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# Shared or open research data policy Open Source Software policy

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## Ambition to open up research

Law in a Digital Republic (2016) recalled by open science

## **Open all research products and methods**

- Publications
- Research data
- Source codes and software

For a more cumulative, robust and reproducible science

For a science fully transparent and accessible to all



## Commitments

Second National Open Science Plan Data policy, algorithms and source codes

Support the structuring, preservation, sharing, and openness of research data discovery

Promote data management practices that are both control and ecologically responsible

Support the opening up and the promotion source code produced by research

Encourage practices for reusing research data and source code

Organize local and thematic initiatives







# Natively design reusable data

## Scientists work to produce FAIR data, need to describe:

- The origins and transformations of data
- Codification guides
- Models and detailed description of collection, cleaning, analysis methods
- The code specific to an instrument
- Software designed for domain-specific applications

The longer the reuse is from the origin point, in terms of time, research issues, or themes, the more difficult it is to retrieve and interpret data





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The person who produced well-described data is the first to benefit from it! Publishing with shared data has a citation rate of + 25% to + 75% Shared data is recognized as a product of research



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# Structuring, sharing and opening up research data

Implement the obligation to disseminate publicly funded research data

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**Create Recherche Data Gouv,** the federated national platform for research data

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**Promote widespread adoption of data policies** that cover the whole lifecycle of research data, to ensure that they are Findable, Accessible, Interoperable and Reusable (FAIR)

« We will encourage practices that favor **research data reuse.** »

« We will create Recherche Data Gouv in order to involve all research fields in active practices of open data. »



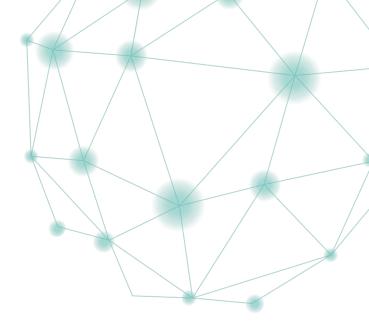
## Strategy and objectives

### Support

 Train, support and raise the awareness of research teams throughout the data life cycle

## A sovereign solution for depositing, publishing and reporting data

- A federated national research data platform : data repositry and data registry
- A complement to thematic repositories
- Ambition to become an integral part of EOSC services, offering access to shared and open research data to support reuse





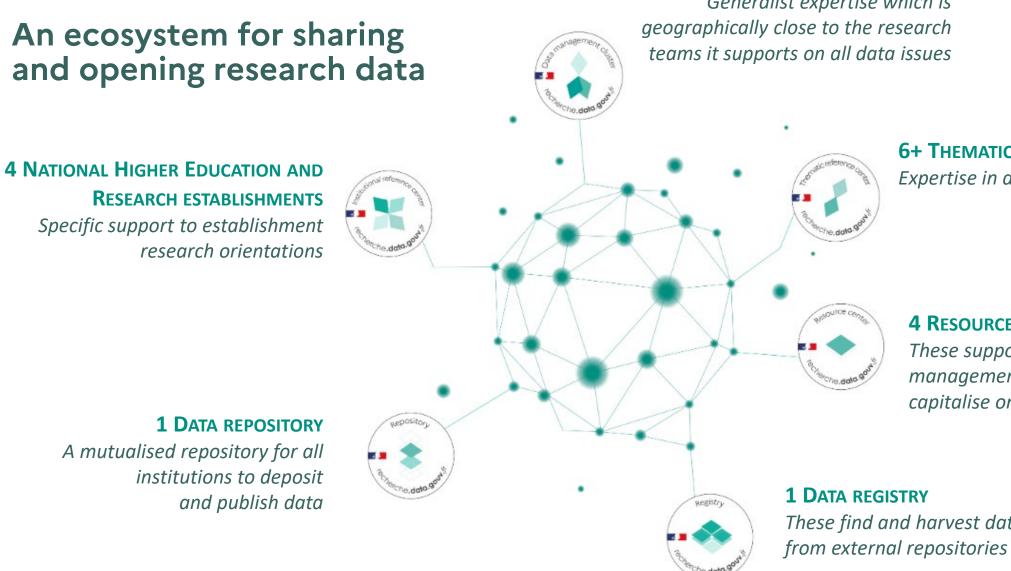
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## An ecosystem for sharing and opening research data

**RESEARCH ESTABLISHMENTS** Specific support to establishment research orientations



#### **15+ DATA MANAGEMENT CLUSTERS**

Generalist expertise which is geographically close to the research teams it supports on all data issues

#### **6+ THEMATIC REFERENCE CENTRES** Expertise in a given scientific field

#### **4 RESOURCE CENTRES**

These support the data management clusters and capitalise on their practices

#### **1 DATA REPOSITORY** A mutualised repository for all institutions to deposit and publish data

These find and harvest data from





## Data management clusters



## Generalist expertise which is geographically close to the research teams it supports on all data issues

Shared services and skills for organisations from a given territory

These clusters are progressively developed

- As they are designed by the universities involved
- Following successive calls for expressions of interest







## **Thematic reference centres**



#### Expertise in a given scientific field

Definition and dissemination of **best practices and international standards for data management, processing and dissemination** by scientific field

The first landscape put forward: Research infrastructures that structure data management and dissemination for their scientific community

















