



LIBER 2026

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**HAL as an Open Infrastructure for automated Open-Science
monitoring: insights from Université Paris-Saclay's BiSO**

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Open infrastructures to support Open Science monitoring



Open Science policies require reliable evidence.

- Libraries need data and tools to:
 - document progress;
 - support researchers and laboratories;
 - produce transparent indicators;
 - adapt national policies to local contexts.
- This requires infrastructures that are:
 - open;
 - interoperable;
 - sustainable;
 - reusable.

HAL: from repository to open infrastructure



HAL is the French national open archive.

Operated by CCSD, HAL has been developed over 25 years as:

- a trusted repository, supported by CoreTrustSeal certification and POSI principles;
- a national Open Science infrastructure, aligned with France's national Open Science plans;
- a source of reusable metadata for monitoring and interoperability;
- a shared service for researchers, institutions and libraries.



HAL
25 years of open science

A mature infrastructure



SCALE



1.65 M+

Full-text
documents

ADOPTION



150+

institutional and
thematic portals

INTEROPERABILITY



APIs
Standards
Persistent identifiers
ROR-aligned structure registry

Beyond deposit: turning publications into actionable data



HAL helps structure publication data through:

- automatic metadata retrieval;
- deposit suggestions;
- DOI, ORCID and ROR-aligned structures;
- licence information;
- links with datasets and software.

Supporting a distributed data-quality ecosystem



Trusted data relies on:

- infrastructure and automation;
- metadata checking and enrichment;
- local knowledge of laboratories and affiliations;
- documentation, training and shared practices;
- coordination between CCSD, institutions and libraries.



From national infrastructure to local action: the Saclay case



HAL data



Paris-Saclay Open Science strategy



DiBISO support service



3RSO network



Laboratory needs

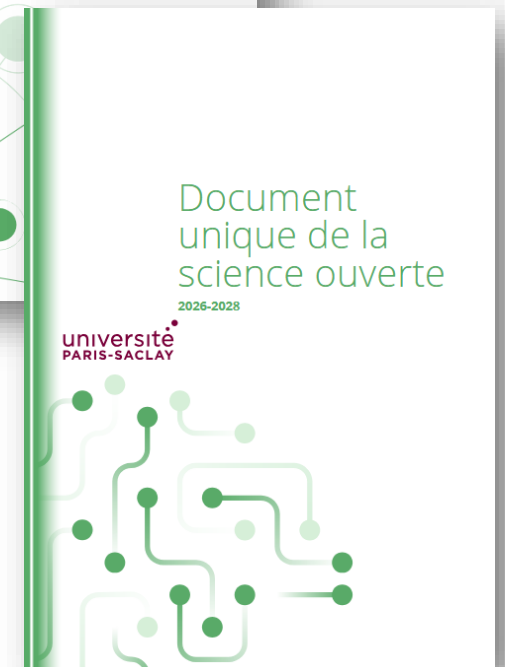


**A national
infrastructure
reused for local
Open Science
monitoring**

Why we needed automated Open Science reports

Université Paris –Saclay is a young institution with high expectations

- Established 2020
- Expected to be world-leading in research
- Signatory of DORA, CoARA & Barcelona declaration
- Open Science policy document formally published since 2021





What we expected from the BiSO

First, supporting Research

- Consistent year-to-year evolutions
- Useful indicators
- Easy to produce

Second, openness as the core value

- Yearly reminder to deposit into HAL
- Valuing all colors of open, including green and diamond, and publishing diversity
- Keeping APCs in mind

What the BiSO actually is

Good old pdf

- ~20 pages, mainly images
- Contextual help texts
- Summary, what is good, what to improve

A straightforward way to produce it

- Single webpage with little information to fill
- Simply editable and reproducible

Report Parameters

Year * Year for which to make the report.	HAL collection ID * The HAL collection ID used to fetch the data.
2025	e.g., LABORATOIRE-EXEMPLE
Lab Acronym * The laboratory acronym that will be displayed on the title page.	Lab Name * The laboratory name that will be displayed on the title page.
e.g., LABO	e.g., Laboratory Example

What made the BiSO possible

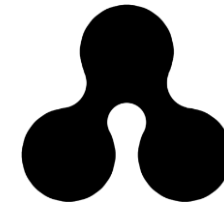
HAL has become a standard since 2018

- Used for national evaluations
- Made mandatory by CNRS

Automated, but human-first

- ~20 people, each supporting ~6 labs
- DataViz is automated
- Comments are manual but optional
- Opening opportunities for dialog

Using all relevant open-data sources



OpenAlex



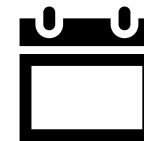
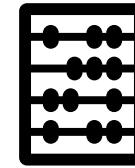
ScanR

ROR 

Proposed metrics

12 metrics and visualizations

- Lists of scientific works by type:
 - Journals
 - Conferences
 - Book chapters
- Typology of research outputs in HAL
- 5 Year open access rate for articles and conference papers
- Business model of journals (APC cost from Open Science Monitor)
- International collaborations
- Corporate collaborations
- French funding agencies like ANR and European projects





