



## EOSC-Life : Build the Life Science European Science Cloud

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# EOSC-Life : Build the Life Science European Science Cloud

A-F Adam-Blondon, deputy head of ELIXIR-FR, INRAE

# EOSC-Life in a nutshell

- Started in 2019 – ends in 2023
- 13 ESFRI in Life Sciences, 47 Partners and 17 linked 3rd parties
- 26 M€
- Two WPs added in 2020 in response to the COVID-19 crisis

## European Open Science Cloud



E-Infrastructure  
consolidation

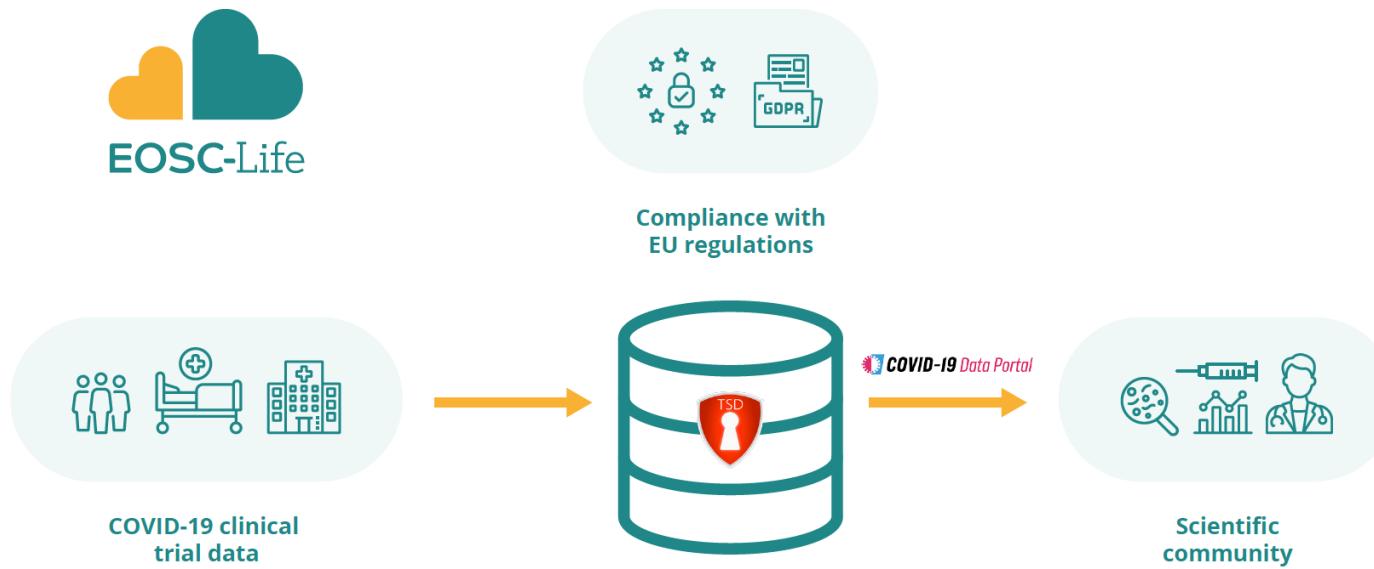
+  
Open Science

+  
Scientific  
Communities'  
content and users



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824087

# (Unexpected) Use cases to drive the activities of EOSC Life



EOSC Life partners and solutions were quickly mobilized to:

- foster collaborations: International COVID-19 Biohackathon + Cloud resources
- Frontloading of open tools and workflows: <https://workflowhub.eu/> , <https://usegalaxy.eu/>
- Build a repository for COVID-19 clinical trial data
- Extension of the COVID-19 Data Portal: <https://www.covid19dataportal.org/> 

