Depuis 80 ans, nos connaissances bâtissent de nouveaux mondes

Open science : a necessary revolution

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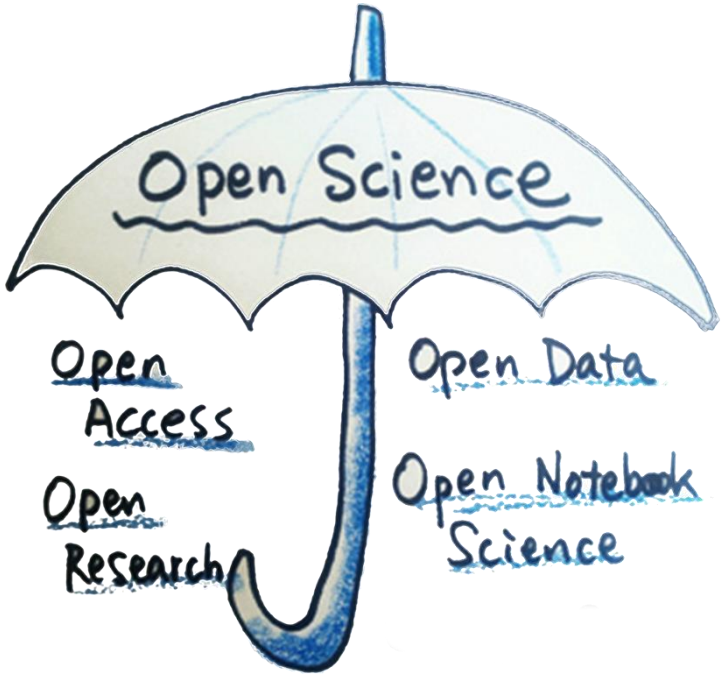
Open Science



Free dissemination of scientific production

as Open as possible, as closed as necessary

Remove access barriers while maintaining all copyright protections

In France, the development of open science needs the involvement of all the research institutions: universities, research organizations …

CNRS Roadmap for open science

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1. 100% of publications in open access
2. FAIR-ization of research data
   - Findability, Accessibility, Interoperability, and Reusability
3. Develop and promote text and data mining tools
4. Evaluation of researchers

100% of publications in open access

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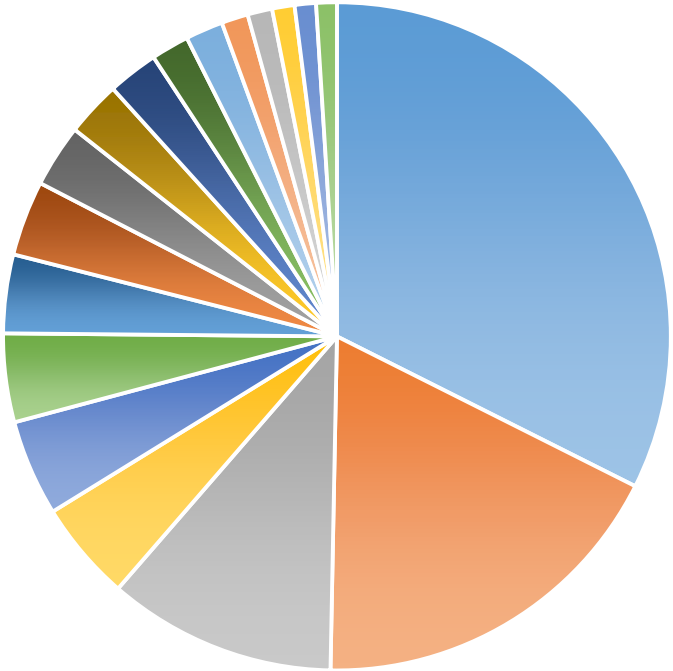
1

CNRS Laboratories : 55000 publications in 2017



- Elsevier
- Springer
- Wiley
- American Physical Society (APS)
- American Chemical Society (ACS)
- Institute of Electrical and Electronics Engineers (IEEE)
- Oxford University Press (OUP)
- Royal Society of Chemistry (RSC)
- IOP Publishing
- EDP Sciences
- Informa UK
- AIP Publishing
- Public Library of Science (PLoS)
- MDPI
- Frontiers Media
- American Astronomical Society
- The Optical Society
- Copernicus

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- National open archive HAL, an incentive policy to deposit scientific publications
- Deposit in preprint servers
- Strategy of negotiations with conventional publishers

« Virtuous » electronic publishing platforms

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- Non-profit publication platforms
- Open access publication platforms offering different types of objects: reviews, books, recommendations, referees' evaluation reports, readers' comments, annotations or other forms of discussion around publications
- ”Creative commons" license for publication, IP being kept by the authors
- Permanent identification of documents allowing the assignment of a DOI
- long term preservation of documents

FAIR-ization of research data

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- Develop a FAIR culture of data management and sharing.
- The practices of the scientific communities are different from one discipline to another.
- Support data infrastructures, including the issue of data repositories for "small data" (also called long tail data)
- Support researchers by providing data management tools and the joint publication/data repository, in particular through the DMP OPIDOR tool to complete data management plans, and the assignment of DOIs via Datacite (INIST)
- Assist large research infrastructures in setting up a data policy

Text and data mining

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3

Facilitate the mining and analysis of scientific results with the development of infrastructures, tools and skills to allow free analysis of scientific content.

- Support infrastructure for content analysis: ISTEX, VisaTM etc.
- The legislative framework for authorising the search of texts and data, in relation to the Digital Law (2016) and the European Copyright Directive (March 2019): support, transposition, information
- Develop the use of corpus processing tools and techniques: establishment of a TDM toolkit for researchers in all disciplines

Evaluation and open science

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CNRS signed DORA

San Francisco Declaration on Research Assessment

4. Be explicit about the criteria used to reach hiring, tenure, and promotion decisions, clearly highlighting, especially for early-stage investigators, that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.

5. For the purposes of research assessment, consider the value and impact of all research outputs (including datasets and softwares) in addition to research publications, and consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

Evaluation and open science

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1. Results themselves must be evaluated and not the fact that they may have been published in a prestigious journal
2. For each of the productions cited in the evaluation files, researchers must explain their scope, impact, and personal contribution : exhaustive list of productions is not required.
3. All types of production can be part of the evaluation
4. Scientific productions cited in the evaluation forms must be accessible in an open archive

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3. Develop and promote the use of tools for text and data mining
4. Evaluation of researchers
5. A training and dissemination plan
6. An international strategy
7. A plan for researchers commitment

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Thank you