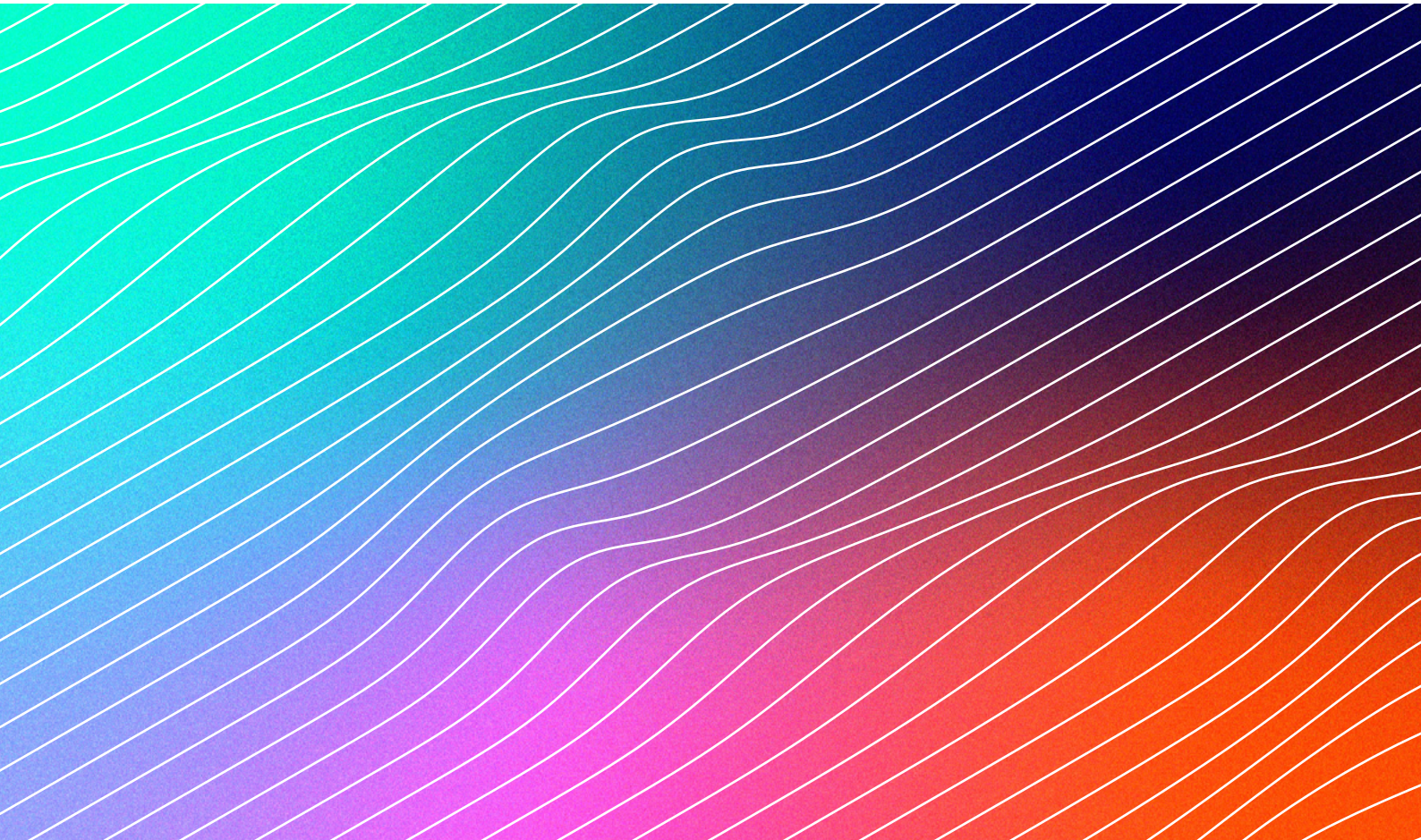


**CCSD** 

Centre pour la Communication  
Scientifique Directe

# Activity Report 2025



# Editorial

## by Nathalie Fargier

The year 2025 marked a significant milestone for the CCSD (Centre pour la Communication Scientifique Directe - Centre for Direct Scientific Communication): 25 years of commitment to advancing open science, during which the CCSD has supported, and often anticipated, changes in scientific communication. From the creation of HAL to the emergence of new publishing models, the CCSD has become a leading player at the intersection of research communities, institutions and public policy.

This anniversary reflects the continuity of a mission: to make science more open, more accessible and more transparent. Beyond the design and operation of public, open and sustainable platforms, the CCSD brings together and leads communities of practice. Researchers, institutions, librarians and engineers collectively shape the uses and operational standards of open science.

This maturity is now accompanied by a clear international momentum. In 2025, our partnerships expanded and diversified, whether through institutional exchanges with India and Japan, or through the sharing of perspectives with the Canadian Association of Research Libraries and the Australasia network. Our long standing contribution to structuring the global network of open repositories and to the FAIR data ecosystem was reflected in the election to the COAR board, in SCOSS support for Episciences and in our active participation in the European projects EOSC Data Commons and SoFAIR.

Finally, 2025 was marked by a very positive mid term evaluation of the HALiance project. The international panel identified it as a flagship achievement of the Investments for the Future programme, highlighting both its scientific quality, its technical robustness and its structuring impact. HALiance embodies our vision: that of an open repository that is innovative, interconnected and driven by the academic community.

These achievements would not have been possible without the commitment and expertise of the CCSD team, as well as the involvement of partner institutions and their staff, who are the driving forces behind this collective success. A big thank you to everyone! The future beckons - with the same high standards as 25 years ago.

Nathalie Fargier,  
Director of CCSD

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# The CCSD

## Missions

The CCSD serves the scientific and academic communities and its mission is to facilitate all forms of direct scientific communication, give greater visibility to French research through the open dissemination of its results and ensure its sustainability. It is a major player in national and institutional policy in favour of open science, and in particular in the National Plans for Open Science (PNSO), whose objectives are to generalise open access to publications and structure and open data research.

The CCSD develops and administers the three platforms it has created for archiving, disseminating and promoting scientific publications and data :

- HAL, the multidisciplinary open archive for French research, and its derivative portals;
- Episciences, for journal publishing and editorial innovation
- Sciencesconf, dedicated to the organisation of scientific events.

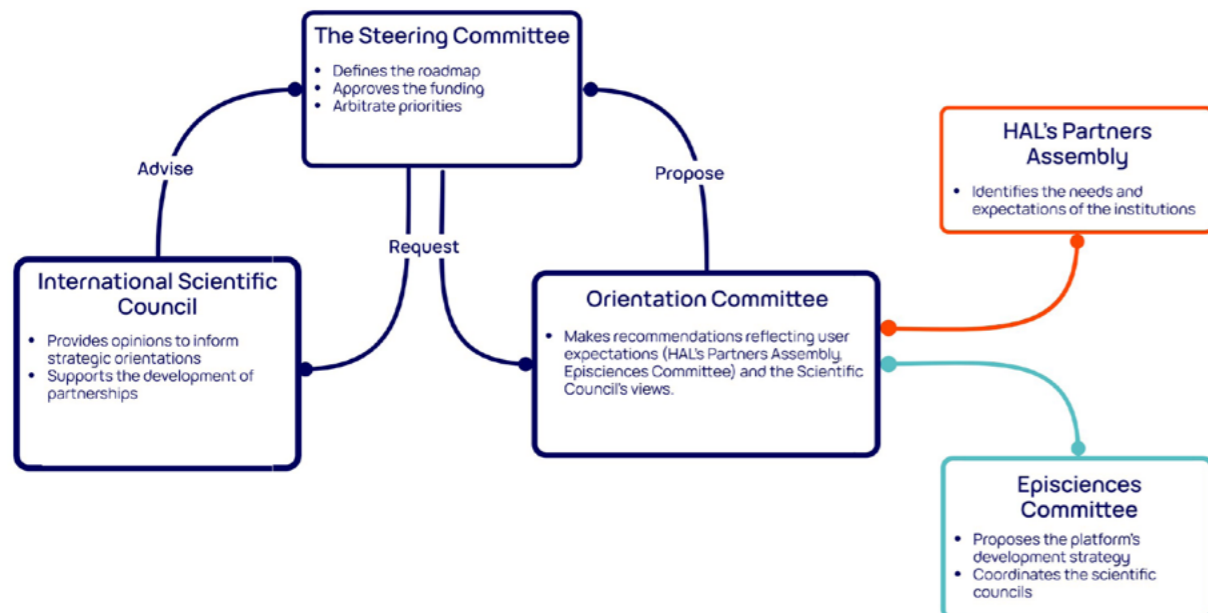
These platforms enable researchers and their institutions to make their work visible, discoverable, usable and accessible in the long term, and thus

to regain control of the scientific production process.

The CCSD fulfils two other missions. The first is to contribute to the development and creation of the reference systems needed to identify French scientific output. The second is to participate in all French and international initiatives, particularly European, concerning open archives and open science, which help to improve the quality of the service provided to scientific communities and the visibility of their work.

## La gouvernance du CCSD

Approved by the Committee for Open Science on July 16, 2020, the governance of the CCSD is composed of several bodies and fully involves the users of the platforms operated by the CCSD.



## A Strategic Orientation Board for Episciences

The governance of Episciences is evolving with the creation of a Strategic Orientation Board (COS), which replaces the former Episciences steering committee. This body brings together representatives of the CCSD supervisory institutions and of the organisations providing human resources to the platform, as well as a representative from each of the disciplinary scientific boards.

As a consultative body, the COS is tasked with providing forward-looking reflection in the medium and long term

on the development of the platform. In this capacity, it is responsible in particular for defining the Episciences roadmap, developing an international dissemination and communication strategy, ensuring the follow-up of the disciplinary scientific boards and encouraging their creation in new fields, as well as setting the conditions for access to the platform.

The COS met for the first time on 12 March.

## Maintaining HAL+ within the national strategy for research infrastructures

The Ministry is preparing the next edition of the roadmap for research infrastructures, implementing its national strategy. In this context, the CCSD has renewed the application of HAL+, which brings together the three complementary platforms, namely, HAL, Episciences and Sciencesconf.

Submitted in July for a review at the end of August, the dossier includes, amongst other elements, an assessment and outlook, indicators of use of the infrastructure and financial data.

Research infrastructures support excellence in research. HAL has been included in this roadmap since 2016, and HAL+ since 2021 (Scientific Information chapter).

### Steering committee

The committee adapted its working methods in order to strengthen the structure and impact of its work. It identified priority themes for reflection and developed recommendations. These were published on the institutional website and aimed, over time, to build a shared and coherent reference framework. Licensing was one of themes addressed in 2025.

### Scientific Advisory Board

The year 2025 also marks the relaunch of the Scientific Advisory Board under the chairmanship of Vincent Larivière (University of Montreal). Two main topics of discussion have emerged: the impact of artificial intelligence on the three platforms (HAL, Episciences and Sciencesconf), and the internationalisation strategy of the CCSD.

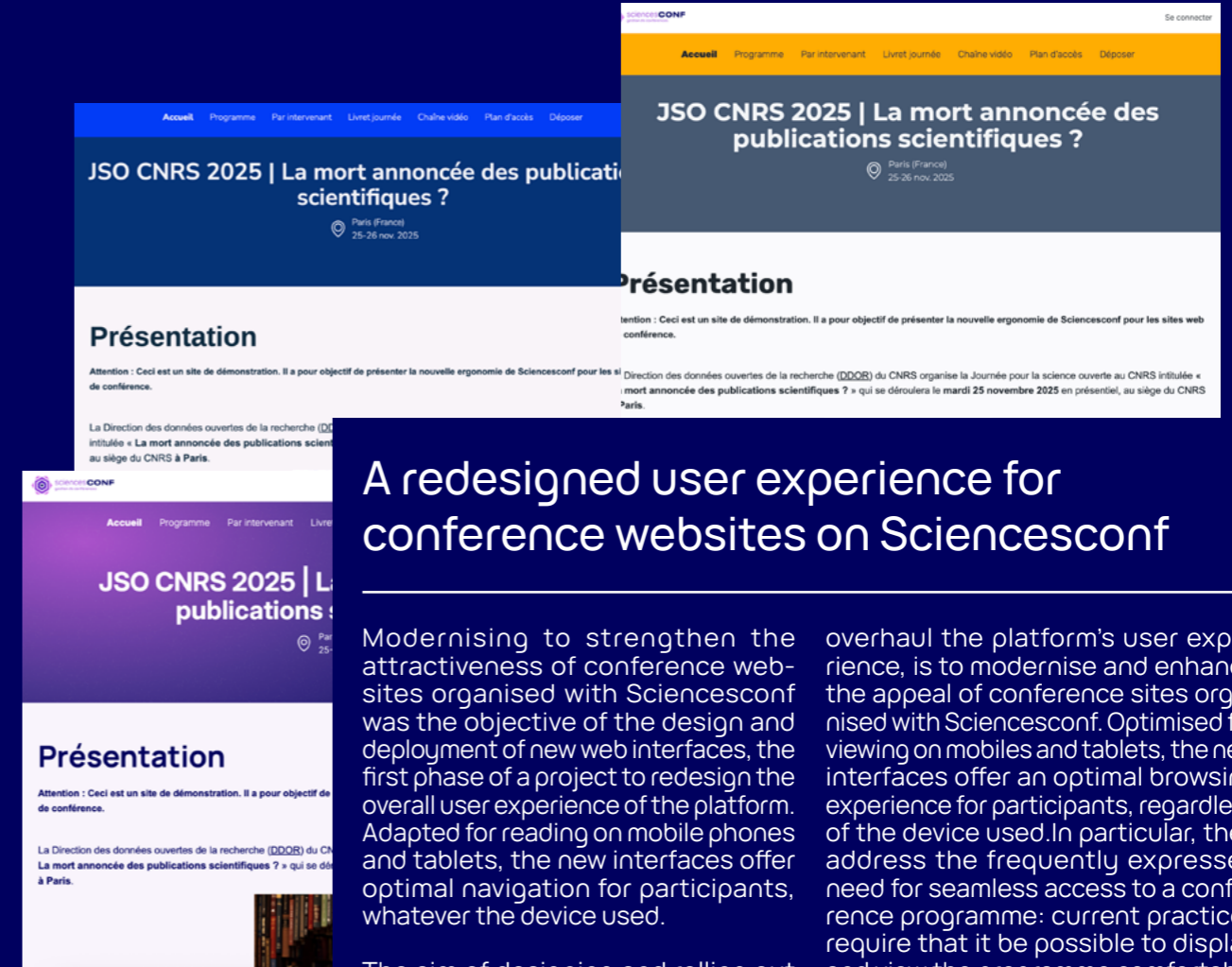
# Significant events in 2025



## HAL obtains CoreTrustSeal certification

The year began well with the award in February of the CoreTrustSeal certification for HAL. This certification is one of the objectives of the Equipex+ HALiance project. It recognises long standing efforts in the areas of governance, data management and compliance with international standards for

archiving and open science. It strengthens the credibility of HAL among the scientific community and its partners, both nationally and internationally, and represents a structuring milestone for its continued development.