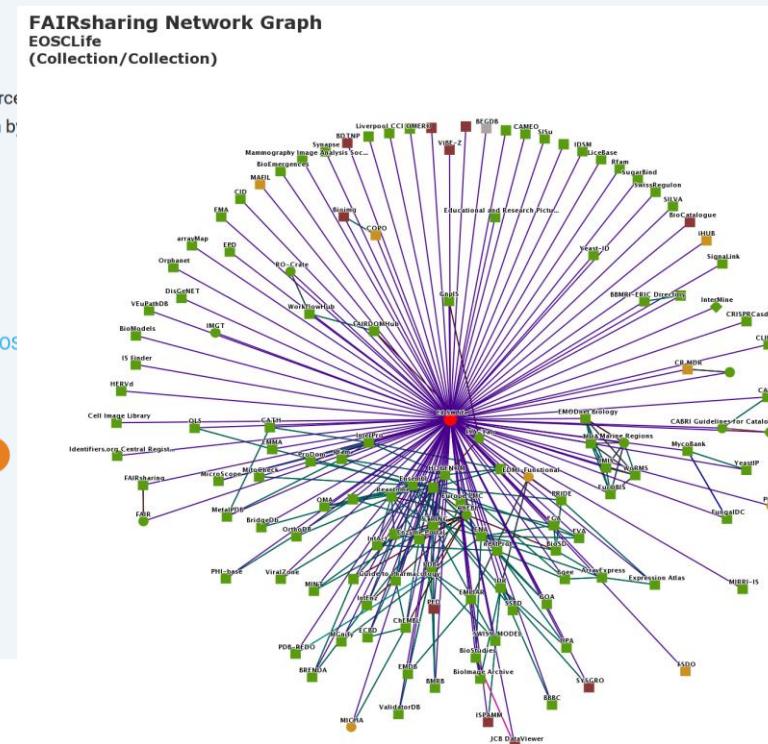


# Populating the EOSC with Data



- **FAIRsharing EOSC-Life collection** with more than a 100 of datasets : <https://fairsharing.org/3513>
  - **Provenance standard for life science data** (ISO 23494) describing all the history of the data, including sensitive data and compliant with the Nagoya protocole + EML technical implementation

GENERAL INFORMATION	
Type	Collection
Registry	Collection
Description	More than 100 diverse data resources updated or added to this collection
Organisations	EOSC-Life
Homepage	<a href="https://www.eosc-life.eu/">https://www.eosc-life.eu/</a>
Reference URL	None found
Maintainers	FAIRsharingTeam, PhilipGribbon_EOSC
Contacts	EOSC-Life WP1 General Contact
Subjects	Knowledge And Information Systems
Domains	Knowledge Representation
Taxonomic Range	All
User Defined Tags	None





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[TC > ISO/TC 276](#)

# ISO/WD TS 23494-1

## Biotechnology – Provenance information model for biological material and data – Part 1: Design concepts and general requirements

### GENERAL INFORMATION

Status :  Under development

Edition : 1

Technical Committee : [ISO/TC 276 Biotechnology](#)

