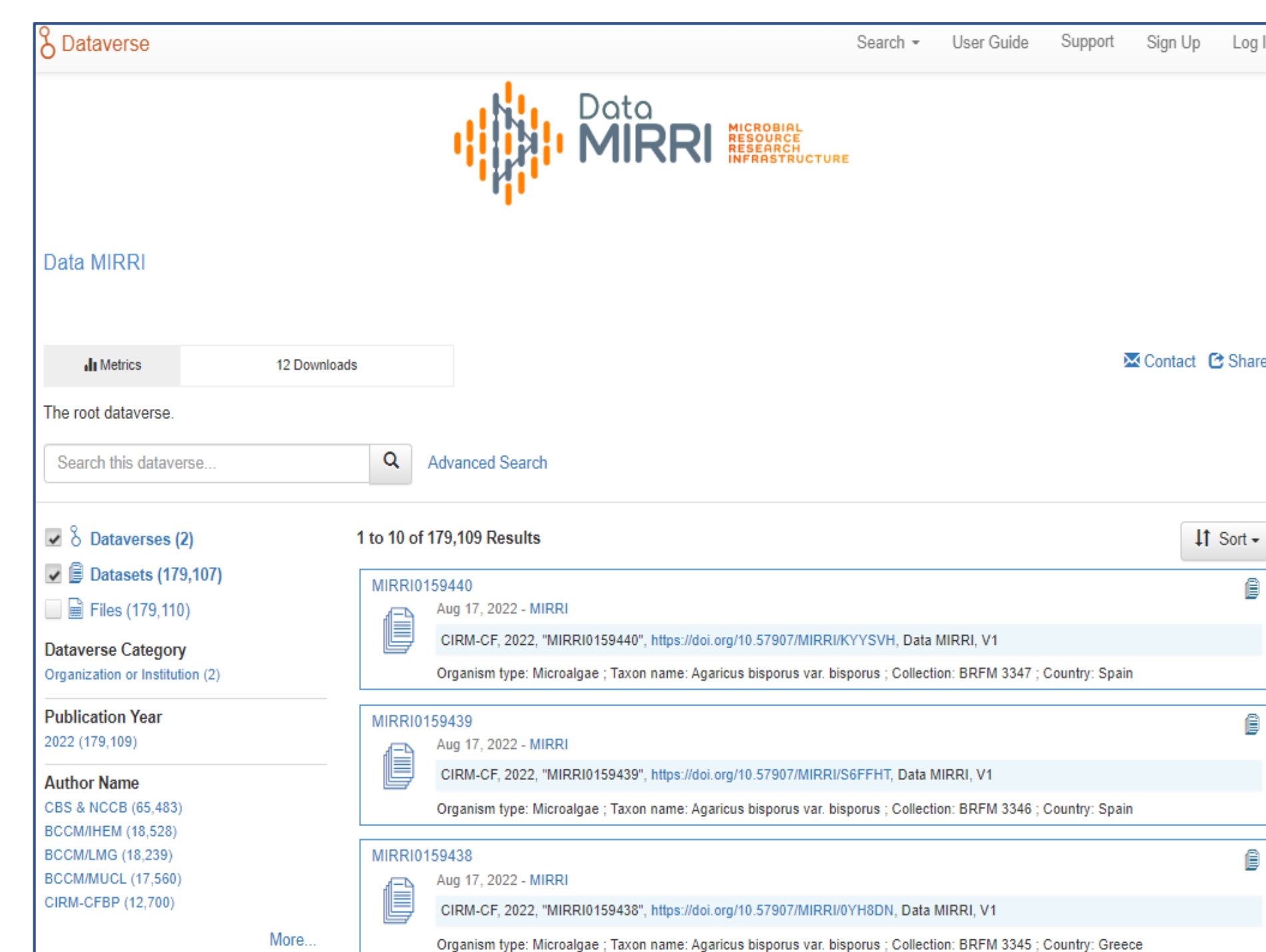
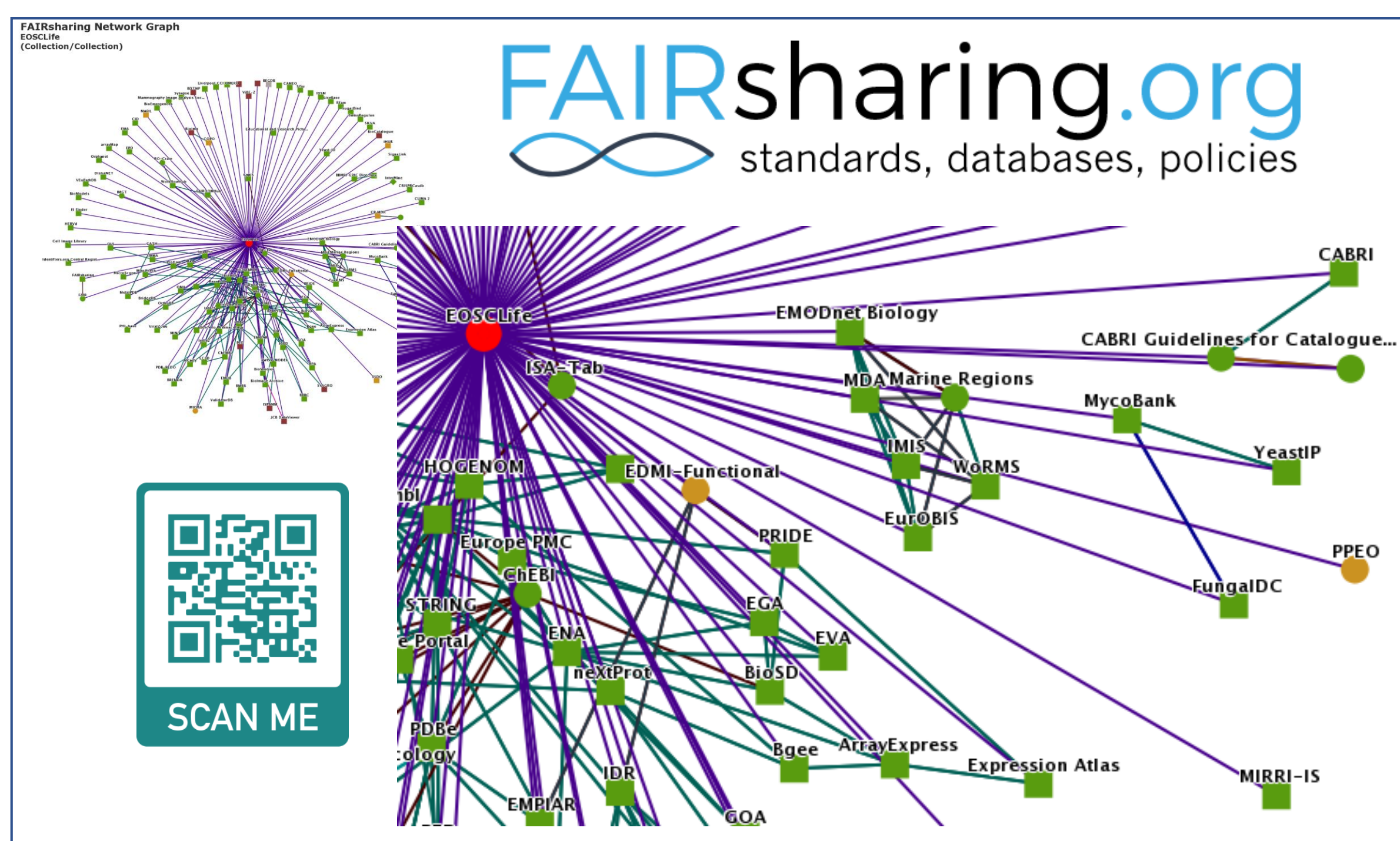
Servers
/mirri

Data Everything about operations on external data provided by BioLMICS Webservice.

Schemas Everything about external metadata provided by BioLMICS Webservice.

SearchData Everything about external data provided by BioLMICS Webservice.

Portal



A MIRRI Galaxy server is being developed as well: it will include workflows of interest both for curators of culture collections and for the community of researchers in the microbiology domain.

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