## A redesigned user experience for conference websites on Sciencesconf

Modernising to strengthen the attractiveness of conference websites organised with Sciencesconf was the objective of the design and deployment of new web interfaces, the first phase of a project to redesign the overall user experience of the platform. Adapted for reading on mobile phones and tablets, the new interfaces offer optimal navigation for participants, whatever the device used.

The aim of designing and rolling out new web interfaces, this being the first phase of a project to comprehensively

overhaul the platform's user experience, is to modernise and enhance the appeal of conference sites organised with Sciencesconf. Optimised for viewing on mobiles and tablets, the new interfaces offer an optimal browsing experience for participants, regardless of the device used. In particular, they address the frequently expressed need for seamless access to a conference programme: current practices require that it be possible to display and view the programme comfortably on a smartphone, regardless of its complexity.

## The Equipex+ HALiance project at mid term



2025 marked a key milestone for the Equipex+ HALiance project with the mid term report submitted to the ANR. The international panel issued a very favourable opinion on the progress of the project: the completion rate in October 2025 stood at 56%.

The HALiance project consists in rethinking the code of HAL and its core services. It goes beyond a simple technical upgrade by promoting a radical opening of the infrastructure, a change in practices and the creation of a continuum between publications and other research outputs, in the service of a science that is more transparent, reusable and ethical.

The modernisation and migration of the code, carried out without interruption of service, constituted a major technical challenge. By December, the project had recorded 54 sprints, each sprint representing a three week development period and enabling the progressive delivery of functionalities.

# Review the 2025 action plan

Progress on each action is shown by a points system :

-  Action started
-  Action in progress
-  Action being finalised
-  Action completed

Achievements related to the action plan are marked with the symbol throughout the activity report.

## Anchor the CCSD within the Open Science and knowledge ecosystem in a durable and exeplyary way and assert its leadership

The CCSD needs to consolidate its role at the service of French public policy, working closely with the various scientific information infrastructures and research funding agencies. It must also strengthen its partnerships with the major players in Open Science in Europe and worldwide, assert its role and promote its platforms. This recognition relies, among other things, on the formalisation of its alignment with the Open Science criteria of excellence.

**1.** Association of licences for files deposited in HAL to improve HAL's compliance with Open Science standards of excellence.



**2.** Optimization of harvesting and visibility of HAL by content aggregators and bibliographic databases.



**3.** Renewal of the application to include HAL+ in the Ministry's roadmap for research infrastructures.



**4.** Exploratory study aimed at integrating HAL+ into the European ecosystem, notably the European Open Science Cloud (EOSC).



## Increase usage of HAL, Episciences and Sciencesconf

Improving the quality and relevance of the services provided to researchers and institutions is a fundamental lever. Emphasis is placed on simplifying existing procedures, adding new functionalities, reinforcing support, ensuring clear and transparent dissemination of information, and valuing the contributions of the various user communities..

**5.** Second stage of linking the publications present in HAL, datasets and software : deployment of the service



**6.** Improvement of the detection of duplicates by HAL portals to facilitate the work of administrators and collection managers.



**7.** Implementation of new web interfaces for the journal websites hosted on Episciences : harmonisation and improved accessibility.



**8.** Creation of Metopes compatible layouts for use by the editorial teams of the journals distributed on Episciences.



**9.** Definition of new open peer review procedures for the Episciences platform.



**10.** Design and implementation of new web interfaces for scientific events organised with Sciencesconf



**11.** Finalization of the reorganization of HAL documentation



**12.** Provision of an English version of the HAL user documentation (Phase 1)



**13.** Enrichment in educational resources of the HAL training hub : design, creation and provision



**14.** Implementation of specific actions for HAL portal administrators, collection managers, and technical validators.



**15.** In person meeting of the HAL partners' assembly.



**16.** Development of the HAL ambassadors system.



## Ensure the sustainability of HAL, Episciences, Sciencesconf and their service offer

Maintaining access to the HAL, Episciences and Sciencesconf platforms and services depends on the convergence of various elements: an efficient governance model, the expertise of CCSD team members, a sustainable economic model based on diversified sources of funding, and open and secure technological choices.

**14.** Public monitoring of the operation and availability of the infrastructure.



**15.** Ensuring high availability of the infrastructure : migration of databases to the cluster.



**16.** Establishment of the Strategic Orientation Committee of the Episciences platform.



# Scientific open archive

## Linking publications, data and software to enhance the visibility of research

### HALiance

Connecting publications, research data and software is essential to strengthen the coherence, transparency and impact of scientific work. One of the objectives of the HALiance project is precisely to improve the links between these different resources by making this process more seamless.

The redesign of the relationships system was deployed at the beginning of 2025. It aims to harmonise the handling of relationships, whether internally to link several HAL deposits together, or externally to associate a deposit with a resource available in another repository, notably Nakala, recherche.data.gouv and Software Heritage. It is based on a standardised vocabulary produced by Datacite to qualify the relation, as well as on the COAR document typology to specify the type of resource.

The deposit form has been updated to include an "Associated Resources" section, which allows users to add one or more relationships between the deposit and a dataset or source code. There is just one essential requirement: the associated resource must

have an identifier (DOI, SWHID or HAL). The validity of the identifier is checked instantly, ensuring that the information will be usable. The citation for the resource (image, dataset, software) is then displayed when the deposit is viewed. Export formats have also been enhanced in order to make the metadata fully usable and to facilitate the discovery of content.

The transition to the new relationship system required processing existing records prior to data migration: more than 32,000 deposits already contained relationships. Identifier entry had not previously been controlled, making data cleaning an essential step.

In addition, synchronisation with other repositories depends on the implementation of the COAR Notify protocol by these repositories. This has been the case for Nakala since June. The reciprocal visibility of links between resources on the two platforms provides users with a smoother navigation experience and enhances content visibility.

**1,594,705**  
documents


full-text online as  
of 7 January 2026, of which

**161,991**

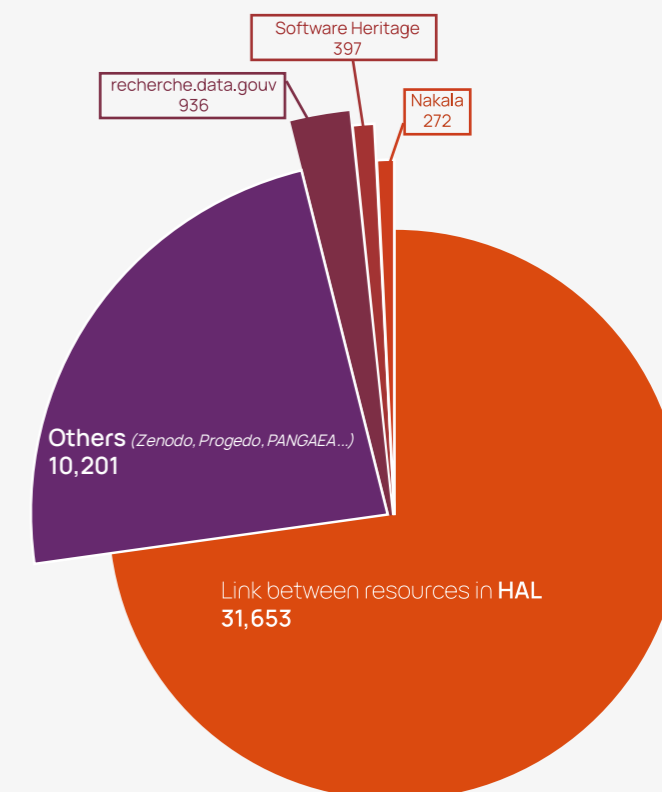
were deposited during 2025

That's an average of **13,500**  
deposits per month.

**113,519**  
active accounts

 Which is 1.5 the capacity of  
the Stade de France.

Related resources: distribution by warehouses



## Optimisation of the deposit-suggestions service

With improved handling of names with the same spelling and text revisions to remove certain ambiguities, the deposit-suggestions service has undergone several updates over the course of the year to better meet users' expectations. Providing authors with access to the full set of results from the harvesting process represents a major step forward in the evolution of the service since it enables them to have, in their personal space, reliable bibliographic references for their publications, enriched with metadata such as affiliation, so that they only need to upload the file.

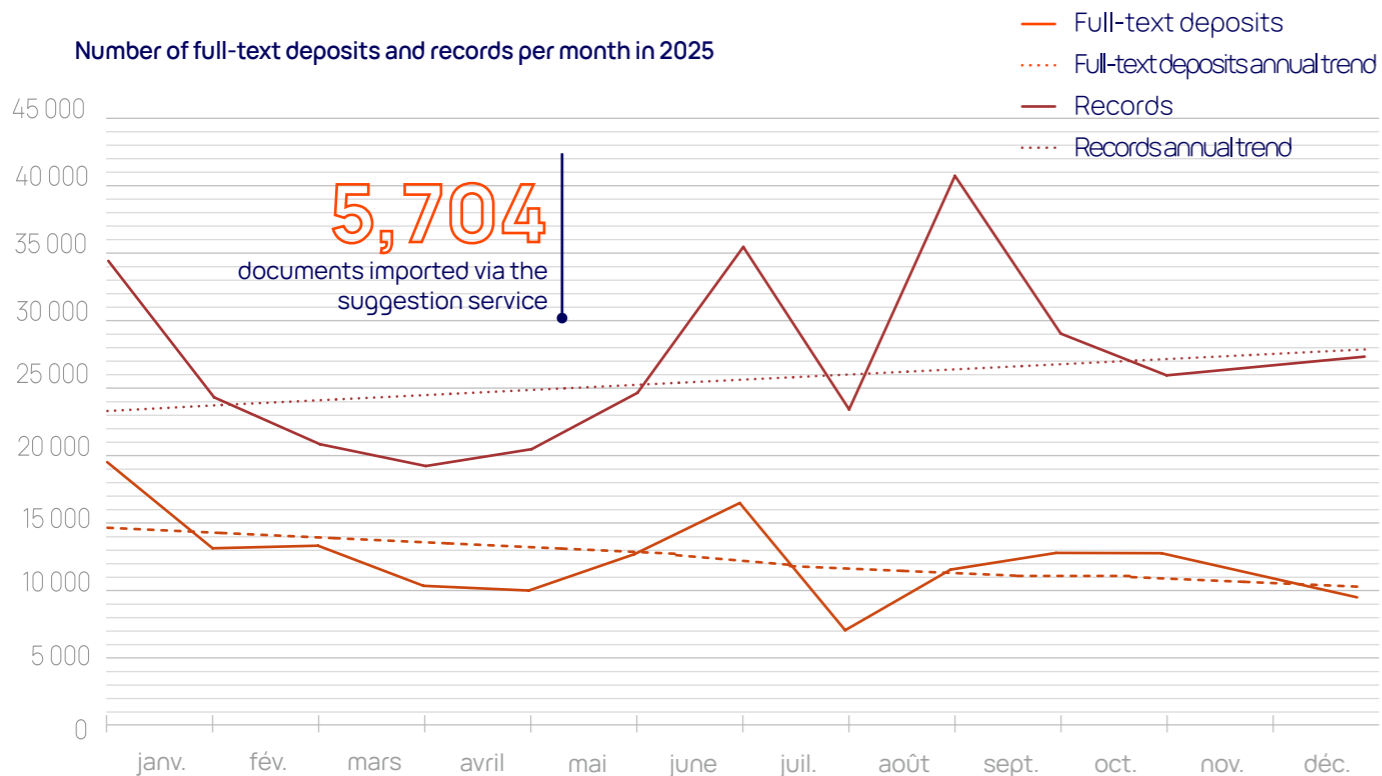
The service is therefore no longer limited to publications that are already openly accessible and distributed under a Creative Commons licence. It significantly reduces the need for manual data entry and encourages full-text deposit. A total of 5,704 files were imported automatically, with more than 600 additional files uploaded by authors.