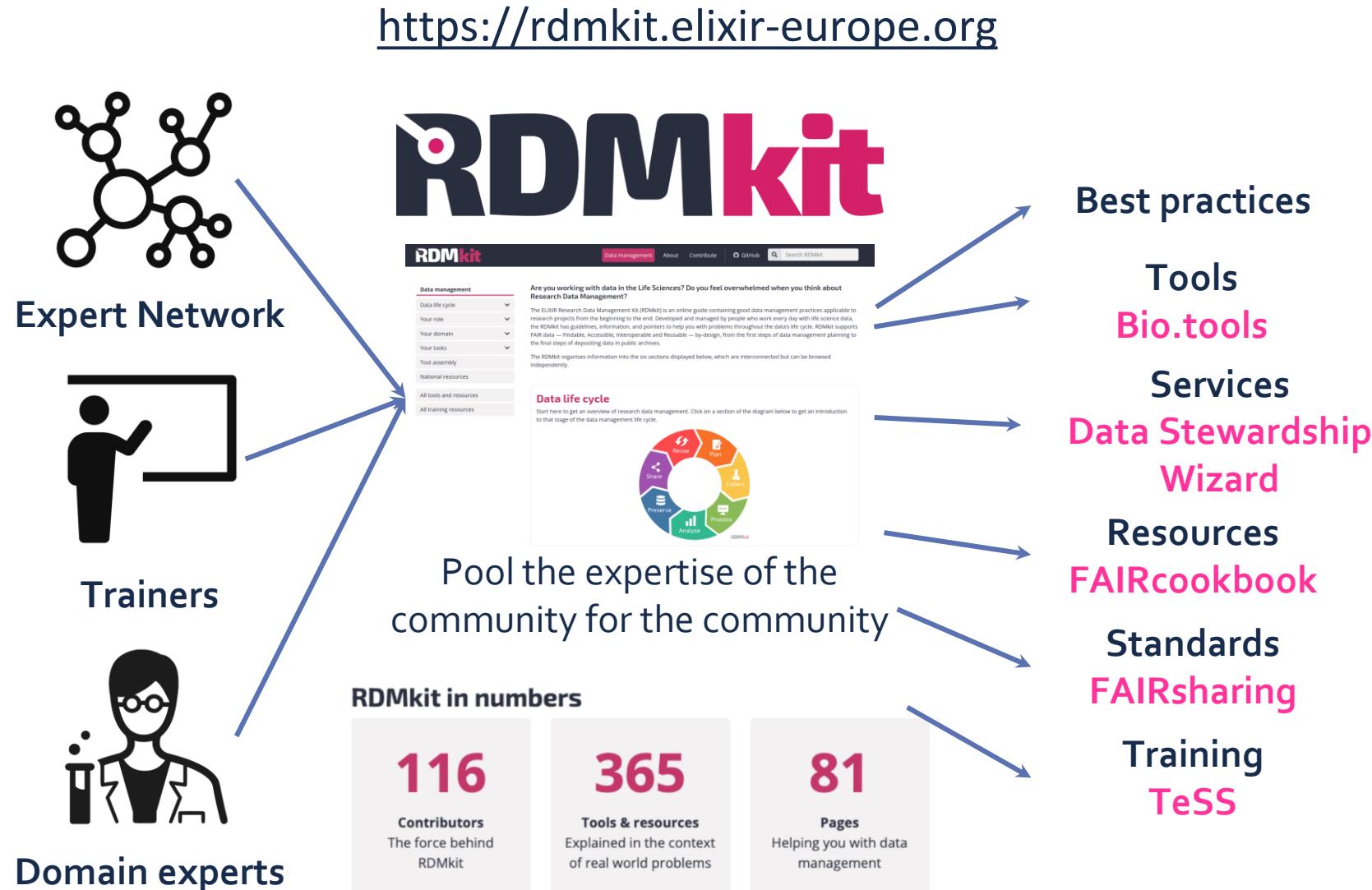
# ELIXIR CONVERGE : upscaling the support to research data management

- 2019 – 2023
- 5M€ + 4M€ pour 3 WP COVID 19
- Complement/in synergy with EOSC Life



ELIXIR-Converge has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No 871075.

- Major outputs:
  - ELIXIR RDM community
  - RDMkit: collaboratif knowledge portal in support to Data Management Planning