Our Laboratories' Top metrics

Diversity of collaborations

Academic



Company and start-up

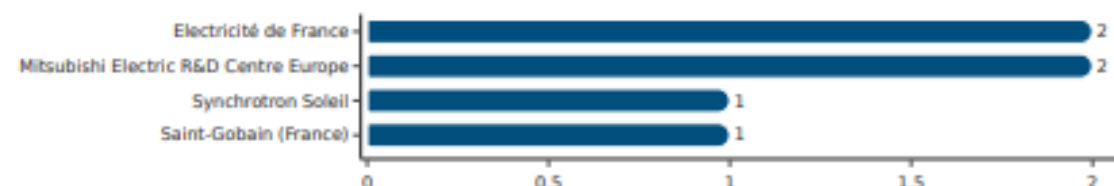


Figure 8 – Collaborations avec le secteur privé - Données : publications renseignées dans HAL, en utilisant les métadonnées de scanR



Diversity of practices

6 Articles et Communications de congrès en accès ouvert

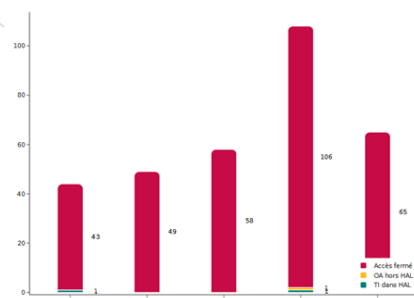


Figure 4 - Statut des accès ouverts des travaux sur la période 2020 - 2024

Law discipline

4 Articles et Communications de congrès en accès ouvert

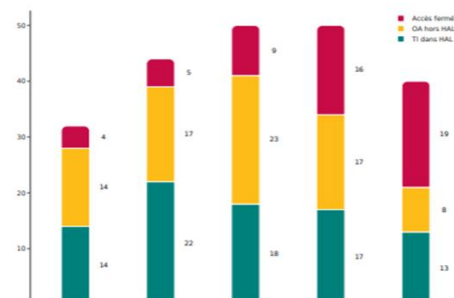
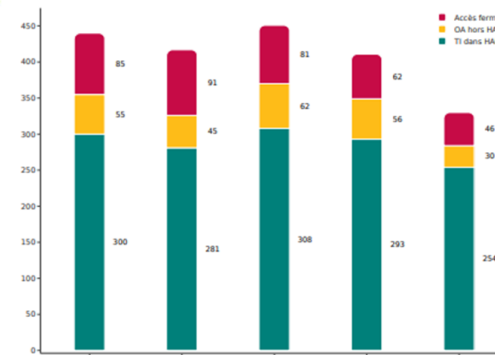


Figure 3 - Statut des accès ouverts des travaux sur la période 2020 - 2024

Health



Mathematics, engineering, physics

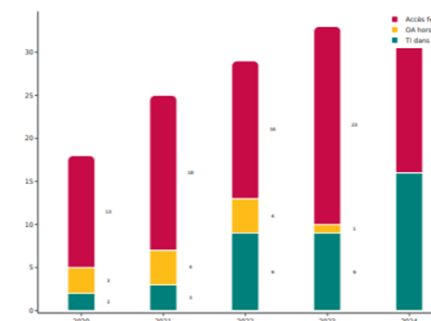
5-years
open access rate

Red closed

Yellow open access beyond HAL

Green open access in HAL

Long-term support to be continued





Promoting researchers' open science initiatives

Qualitative and personalized assessments

1 paragraph about strengths and recommendations

Diversity of strengths and profiles

- Publish in diamond open access journals
- Link dataset with publications
- Numerous international collaborations

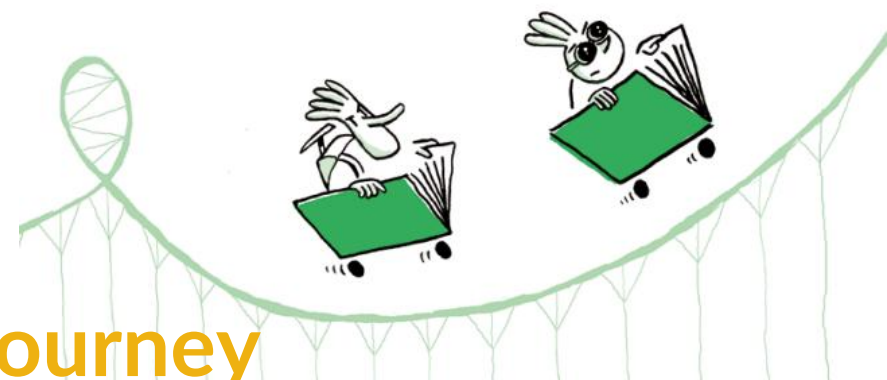




Conclusion

Satisfaction of all the actors about results

- Developed in collaboration with researchers
- Reporting Tool & clear methodology
- Concise, personalized overview of strengths and recommendations



Supporting our labs on their open science journey



Illustration: Ministry of Higher Education and Research, Passport to Open Science, feb 2024. Available online : <https://www.ouvri.lascience.fr/wp-content/uploads/2024/03/24-02-22-PSO-EN-GP.pdf>