## A modernised software foundation and new features for the HAL CV

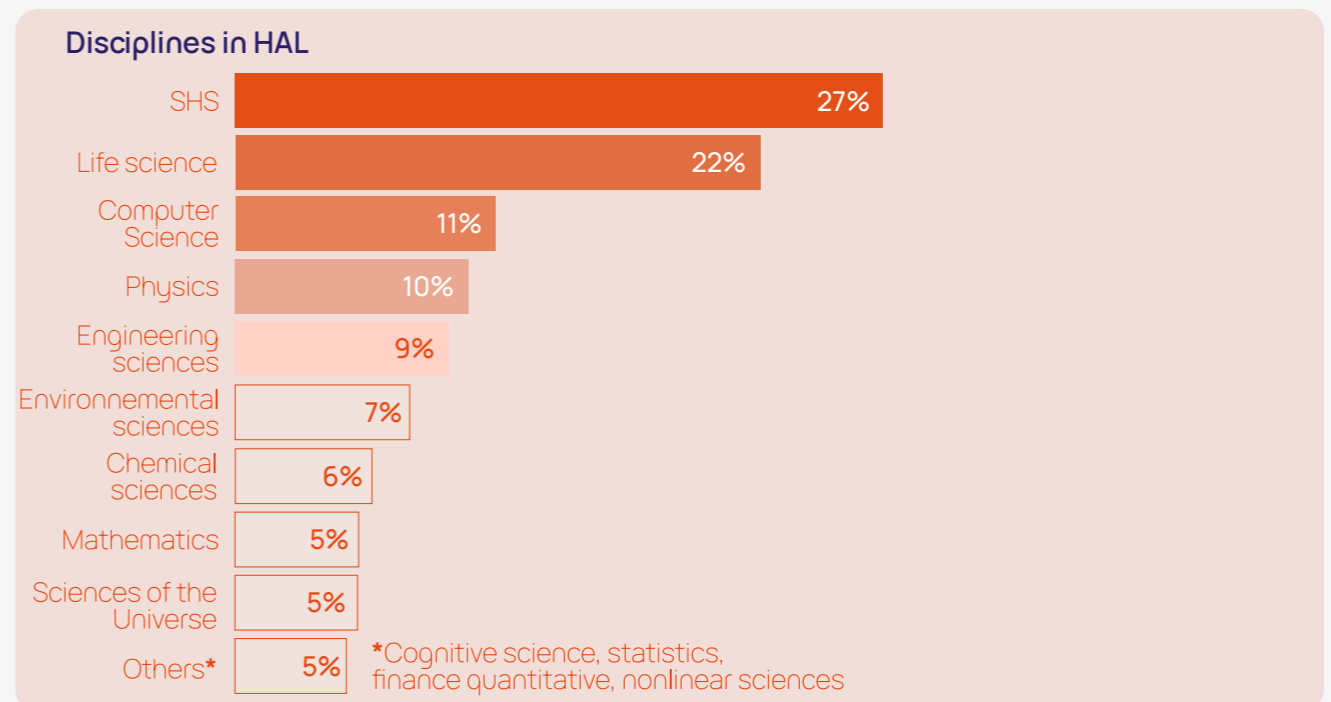
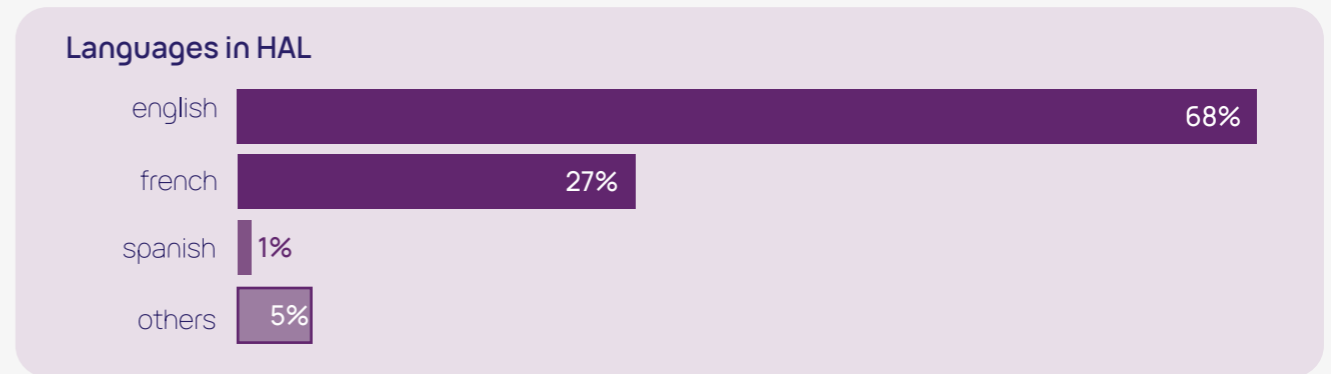
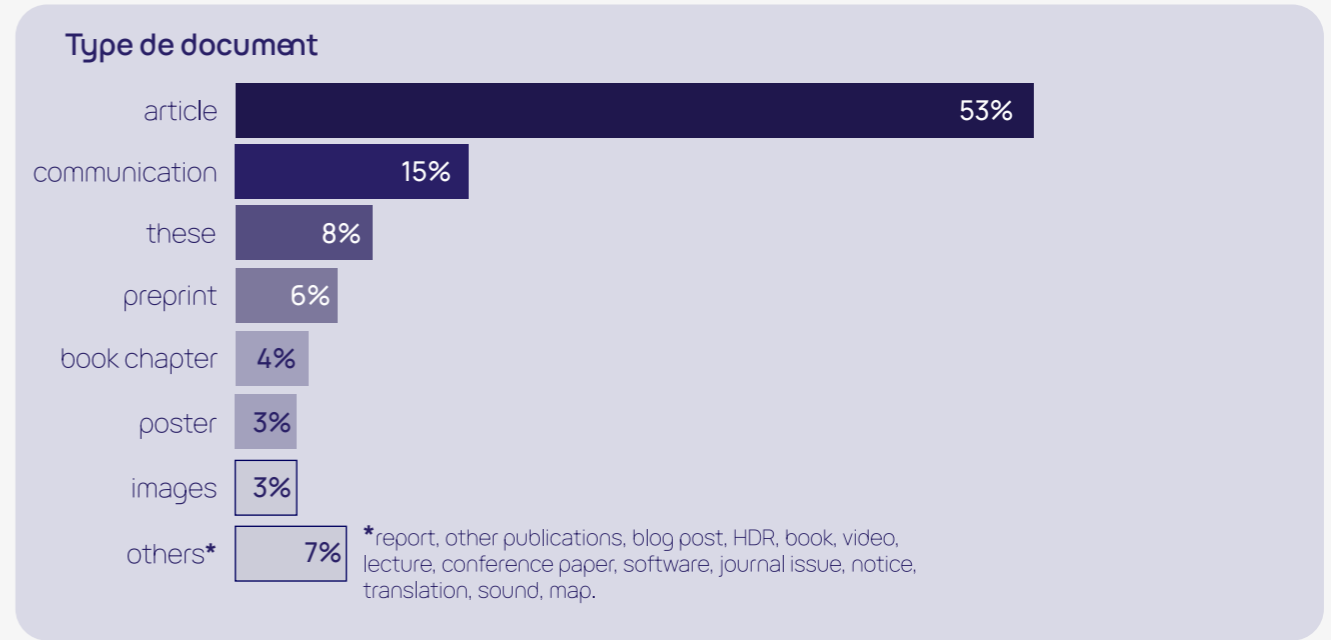
### HALiance

The HAL CV is the first building blocks of the new HAL codebase, developed as part of the HALiance project and released in April. This initial component also includes several enhancements designed to better meet researchers' needs, such as improved filter management to optimise indexing, better compliance with digital accessibility requirements, and a new feature for exporting to Word format.

Another new feature allows datasets stored in other repositories to be displayed in the CV: the ORCID identifier is central to interoperability between the repository where the datasets are archived and the HAL CV. To support this, HAL relies on data drawn from the OpenAlex catalogue. In total, 942 researchers have chosen to highlight their research data in their CV by using this functionality.



## Breakdown of the full-text documents deposited in 2025 by type, by language and by scientific discipline



## HAL in support of open access to ministerial publications

The platform documentation.administrative.gouv.fr is the result of a partnership with the CCSD: it is built on HAL's technological framework and the CCSD's infrastructure. Officially launched in December 2021 for documents produced by the Prime Minister's Office, the platform was extended to all ministries in 2025. It provides open access to documents produced and held by government departments, thereby supporting citizens' right of access to administrative documents and facilitating the publication of information as open data. Nearly 1,400 documents were available in open access by the end of 2025.

The partnership with government departments around documentation-administrative.gouv.fr helps ensure the sustainability of the infrastructure and confirms recognition of the CCSD's expertise. It thereby affirms the CCSD's legitimacy as a key player in open access to public information in France, well beyond the academic sphere alone.

## Optimisation and increased reliability of the database

### HALiance

Over the past two years, significant work has been carried out to optimise and improve the reliability of the database. More than 120,000 documents have been archived locally: these were either documents more than a year earlier or deposits awaiting modification following a technical validation request for more than two years.

This clean-up aims to ensure the quality, reliability and consistency of the information available on HAL. It also helps optimise the platform's performance and facilitates the search and promotion of deposits for all users.

This makes it possible to :

- remove obsolete data in aureHAL corresponding to records that are not visible to users (e.g. invalid organisational structures);
- ensure that a deposit awaiting modification for more than two years is no longer taken into account when a new deposit is identified as a duplicate.

## Ambassadors Program

The programme counted 16 ambassadors in 2025. As key partners, their expertise and close connections with research communities support the co-development of services that are ever more closely aligned with users' needs.

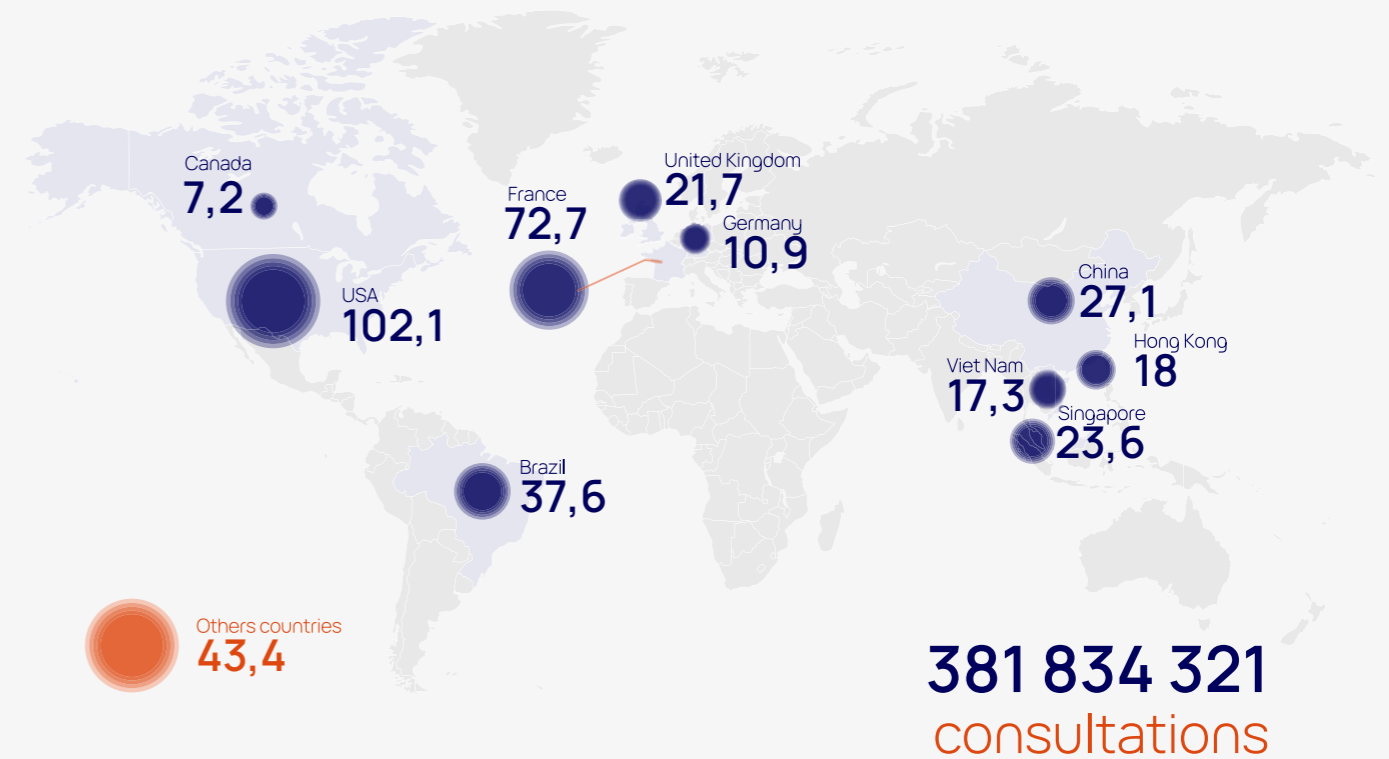
In particular, they initiated the design of two educational resources based on the academic standards of scientific posters. The aim is to promote HAL by making its role and uses easier to understand, thereby encouraging its adoption by research communities. The arguments presented in these posters were developed by researchers, for researchers, in order to respond as closely as possible to their needs and concerns. This work has drawn on the complementary perspectives of ambassadors with varied practices and experience, ranging from biological modelling to architectural design, from education sciences to Indian studies.

The drafting, bibliographic support and layout were then carried out by the CCSD. These two resources, HAL, c'est le GrâHAL and Action loCHALe, effet globHAL, are available in French and English under an open licence on the HAL Training website.