# Packaging tools and workflows for use in the cloud



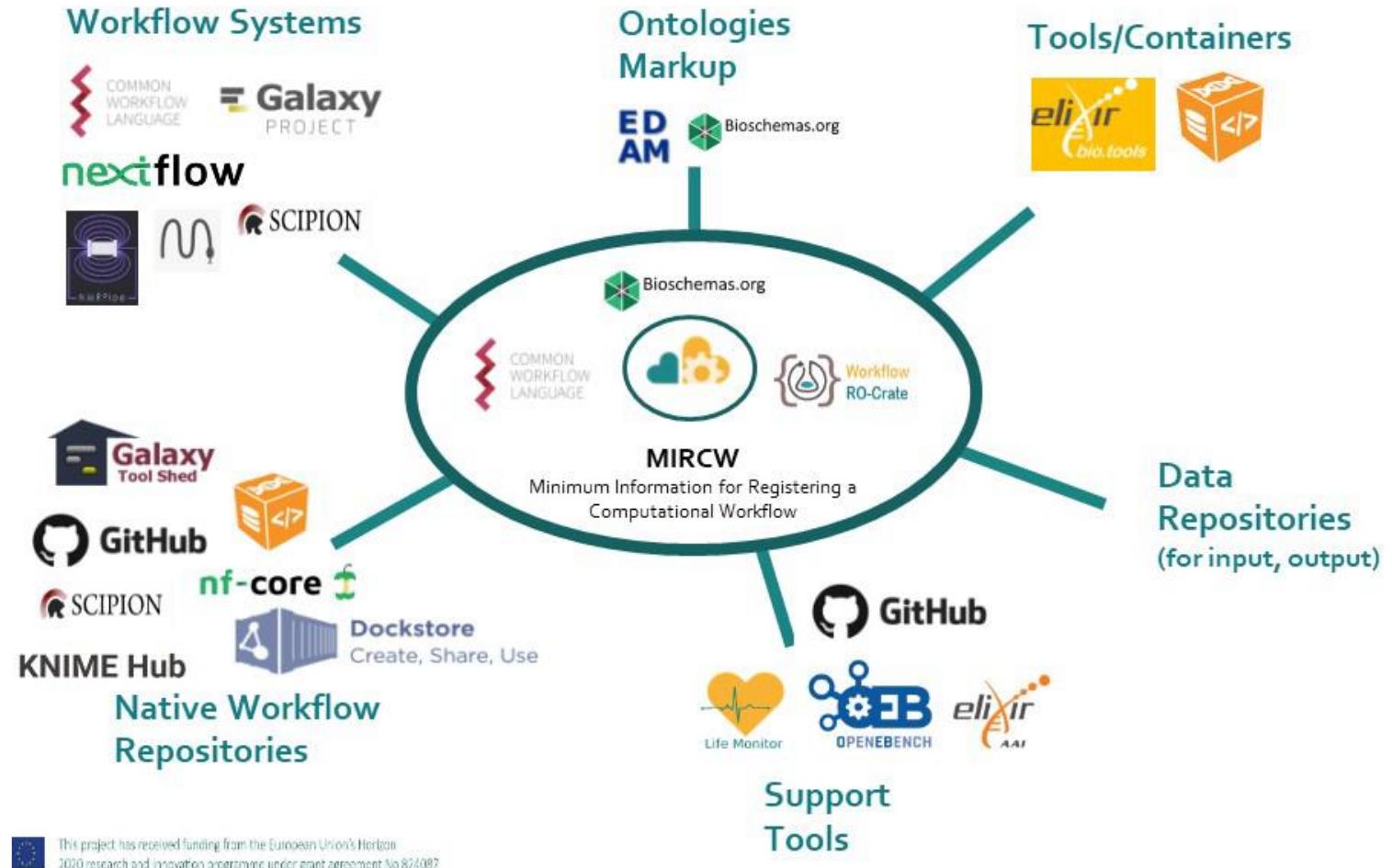
## WorkflowHub

- a registry of scientific workflows to make them more findable
- Adoption par Australia BioCommons