## **Resource centres**





Training and e-training resource centre B Recherche Data Gouv

Sharing and certification of **teaching tools** along with the development and provision of **generalist e-training** 



Skills resource centre Recherche Data Gouv

A system aimed at increasing the skills of the data management clusters



Shared tools for the clusters resource centre Recherche Data Gouv

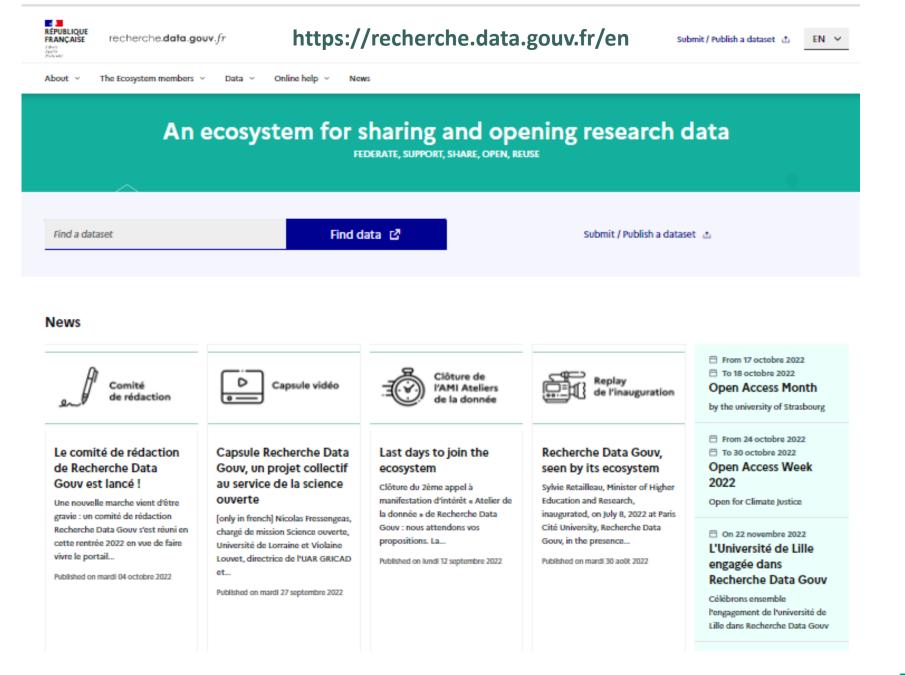
Development and maintenance of shared tools for the data management clusters



Repository-registry resource centre I Recherche Data Gouv

Development and maintenance of the repository-registory along with user support



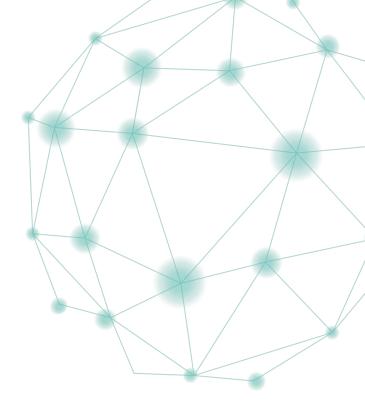






## The data repository-registry

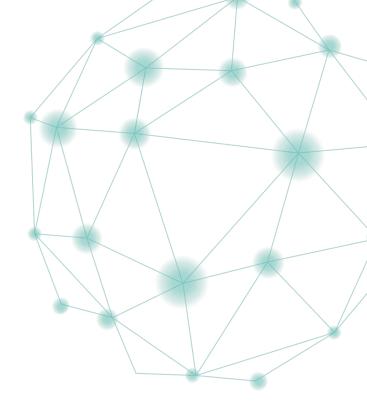
- Entrusted to the INRAE which will adapt and mutualise the solution
- 7 partner establishments will develop and maintain this







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## Join the Recherche Data Gouv ecosystem



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#### Create an institutional space

All higher education or research institutions can ask for an institutional space to be created where it can deposit and publish its research data.

Each institution is responsible for its own space and for curating dataset deposits.

http://recherche.data.gouv.fr/uploads/general/Documents/Demande creation espace institutionnel.pdf

**Become a data management cluster** To support research teams in the management, structuring and dissemination of their data

https://recherche.data.gouv.fr/fr/actualite/recherche-data-gouv-lance-son-deuxieme-appel-a-manifestation-dinteret-ateliers-de-la-donnee-presentez-vos-projets

An open ecosystem constructed by partner establisments for the whole research community



Opening up and promoting source code produced by research

Recognize and support the dissemination under an open source license of software produced by publicly funded research programs

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Highlight the production of source code from higher education, research and innovation

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Define and promote an open source software policy

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« The opening of software source code is a major challenge for the **reproductibility** of scientific results. »

« Distribution of software products under **open source licence** will be preferred. »



#### Define and promote an open source software policy

- Produce a National Charter for Open Source Software coming from higher education, research and innovation
- Develop the **link between data and software** through a network of **Chief Data and software Officers** in the various universities and research performing organisations
- Develop the economic models of open source software and make them known within commercialization services
- Support Software Heritage and recommend it for the archiving and referencing of source code

#### Build an ecosystem that connects code, data and publications

• Develop **proper coordination** between software forges, open publication archives, data repositories and the scientific publishing sector

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# Merci ! Gracias ! Obrigado !



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