The ambassadors also contributed to the annual meeting of the Partners' Assembly meeting in November: two of them presented feedback on their experience with HAL, illustrating the different facets of the services, whether at the level of a laboratory or a research community.

Last but not least, one of the ambassadors led a Parlons science ouverte webinar dedicated to links between publications and research data.

The ten countries with the highest number of document consultations (record consultations and document downloads) in 2025 (in millions)



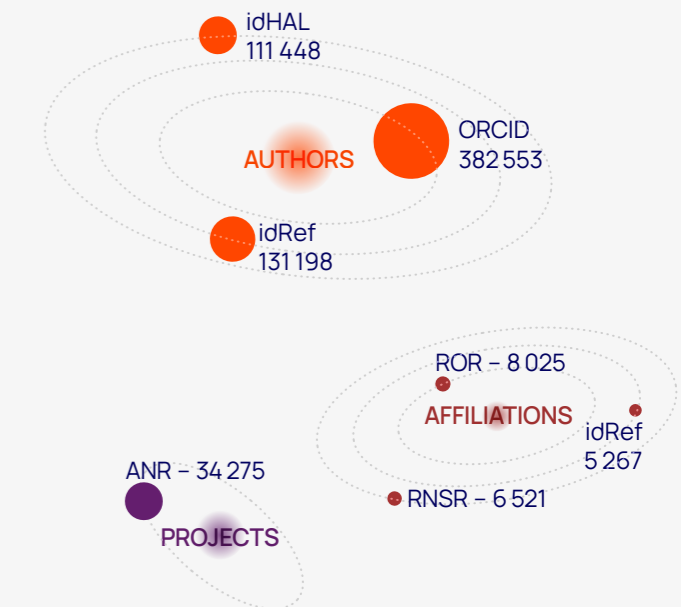
COUNTER Compliant  
designed by freepik

## Focus on the collections

Breakdown of collections by category



## Focus on identifiers



## ✦ An enhanced deduplication functionality

Since December, a new feature has made it easier to identify duplicates within a portal by listing potentially similar deposits in the deduplication menu. The algorithm used relies on two services: the CorHAL database developed by Inist – also used for the deposit suggestion service – and BiblioGlutton, an application for the disambiguation of bibliographic references.

Deduplication remains a sustained activity (more than 17,000 actions recorded in 2025), and this feature was eagerly awaited. It reduces the manual effort required

for this essential process, which is crucial to overall data quality.

A total of 1,474 deduplication actions have been recorded since going live. The feature also allows users to confirm that certain suggested items are not duplicates, thereby progressively refining the algorithm. This has resulted in 400 deposits being removed from the list of potential duplicates.

## Facilitating the traceability of publicly funded research results

Building on the ANR HAL portal created in 2020, two agencies have been rolling out their portals since the summer to showcase publications resulting from the projects they fund: the Ademe portal and the Anses portal for the National Research Programme on Environment, Health and Work (PNR EST), which the agency coordinates.

The possibility to supplement a deposit with the reference of a project funded by these two organisations has been introduced: HAL synchronises project data with datasets submitted on data.gov.fr. By consolidating synergies between funding agencies, HAL is establishing itself as a key structuring tool within the open science ecosystem. It facilitates not only the deposit, dissemination and promotion of scientific publications, but also the traceability of funded research results.

## A partnership with Mir@bel

The CCSD is strengthening its partnership with Mir@bel, a platform recognised by stakeholders in higher education and research (ESR) and supported by the Committee for Open Science.

Since December, HAL has relied on Mir@bel for information on publishers' policies regarding the deposit in open repositories of different versions of articles (preprint, postprint, published version). As the national contact for Open Policy Finder (formerly Sherpa/Romeo), Mir@bel provides information translated into French and offers broader coverage of French journals. If journal data are not available in Mir@bel, HAL queries Open policy finder directly.

Adding the ability to query Mir@bel data required rewriting the existing code in order to align it with the standards of the HALiance project.

## Contribution to the national policy on persistent identifiers

The CCSD is actively involved in shaping the national policy on persistent identifiers by contributing its expertise to the working group dedicated to the data model of the future National Register of Research Structures (Rnest).

This Register, by building on and evolving from the RNSR, will serve as the trusted national source, ensure consistent representation of research organisations in ROR, and prevent the duplication of data entry.

## ✦ No deposit without a licence: looking ahead to 2026

Associating a licence with each file submitted to HAL is an essential and explicit requirement of the CoreTrustSeal certification, ensuring that documents can be reused.

How should this metadata be completed? Should the licence metadata become mandatory? How should existing records be handled? The definition of a licensing policy is being driven by the CCSD and the Steering Committee: this governance body recommends systematically associating a licence with every file submitted. The aim is to facilitate the circulation of academic content whilst complying with the legal framework and associated rights. Another aim is to strengthen HAL's position within the open science ecosystem by aligning with the FAIR principles (in particular the "R" for Reusability) and by securing the reuse of files.

Preparations for implementation dominated much of the year. From a technical perspective, work was carried out to adapt the deposit interface and to develop a scenario for handling existing records, but also to create content aimed at informing and supporting communities as effectively as possible. A presentation webinar held in October brought together more than 300 participants.

Deployment is scheduled for February 2026.

## ✦ A workflow to increase the visibility and impact of research software

Deployed at the end of the year in the HAL-Inria institutional portal as a proof of concept, the workflow developed as part of the SoFAIR project aims to simplify the identification of software cited in scientific publications.

The solution relies on the GROBID/Softcite application to identify and extract mentions of software in the submitted PDF files. The next step involves asking the authors of the publication to validate the identified information. Once validated, this makes it possible to enrich the publication record with explicit links to the software concerned, thereby increasing their visibility.

SoFAIR brings together teams from Inria, the CCSD, The Open University, Brno University of Technology, the IBL-PAN Institute of Literary Research (Polish Academy of Sciences), and the European Bioinformatics Institute.

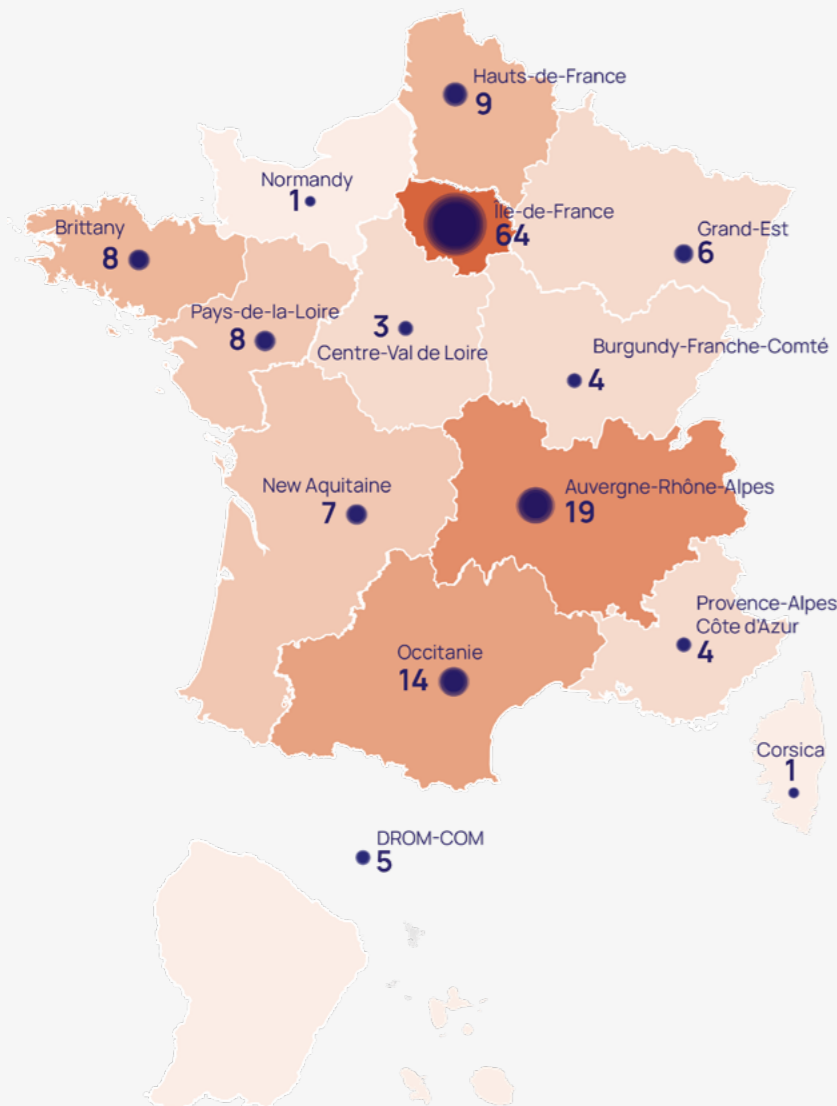
## HAL at the heart of the identification of academic open-source software

HAL serves as the main database for the catalogue of free and open-source software in academic research. As part of the National Plan for Open Science, the catalogue launched its beta version in April. The aim is to highlight these software products and their importance for research. It harvests records of software that have an SWHID identifier and also provides links to related publications. The verification of deposits prior to online publication is considered a key strength of HAL as a source, ensuring the reliability and quality of the metadata.

# Institutional portals

2025 marks a turning point for institutional portals. Three institutions which had, several years ago, chosen software solutions such as DSpace or Islandora to manage their open repositories have begun transitioning to HAL. The University of Lille and the École nationale supérieure d'arts et métiers (ENSAM) already had a HAL portal, which has now become their sole institutional repository. The University of Strasbourg, for its part, created its portal in 2025. Although these three local repositories were already importing part of their content into HAL, the transition involved data migration as well as enhanced support for the teams involved.

As new portals open, others close: the two administrative entities HESAM and Paris Lumière no longer exist and their respective portals have been discontinued. The ENSTA portal, created in 2025, now brings together the ENSTA-Paris and ENSTA-Bretagne portals, which have also been closed. In all these cases, the associated collections are maintained and their history preserved. Indeed, this is one of the key strengths of the HAL portal service: it makes it possible to adapt to administrative changes (mergers, closures) without any loss or migration of data.



**153**  
Institutional portals

including 4 created in 2025

- Université de Strasbourg
- Institut national de la statistique et des études économiques (INSEE)
- Burgundy Business School (BSB)
- École supérieure des agricultures (ESA)

**47**  
Institutions

are handling technical validation

including 8 new ones in 2025

# Activities of the HAL Partners' Assembly



Photo taken during the Fifth HAL Partners Assembly on November 12, 2025

The fifth annual session of the Partners' Assembly took place in November, bringing together over 140 participants. As with previous editions, the 2025 event centred on two key elements: an initial half-day institutional session devoted to reviewing achievements and actions taken, as well as the outlook for the coming year, followed by a thematic study day exploring the links between open science and research evaluation.

The presentations and discussions highlighted the central role now played by open infrastructure and open science initiatives in understanding, promoting and evaluating research. From French initiatives to feedback from across Europe, a common trend is emerging: the development of more interoperable tools, better structured data, more qualitative indicators, and increased attention to the actual practices of researchers.

HAL is fully aligned with this trend, serving as a national resource, a repository, and also as a foundation for emerging uses.

Research assessment was also theme of a workshop offered to members of the Assembly in April. Dedicated to preparing the Hcéres assessment using HAL, the workshop presented feedback from the University of Versailles Saint-Quentin-en-Yvelines regarding the methods and strategies they had implemented.

Feedback was also central to another webinar held in September on the management of technical validation. Gustave Eiffel University and Isara presented the organisational and technical arrangements implemented within their institutions. The webinar highlighted the difficulties encountered as well as the solutions implemented.