## RO-Crate

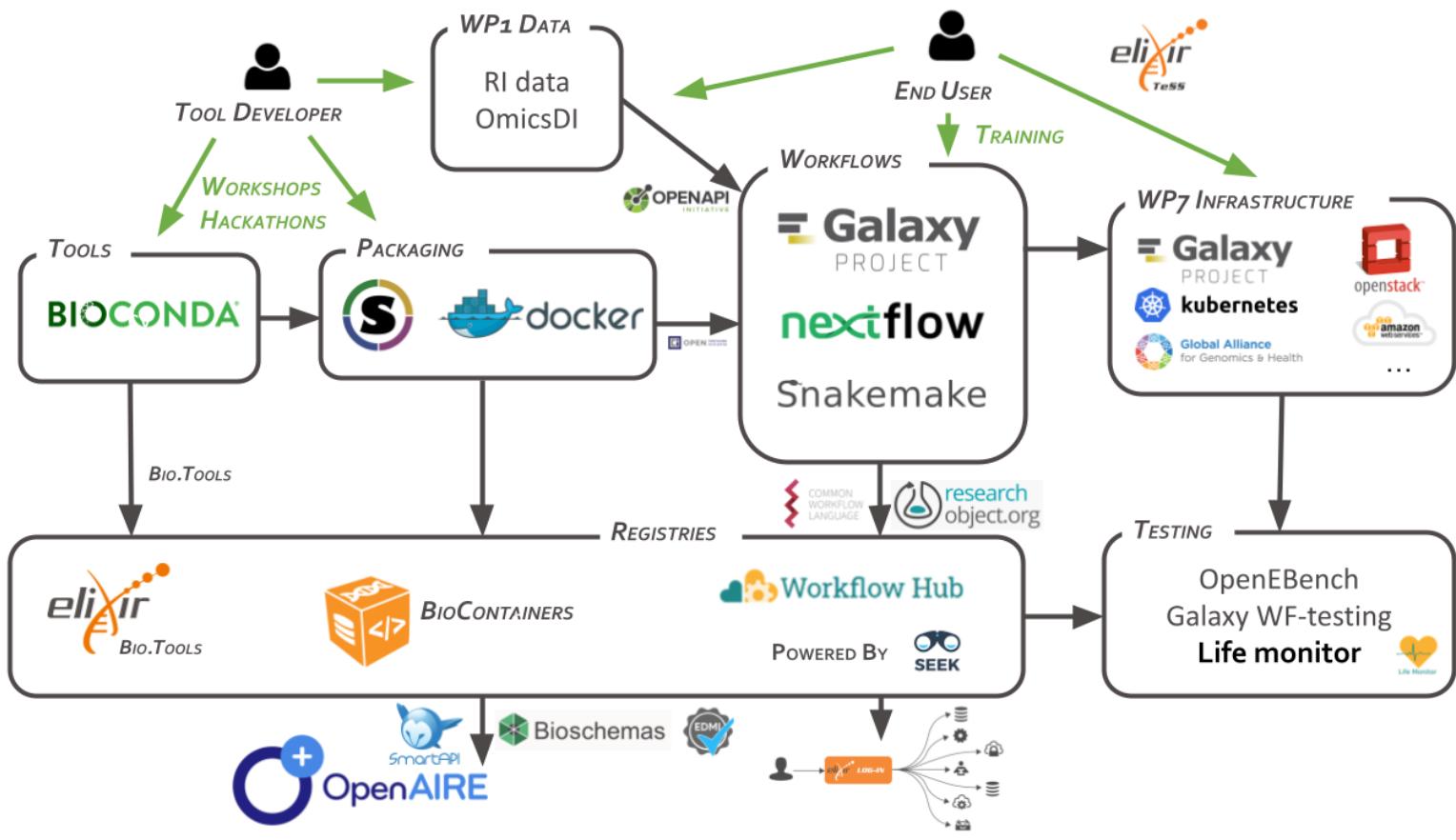
(<https://www.researchobject.org/ro-crate/>)

- formalize packaging of research data with structured metadata (including provenance) using schema.org.
- Integrated in workflowhub and Galaxy.
- Adopted by projects/infrastructures to create FAIR digital objects (e.g. DISSCO SYNTHESIS +, Bidiversity Genome Europe)



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- **Cloud deployment and cloud resources** + identification of suitable providers for sensitive resources



- Providing access: **LS LOGIN system**
- Connecting, informing and training users



EOSC-Life has received funding from the European Union's Horizon 2020 programme under grant agreement number 824087.

# Thank you!

## Sources:

- <https://www.eosc-life.eu/wp-content/uploads/2021/03/eosc-life-achievements-brochure-Final.pdf>
- Romano P, Rosato A & EOSC-Life project Consortium (2022) <https://doi.org/10.5281/zenodo.7853116>