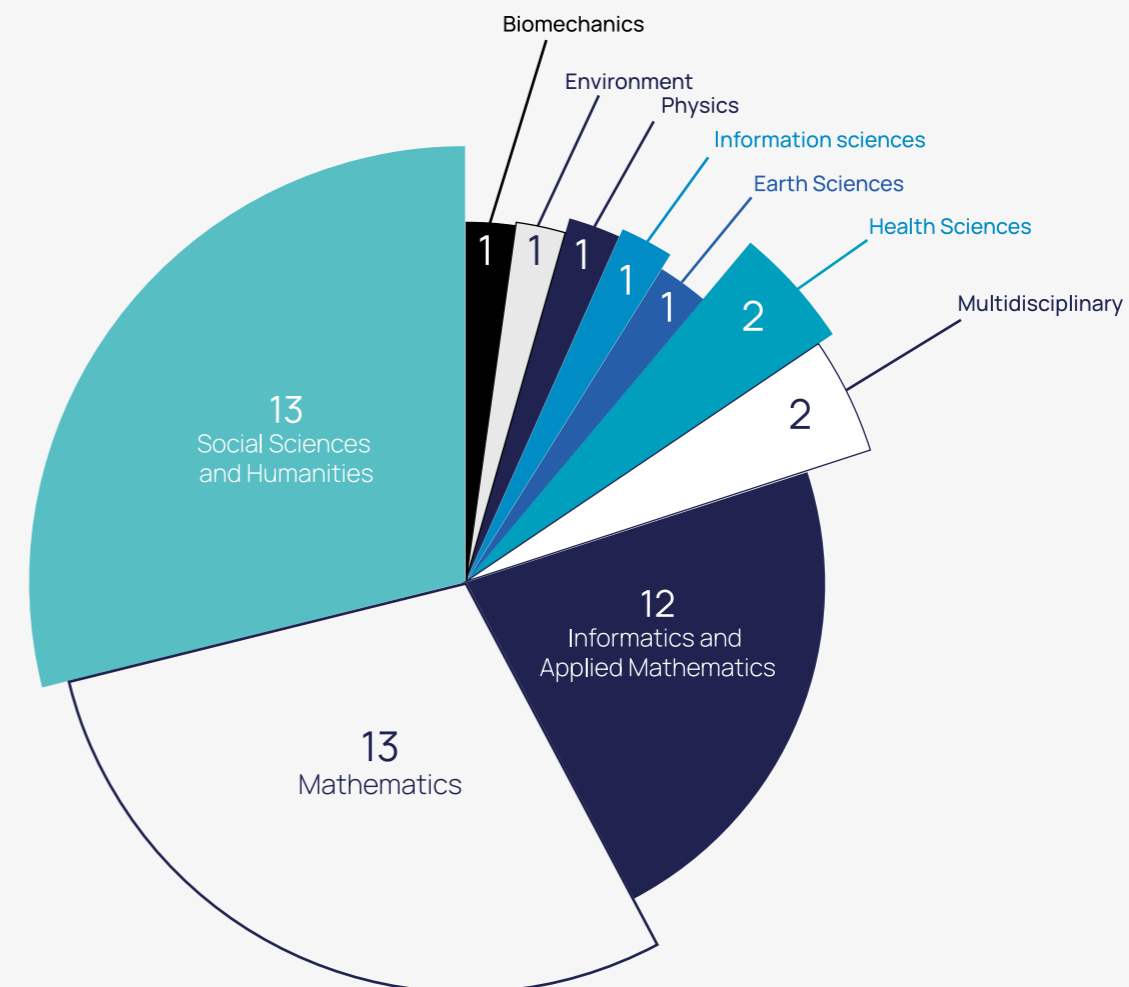
# Open access scientific journals

## 45 journals

which 9 were put online in 2025 :

- *Data et corpus : la revue des données en SHS*
- *Détours : Revue en didactique des langues et des cultures*
- *JETHro. Eran Turan and Hrom: A Journal of Global Late Antiquity*
- *JFP - Journal of Functional Programming*
- *JoNAS - Journal of Non-Associative Structures*
- *JSAT - Journal on Satisfiability, Boolean Modelling and Computation*
- *jSEDI - Journal of Studies of Earth's Deep Interior*
- *MSS - Movement & Sport Sciences - Science & Motricité*
- *ToC - Theory of Computing*

Breakdown of the journals by scientific field (2025)



## Gradual roll-out of new interfaces for journals

The project to modernise and harmonise the public interfaces of journal websites is continuing. This project has several strategic objectives: improve the readability and usability of the sites, ensure a consistent visual identity across the different journals, and strengthen their attractiveness for readers and researchers. It also aims to meet the technical and editorial requirements of the main academic indexing databases, such as the Directory of Open Access Journals (DOAJ).

The rollout is being carried out progressively: eleven journals have so far moved to the new interfaces. Priority has been given to deploying the interfaces for new journals rather than migrating existing journals.

**7,586**  
published articles in total  
including **742**  
published articles in 2025

## The nepHAL+ project

Funded by the National Fund for Open Science (FNSO), the nepHAL+ project aims to develop an innovative standalone deposit and evaluation module enabling the peer review of preprints, datasets and research

software. It will also facilitate the publication of open peer-review reports. In 2025, work focused on continuing the modernisation of the Episciences platform code.

## Promoting journals through the Diamond Discovery Hub

Episciences has joined the Diamond Discovery Hub as a trusted source. Launched in October 2025, this registry stems from the European CRAFT OA project and is supported by the European Diamond Capacity Hub. Its aim is to facilitate the indexing of Diamond open access journals run by scientific communities.

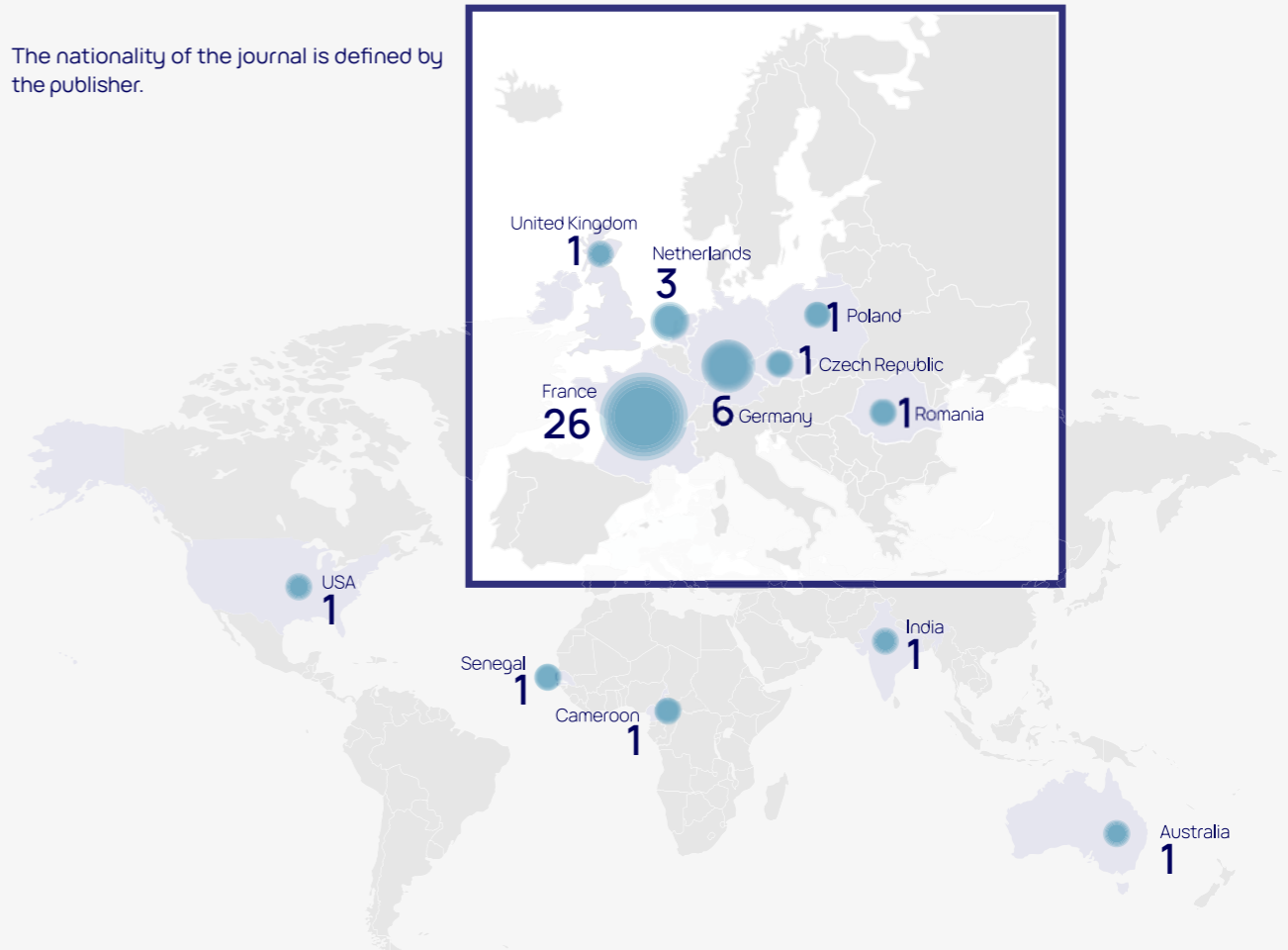
Being listed in this directory means that a journal meets the required criteria, including no fees for authors

and providing open licences. All journals published on Episciences already meet these criteria, which are in line with the platform's requirements.

In practice, registration in the directory is carried out by the CCSD. This enables journals to gain visibility amongst a targeted and engaged community, while strengthening their credibility through their association with a trusted platform.

### Distribution of journals by country (2025)

The nationality of the journal is defined by the publisher.



## Joining the SCOSS coalition



The SCOSS (Global Sustainability Coalition for Open Science Services) is a worldwide network of organisations committed to supporting the development of a free and open ecosystem for open science. Each year, the network launches a new funding cycle by selecting up to four infrastructures, which it supports in strengthening their financial base over a three-year period. Episciences is part of the 6th funding cycle, which began in 2025, alongside AJOL, Make Data Count and SciPost.

This first year has been marked by regular thematic meetings organised by the SCOSS. These opportunities for exchange – whether between the four infrastructures in the current funding cycle or through shared sessions with the nineteen initiatives supported by the programme since its launch – help to build a community of practice, ensure alignment of shared values, and foster opportunities for collaboration amongst network members.

The promotion of Episciences to potential funders notably took shape through participation in three international webinars organised by SCOSS for an audience of libraries.

Episciences' outreach to potential funders took the form, in particular, of participation in three international webinars organised by the SCOSS for a library audience.

The CCSD also organised a webinar in September for a French audience to present the funding model of the German consortium KOALA. The programme facilitates the identification of journals eligible for funding and provides administrative solutions enabling institutions to allocate funds to these journals more easily. Two Episciences journals, Journal of Groups, Complexity, Cryptology (jGCC) and Journal of Nonsmooth Analysis and Optimization (JNSAO), benefit from this programme.

## Financial support from 21 institutions and 5 consortia

The first year of fundraising within the SCOSS funding cycle achieved 17% of the financial target for the three-year participation period. Support has been secured from 21 institutions and 5 consortia, mainly based in Europe (France, Norway, Switzerland, Belgium and Germany).

Participation in the SCOSS funding cycle helps to strengthen the "institutional support" pillar of Episciences' funding model. Since the

Diamond model makes it possible to offer a publishing service free of charge for both authors and readers, it requires diversified sources of support for the platform and sustained institutional commitment to scholarly infrastructures. By redirecting part of the funding allocated to scholarly publishing and dissemination, research institutions can contribute to sustaining a common good accessible to all researchers.

## Review of the Édisciences project

Selected for funding under the third call for projects of the National Fund for Open Science (FNSO) and running for sixteen months, the Édisciences project came to an end in June. It forms part of the platform's service offering, addressing the needs of editorial teams responsible for journals. The project aims to facilitate the editorial preparation of articles and to produce structured publications aligned with editorial quality standards. It pursues a dual objective:

- facilitate the editorial preparation of articles (copy-editing), including proofreading and correction of spelling and typographical errors, stylistic editing, and the application of bibliographic standards;
- produce structured publications that meet editorial quality standards, which are both accessible

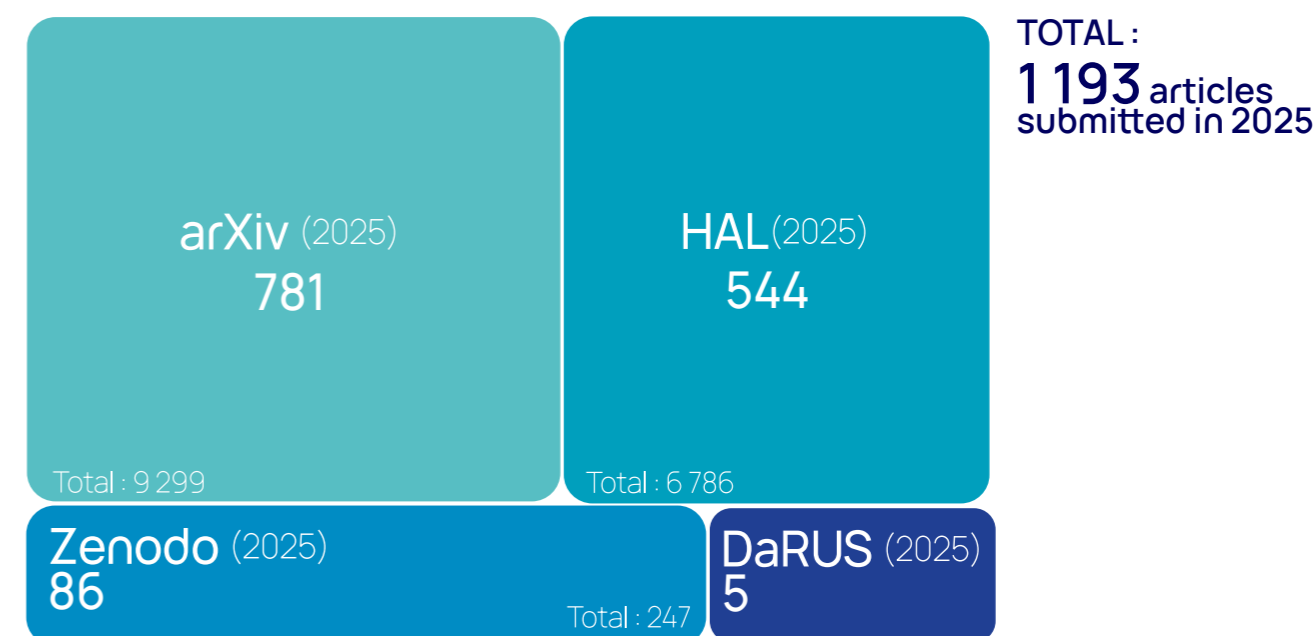
to readers with disabilities and interoperable with open archives and reference databases.

Three journals took part in this project: Recherches en didactique des mathématiques, Cahiers scientifiques du transport, and the Journal of Theoretical, Computational and Applied Mechanics.

Tools such as editorial workflows and checklists, as well as generic templates in InDesign and LaTeX formats, were produced.

Lastly, the Édisciences project made it possible to identify service providers. Editorial teams can call on these professionals while retaining their autonomy in the editing and publication process.

### Origin of articles submitted to the journals(en 2025)



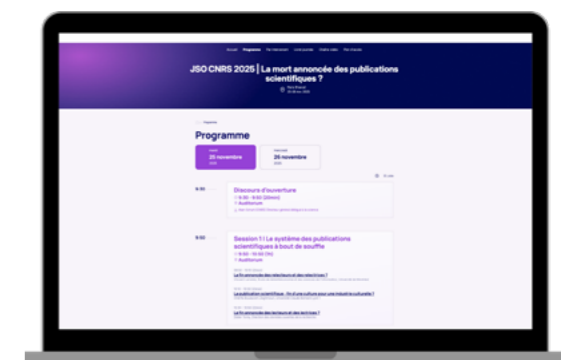
# Management of scientific conferences

## ✦ Updates to the interfaces

2025 was marked by a project to modernise the public interfaces of the Sciencesconf websites, carried out with the support of an external provider specialising in UX design and HTML integration. The project pursued several objectives: improving the ergonomics of conference websites, offering a more comfortable browsing experience across a wide range of screen sizes, and enhancing accessibility for all users.

It also aims to ensure a harmonised and consistent visual identity across the different conference websites, in line with the same principles applied to HAL portals and Episciences journals.

The roll-out will take place gradually for all new sites created from 2026 onwards. A key constraint of the project is that it must not affect existing sites, which means that both versions of the interfaces will need to be maintained for several months.



**3,064**  
conferences

That's nearly **12** conferences  
created per working day (Monday to Friday)

A **14%** increase compared to 2024.

**122,263**  
registrations

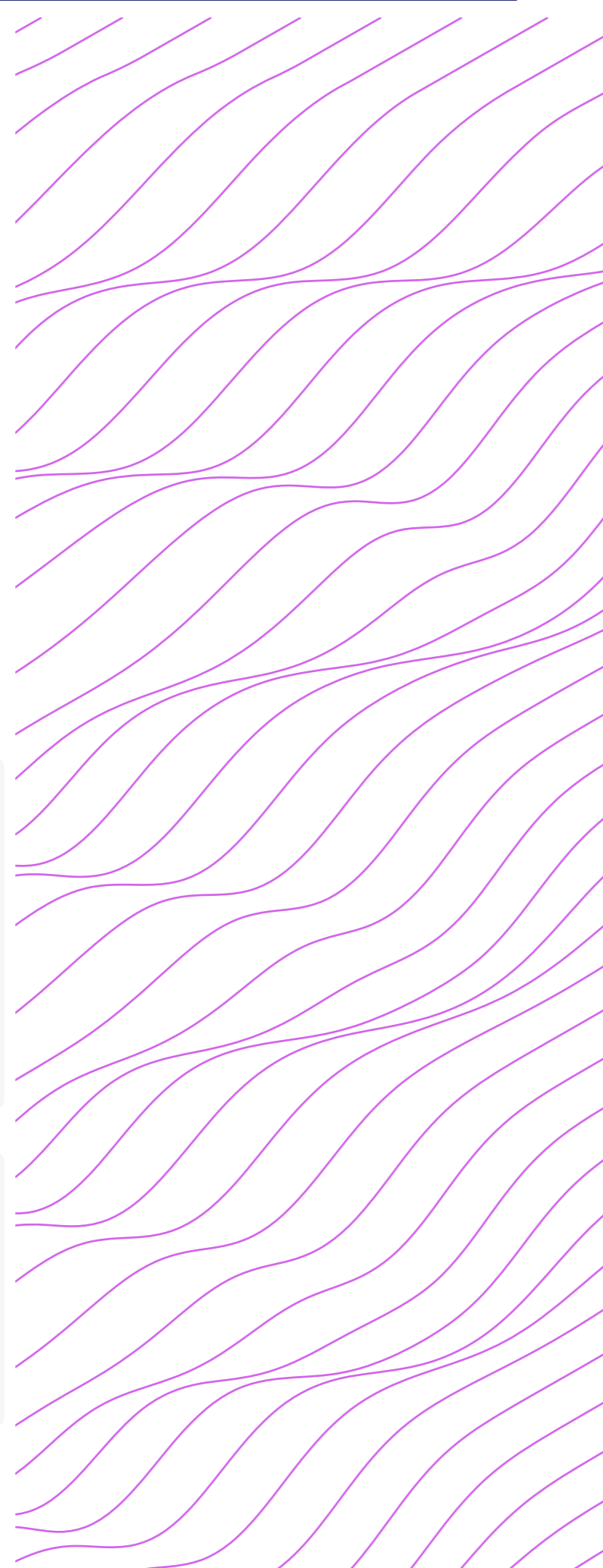
for conferences created in Sciencesconf  
in 2025, that's equivalent to the population of the city of  
Metz.

## Managing distribution licences

In order to allow authors to specify the conditions for the dissemination and reuse of their texts, a specific field is now available when submitting their paper.

This field is activated during the configuration of the conference website.

The inclusion of this metadata ensures compliance during automatic transfer to HAL, as the licence will become mandatory metadata in the archive from 2026 onwards. This facilitates exchanges between the two applications, whilst contributing to better management of usage rights for submitted content.



**90,802**  
communications  
72,538 abstracts and 18,234 full-textes  
an increase of 7% compared with 2024.



Which,  
**1,458**  
communications  
transferred to HAL

## Developments in software infrastructure

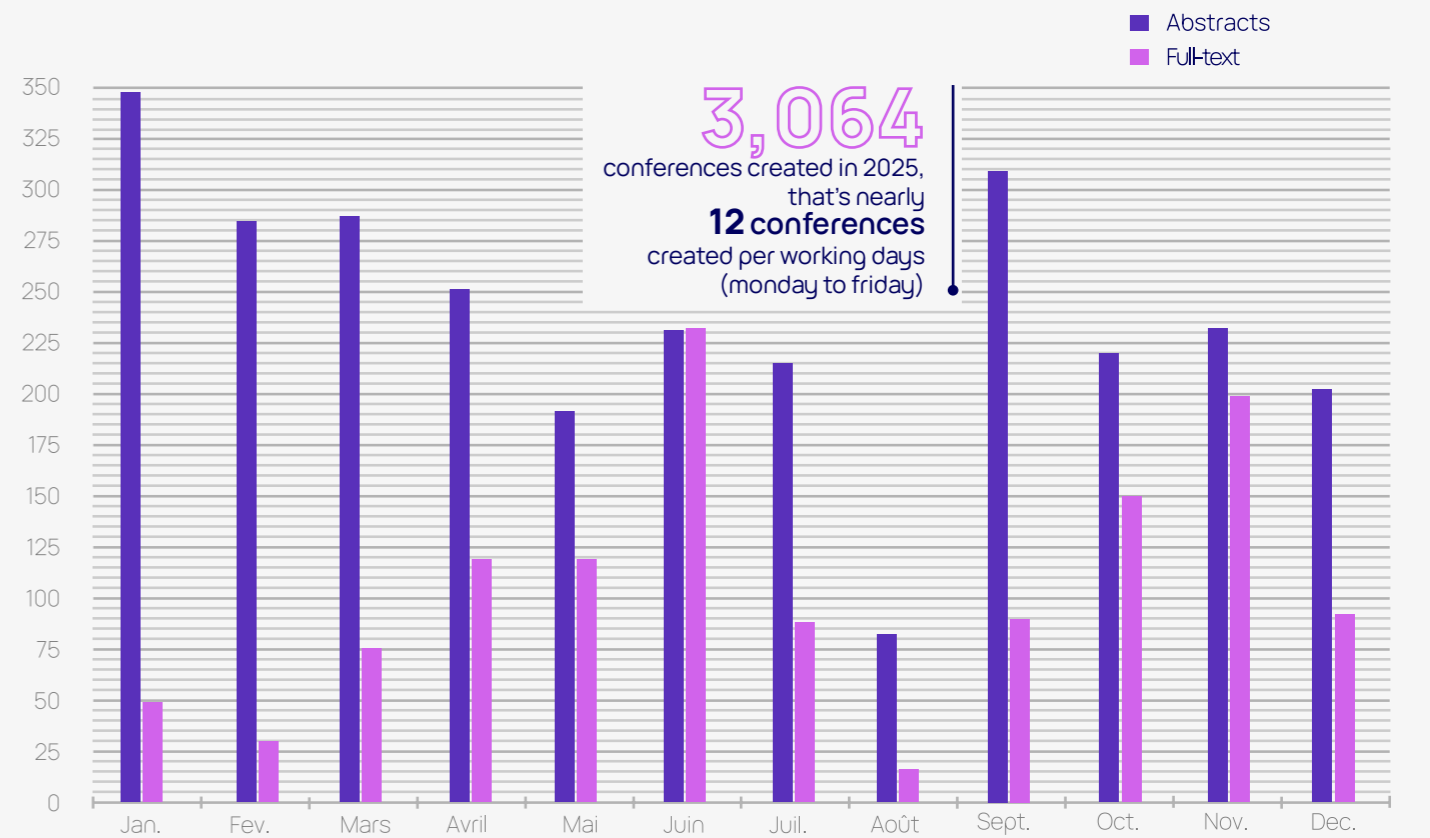
### HALiance

Sciencesconf is the first of the CCSD's platforms to migrate to a new software infrastructure, developed as part of the Equipex HALiance project. For Sciencesconf, this includes, in particular, a migration to the Nginx web server to provide a more powerful and flexible tool, and the implementation of high availability for the databases.

As part of the overall migration of the CCSD databases to a MySQL cluster, significant preparatory work was carried out during the first half of the year for the Sciencesconf databases. The migration and installation of the new version of the database management system (DBMS)

were completed over the summer. These operations help strengthen the reliability, performance and maintainability of the Sciencesconf data environment, while ensuring continuity of service for users.

Email aliases created for conferences were previously handled by an application managed by the CC IN2P3. Preparatory work on both the data and the Sciencesconf application was carried out in order to supply a new internal application, which is scheduled for deployment in the first half of 2026.



Number of abstracts and communications submitted to Sciencesconf per year

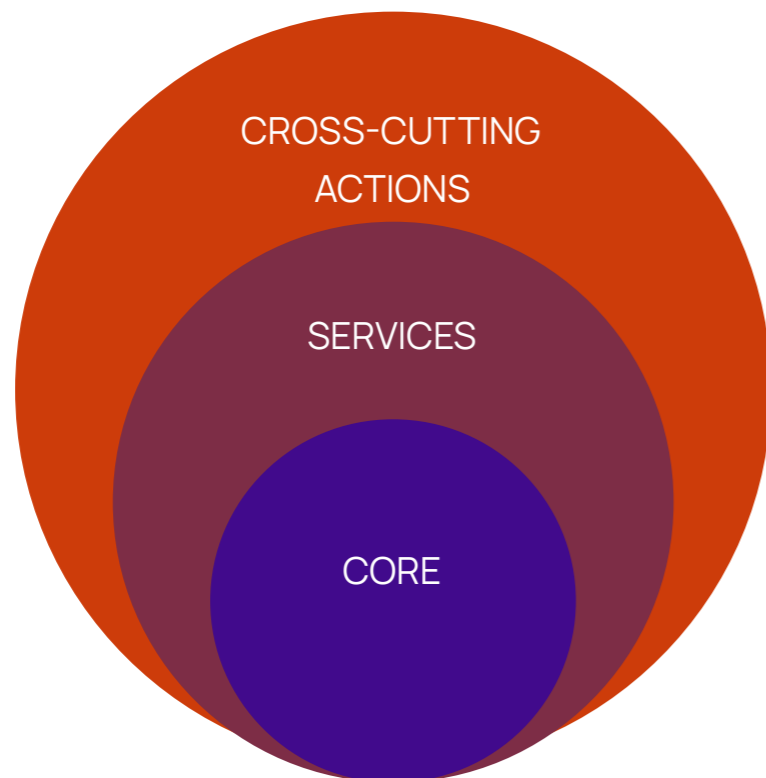
# EquipeX+ HALiance project



Funded with a budget of €3.4 million, the Equipex+ HALiance project has been active for five and a half years. Focused on HAL, it aims to expand the range of services offered, strengthen interactions with other actors in the knowledge ecosystem, and fully meet national and international open science excellence criteria. The project is supported by a renewal of both the hardware and software infrastructure.

The year 2025 was marked by the drafting of the mid-term scientific report and the CoreTrustSeal certification obtained for HAL. Other key highlights included the first component of the code migration put into production, consisting of the HAL CV, as well as the overhaul of the relationships system between resources in order to better highlight links between publications, data and software.

## Divided into 9 Work Packages (WP)



## Achievements in 2024

WP1	Upgrading and securing HAL's physical infrastructure	<ul style="list-style-type: none"> <li>- Migration of part of the databases to a MySQL cluster in order to ensure high availability</li> <li>- Addition of three new hypervisors (physical machines)</li> <li>- Migration of 60 servers to Debian in order to standardise the architecture</li> </ul>
WP2	Migrating, securing and opening the HAL software code	<ul style="list-style-type: none"> <li>- Deployment into production of the HAL CV code on the new software foundation</li> </ul>
WP3	Metadata extraction and alignment with HAL reference data	<ul style="list-style-type: none"> <li>- Extraction of software mentions in publications</li> </ul>
WP4	Organising and documenting the life cycle of bibliographic metadata imported to HAL	<p><i>The actions in this work package depend on the progress of WP2.</i></p>
WP5	Coordinating HAL with preprint review systems and making the publication cycle visible	<ul style="list-style-type: none"> <li>- No deliverables to report for this period</li> </ul>
WP6	Implementing a new method for populating HAL by collecting scientific publications (full text)	<ul style="list-style-type: none"> <li>- Developments in the deposit suggestion service</li> <li>- Identification of duplicates using the Inist / Biblio-Glutton database</li> </ul>
WP7	Coordinating publications in HAL and the research data associated with them	<ul style="list-style-type: none"> <li>- Redesign the system of relationships between resources in order to strengthen links between publications, data and software</li> <li>- Transfer relationships with partner repositories</li> </ul>
WP8	Ensuring visibility and uptake of new HAL services by its users	<ul style="list-style-type: none"> <li>- Updates to user documentation</li> <li>- Publication of blog posts on the CCSD website</li> <li>- Publication of news items on the CNRS intranet and dissemination through communication channel</li> </ul>
WP9	Ensuring consistency with FAIR principles	<ul style="list-style-type: none"> <li>- Obtain CoreTrustSeal certification</li> <li>- Completion of the TEI schema</li> <li>- Curation and optimisation of the database</li> </ul>

# User support, training and assistance

A key focus of 2025 was organising and implementing the national rollout of technical validation of deposits (formerly known as moderation). The aim is to strengthen the pooling of this task by increasing the number of participating portals. This was supported by strengthened outreach activities, including a workshop at the CasuHAL days and two webinars in the autumn, one featuring feedback from Université Gustave Eiffel and Isara.

In addition to the in-person training sessions organised for teams from new portals and for beginners, hybrid training resources fully dedicated to this activity were designed and developed: interactive presentations, video tutorials and practical exercises to enrich the HAL Training website in 2026. Lastly, a community coordinator was recruited in September with the aim of fostering momentum through a network of validators. A survey of the validators' community on their needs and practices was the first action undertaken.

The UsuHAL newsletter helps users discover the training offer and the content available in the user documentation. A satisfaction survey conducted after its first year shows that the newsletter is perceived as a useful monitoring tool for identifying new resources.

Our partnership with Software Heritage to support the move towards open-source software continues. This involves co-facilitating training sessions, of course, but also participating in a video project produced by Software Heritage and funded by UNESCO. These videos are due to be released in 2026.

The challenges of maintaining continuity of service within a team composed largely of fixed-term staff are a recurring issue at the CCSD. The team responsible for supporting HAL users was particularly affected in 2025, with the arrival of four new members replacing staff whose contracts had ended. These significant changes highlight the importance of knowledge transfer and the strengthening of expertise, given the high volume of tickets and deposits to be processed (daily average in 2025: 63 tickets and 376 verification actions).

## Support for coordinators of Priority Research Programmes and Infrastructures (PEPR)

At the request of the CNRS National Programmes Mission, the CCSD coordinates the creation of HAL collections for Priority Research Programmes and Facilities (PEPR). The support provided includes presenting HAL and its services to project leaders, assisting with the customisation and configuration of the collection website, and training staff.

Around thirty collections have been created, helping to showcase the work funded by these programmes while also helping to shape their digital identity.

## First year for the HAL Formation website

HALFormation, a space entirely dedicated to the CCSD's educational offering, brings together resources designed to support users in learning how to use HAL and master its functionalities, alongside access to training courses delivered in a variety of formats (self-paced learning, videoconference, and in-person sessions).

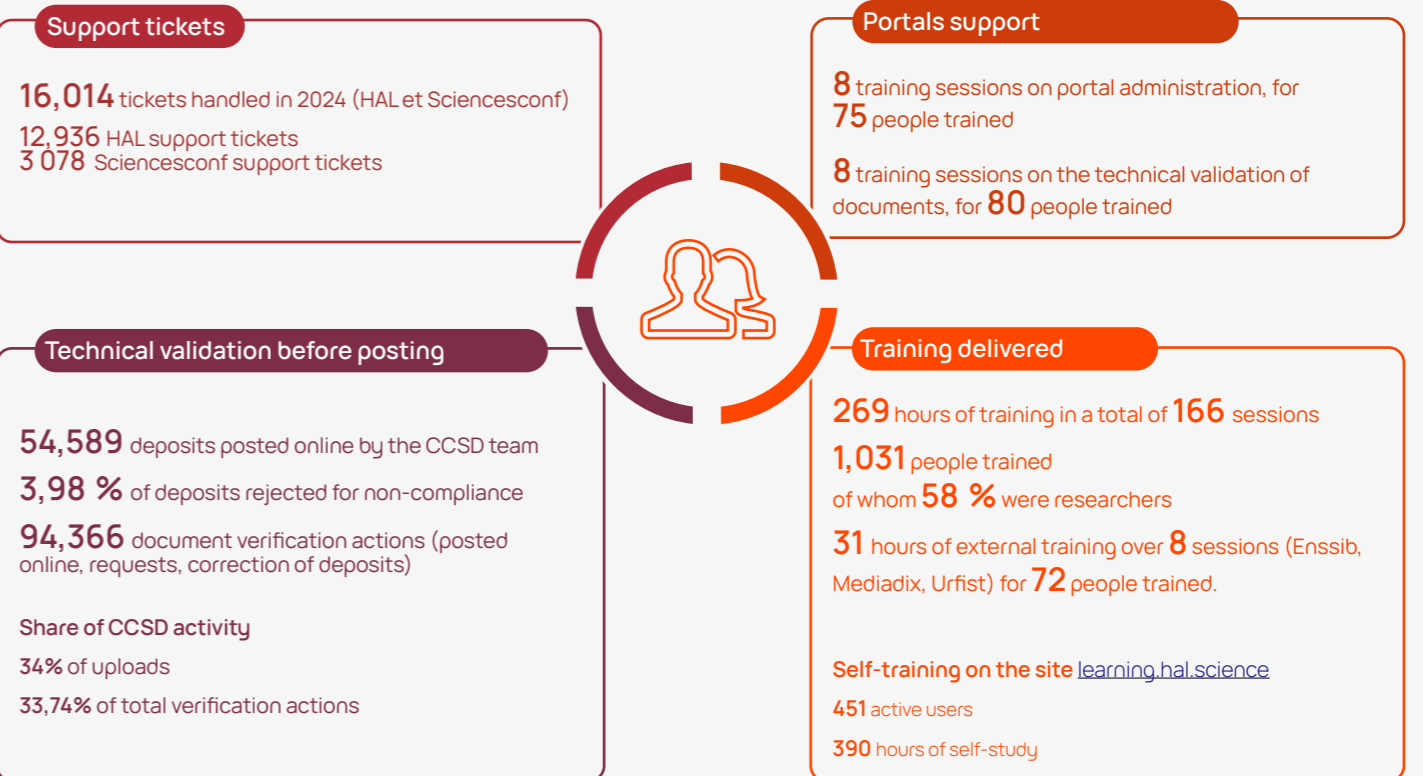
During its first year of production, the site was enriched with eleven educational videos, practical guides from the The Essentials series along with their updates, as well as the two posters designed as part of the ambassadors programme.

In its first year of operation, the site was expanded to include eleven training videos, the "Essentials" practical guides and their updates, as well as two posters designed as part of the ambassador programme.

Following an initial self-paced module dedicated to choosing a Creative Commons licence for a deposit, a new module has been available since September, focusing on the foundations of open access. This module is also offered in a tutored version (with feedback from the teaching team on exercises and questions) as part of a hybrid training course delivered in collaboration with URFIST and Mediadix. Together, these two courses have more than 450 active users.

A total of 1,246 people have created an account on the training platform.

## Panorama of the activity of user support



# Communication and dissemination of information

## Open Science Talks webinars

Since 2021, the CCSD has been offering webinars providing information about Open Science and the Platforms it develops in connection with the national open science policy. Open to all, all the sessions have been very well attended. Video recordings are available on the CCSD's Canal U and YouTube channels.

Three sessions were scheduled in 2025. The first offered a joint exploration of the PathOS (Pathways to Open Science) and COMMONS projects (coordinated by OpenEdition), both engaged in analysing the circulation of scientific knowledge. The second webinar drew on the JUDDGES project (Judicial Decision Data Gathering, Encoding and Sharing) to illustrate the challenges of negotiating open science within a context of public funding. The last session focused on links between publications and data, featuring joint presentations from HAL and Nakala on interoperability standards, as well as feedback from a HAL ambassador as part of the ERC DHARMA research project.

These three sessions brought together 470 participants, bringing the total number of attendees across all webinars to 2,566.

## Redesign of the browsing on the CCSD showcase website

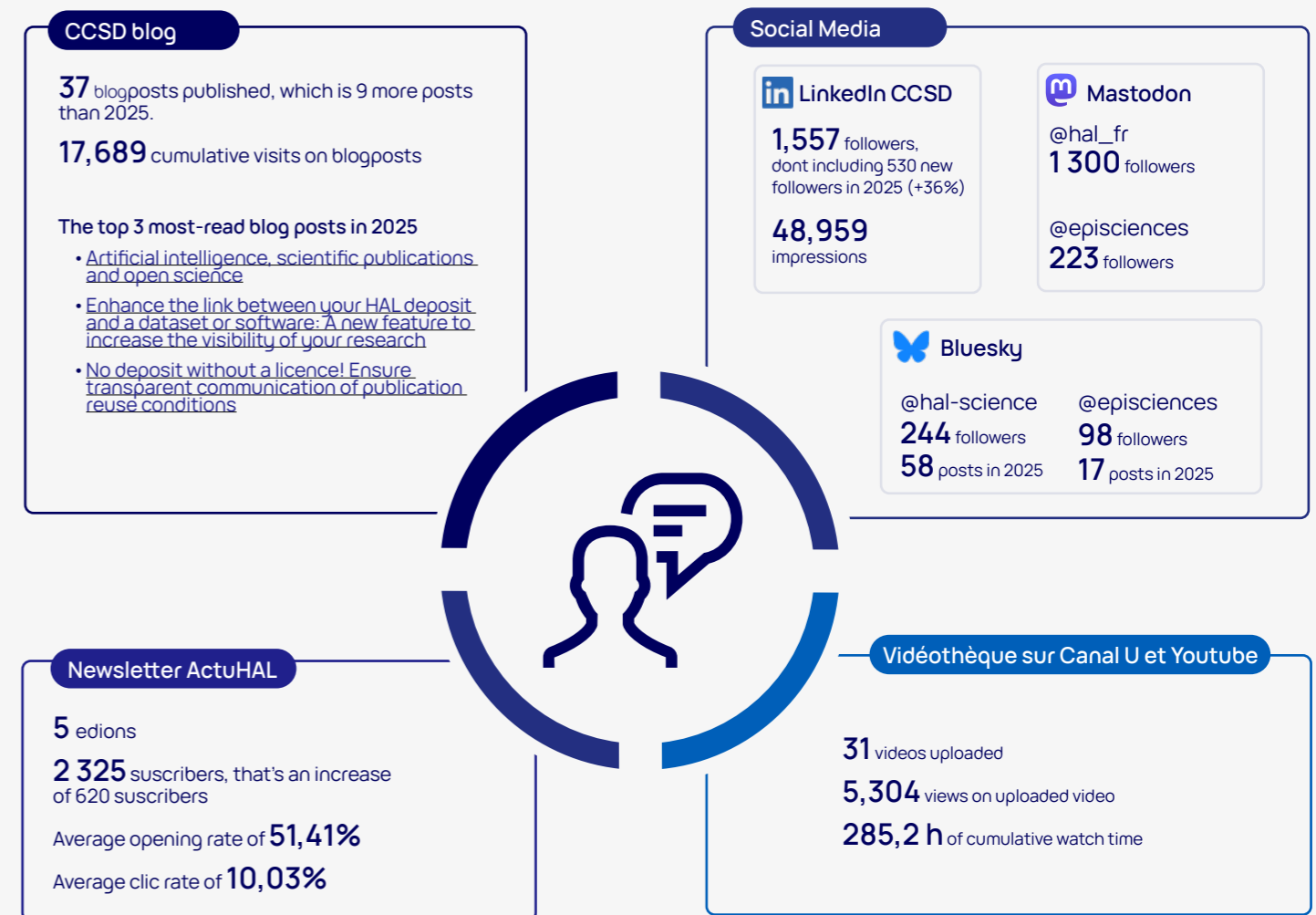
During 2025, the communications team redesigned the browsing of the CCSD showcase website for the purpose of making browsing easier for users. This entailed adding a dedicated tab for each platform. These sections now provide access to projects, programmes and all information related to each platform. The "Strategy and Values" tab federates content relating to the CCSD and the HAL+ infrastructure, covering elements shared across the three platforms. Finally, the "Resources" tab gathers all the CCSD communication materials.

At the bottom of the page, a new "Recruitment" page has been added. A "Communication Materials" page brings together all the resources produced by the CCSD. To achieve this, a tab was created for each platform. It is now possible to find projects, programmes and all information relating to each platform there. The "Strategy and Values" tab brings together everything concerning the CCSD and the HAL+ infrastructure, i.e. elements common to all three platforms. Finally, the "Resources" tab brings together all of the CCSD's communication materials.

## Designing logos for Episciences journals

With a view to the migration of the journals' websites to new interfaces, it was necessary to create square-format logos for all journals that did not already have one. Six logos were designed and will be rolled out, together with the new interfaces, in the course of 2026.

## Communication channels of the CCSD



# List of publications

## January

**8-10 January - Madrid**  
Sebastien Mazzaresse.  
Accueil des nouveaux entrants, Écoles françaises à l'étranger

**27 January - Lyon**  
NII-CCSD workshop

- Nathalie Fargier, HAL+, *Overview and Future Challenges*
- Yannick Barborini, Bénédicte Kuntziger, *HAL Community Engagement*
- Raphaël Tournoy, *Episciences Overlay Journals service*

## March

**5-6 March - New Delhi (India)**  
Open Horizons: Integrating Open Access, Open Data, and Computational Innovation

- Bénédicte Kuntziger, *The green route with the national open Archive HAL*
- Raphaël Tournoy, *Episciences Overlay Journals service*

**18-19 March - Sète**

Agnès Magron,  
*Des identifiants pour la visibilité des infrastructures de recherche - leur rôle dans l'archive ouverte HAL*. 3<sup>ème</sup> journée du Club des infrastructures nationales en biologie santé (INBS)

**20 March - Lyon**

Hélène Bégnis, Sébastien Mazzaresse, *Actions loCHALe, effet globHAL : HAL au coeur d'un écosystème pour valoriser et partager les travaux de recherche au bénéfice des institutions académiques*. Congrès Acierge 2025

**24 March - on line**

Raphaël Tournoy, *Webinar ; Episciences Overlay Journals*. Canadian Research Knowledge Network (CRKN)

## April

**1<sup>st</sup> April - on line**

Raphaël Tournoy. *Presentation of Episciences*. Strengthening Open Science in Latin America: New Opportunities with SCOSS - Endorsed Infrastructures

**22 April - on line**

Raphaël Tournoy. *Presentation of Episciences*. Building a Sustainable Future for Open Science: Meet SCOSS's Latest Endorsed Infrastructures

**24 April - on line**

Bénédicte Kuntziger. *HAL, the French national open archive within global Open Science ecosystem*. AfricArXiv Open Science Series

**30 April - on line**

Nathalie Fargier. *Advancing Open Scholarly Communication. The role of HAL and Episciences within France's OS strategy*. Open Access Australasia webinars

## Mai

**15 mai - Tokyo (Japon)**

Nathalie Fargier. *HAL's strategic role in France Scholarly Communication Landscape*. French Japanese workshop on Open Science

## June

**3 June - Bruxelles**

Raphaël Tournoy, Céline Barthonnat, Camille Fontvieille, Agnès Magron, Hélène Lowinger, et al.  
*A sustainable Economic Model for Diamond Open Access Overlay Journals (poster)*. DIAMAS final project conference

**10 June - on line**

Nathalie Fargier. *Presentation of HAL and Episcience*. Chinese Academy of Science

**12 June - Paris**

Hélène Bégnis, et Amandine Wattelier-Bricout. *Déposer et signaler : une démarche de science ouverte en études aréales*. Printemps de la donnée

**15-18 June - Chicago (USA)**  
Open repositories 2025

- Nathalie Fargier, Bénédicte Kuntziger. *From Open Archive to Multifaceted Platform: Reconciling the Diverse Stakeholders Needs in HAL*
- Morane Gruenpeter, Maxence Azzouz-Thuderoz, Yannick Barborini, Saadet Bozacci, Fotis Psomopoulos, Raphaël Tournoy. *Recognizing Software as a Critical Component in Open Science: Advancing an Interoperable, Community-Driven Vision for Infrastructures*
- Raphaël Tournoy, Camille Fontvieille, Agnès Magron, Manuela Mild, Sibylle Hermann, Dorothea Iglezakis. *Publishing datasets with JoDaKISS and Episciences overlay journals (poster)*
- Yannick Barborini, Bénédicte Kuntziger. *HAL: Strengthening Connections Between Publications, Data, and Software in the French National Open Science Ecosystem*

## August

**17 June - on line**

Céline Barthonnat.  
*Science ouverte : enjeux, pratiques et perspectives (table ronde)*. Les modèles alternatifs de publication (Université de Perpignan)

**23-25 June - Lille**

**Journées CasuHAL**

- Sébastien Mazzaresse, Pascal Lubino, Hélène Bégnis. *Bilan des Groupes de travail CCSD-CasuHAL*.
- Sébastien Mazzaresse, Pascal Lubino. *Prendre en charge la validation technique des dépôts HAL (atelier)*
- Yannick Barborini, Hélène Bégnis, Pascal Lubino. *Carte blanche au CCSD*

**30 June - Lyon**

**CARL Delegation visit**

- Nathalie Fargier. *Advancing Open Science in France. The role of the CCSD in National Policy, Institutional Strategies and Collaborative Models*
- Raphaël Tournoy. *Episciences: Diamond Open Access Overlay Journals*

## July

**2 July - Lausanne**

Raphaël Tournoy.  
*Episciences: Advancing Diamond Open Access Through Repository Integration and Library Partnerships*. LIBER Annual conference

**3 July - en ligne**

Yannick Barborini, Sébastien Mazzaresse et Celia Lentretien.  
*Promouvoir l'ouverture des codes sources liés à la recherche*. C@fé Renatis

**11 July - en ligne**

Raphaël Tournoy.  
*Episciences : le modèle des overlay journals*. Café Science Ouverte PAMIR

**20 August - on line**

Raphaël Tournoy. *Presentation of Episciences, Empowering sustainable open infrastructure*. Welcoming new SCOSS members for 2024/25

## September

**9 September - on line**

Raphaël Tournoy, Delphine Crubellier et Fabian Hennig. *Comment une bibliothèque peut-elle soutenir des revues en accès ouvert Diamant ? Les solutions consortiales proposées par Koala*. Webinaire CCSD.

**9 September - en ligne**

Sébastien Mazzaresse et Sabrina Granger. *De l'archivage à la citation : Software Heritage et HAL, une solution intégrée pour le logiciel de recherche*. LibreABC

**15 September - on line**

Hélène Bégnis, Pascal Lubino, Sébastien Mazzaresse. *Vers un déploiement national de la validation technique dans HAL*. Webinaire CCSD

**15 September - Paris**

Yannick Barborini et Raphaël Tournoy. *Retour d'expérience : Implementing COAR-Notify within HAL - Preprints - Publications*. Journée d'étude du groupe de travail COAR-Notify for Research Data

**17 September - Geneva**

Nathalie Fargier. *HAL, a National, Generalist and Multi-Disciplinary Open Repository*. Open Science FAIR

## October

**1-3 October - Nantes**

Hélène Bégnis et Léo Raimbault. *Stand commun avec Software Heritage*. Congrès ADBU

**6-8 October - Göttingen**

Delphine Crubellier, Raphaël Tournoy, Camille Fontvieille, Agnès Magron. *Episciences: Bridging*

### Key

Intervention in a scientific conference  
Organisation of a training for an external structure

*Open Repositories for Diamond OA Publishing Workflows and Enhanced Metadata Interoperability (poster)*. Craft OA-Conference

**15 October - Grenoble**

Raphaël Tournoy. *Vers une édition scientifique ouverte et équitable : présentation d'Episciences*. Mathdoc : 30 années au service de la communauté mathématique

## November

**11 November - on line**

Raphaël Tournoy. *Stand commun avec Software Heritage*. Colloque Littérature scientifique francophone en santé et science ouverte, GRISOF-Université Cheikh Anta Diop de Dakar-Agence Universitaire de la Francophonie

**17 November - Lyon**

Bruno Marmol. *Données et intelligence artificielle : ouvrir mais protéger (table ronde)*. Biennale du Numérique, ENSSIB

**18-20 November - Tromsø**

Raphaël Tournoy. *Collective Action Advancing Open Infrastructure (workshop)*. 20th Munin Conference on Scholarly Publishing

**21 November - on line**

Nathalie Fargier, Hélène Bégnis, Yannick Barborini. *Pas de dépôt HAL sans licence ! Pour une communication transparente des conditions d'usage*. Webinaire CCSD

## December

**1<sup>st</sup> décembre - on line**

Raphaël Tournoy. *Presentation of Episciences*. SCOSS Showcase Webinar

**11 December - on line**

Yannick Barborini et Sébastien Mazzaresse. *Infrastructures et outils (table ronde)*. Journée d'étude "Codes sources et logiciels de recherche", Université de La Rochelle

**19 December - on line**

Raphaël Tournoy. *Episciences Diamond Open Access overlay journals*. EOSC OA6 Expert Group Meeting

# Infrastructure

The infrastructure, which forms the foundation of HAL+, is supported by the IN2P3 Computing Centre, which hosts the servers and data, by CINES for long-term preservation, and by the Inria Paris center for redundant backup.

## Migration and upgrade

- Migration of 60 servers to Debian
- Database server
  - Upgrade of MySQL servers to version 8
  - Removal of MySQL servers < 8.0
  - Migration of some databases to the MySQL cluster
- Addition of 3 new hypervisors
- Rationalisation of physical servers : decommissioning of old servers
- Completion of the switch to fibre optic across the entire internal network
  - replacing the remaining switches
- Bot filtering across the various platforms
- Automation of the replacement of non-Harica certificates using the ACME protocol
- Migration to Cines: switchover to Vitam

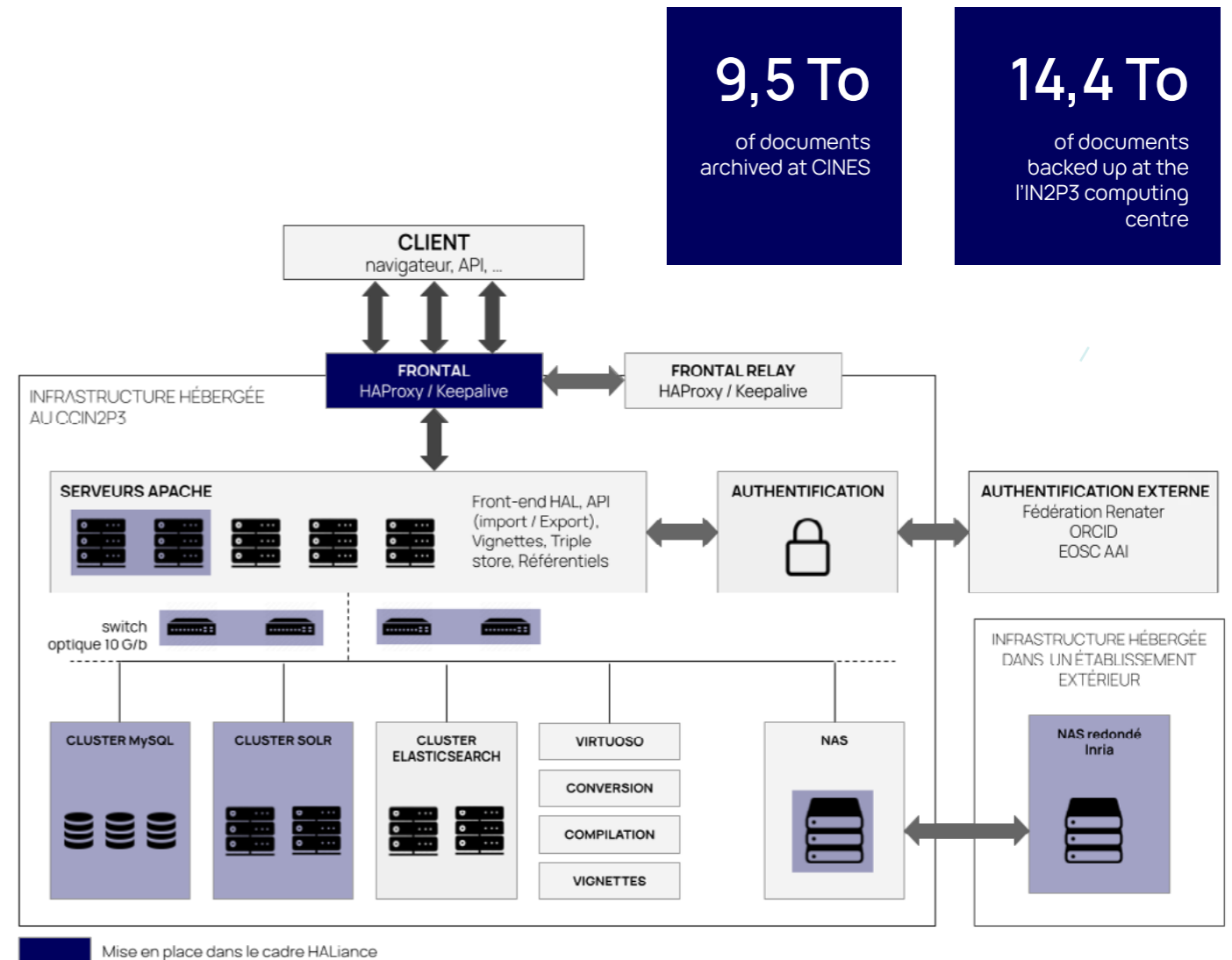
## Bot filtering

The year 2025 confirmed the sharp increase in bot traffic already observed in 2024. The HAL infrastructure, followed by Episciences, was affected by requests originating from particularly aggressive bots that do not comply with the rules typically followed by crawlers (request frequency, identification, compliance with crawling instructions).

In response, the CCSD implemented filtering measures aimed at reducing the impact of these bots, while ensuring that legitimate users and beneficial bots (scientific indexing, archiving, partner services, etc.) are not penalised. The challenge is twofold: preserving service availability and performance by preventing resource saturation, while maintaining the openness of the infrastructure, which is essential for the dissemination and visibility of content.

Work mainly focused on the HAProxy platform, positioned at the front end of all applications, in order to detect, characterise and limit abusive behaviour.

In addition, the CCSD is participating in the COAR "AI Bots and Repositories Task Force".



## Certificates

As SSL certificate policies evolve, certificates with shorter validity periods are expected to become the norm in the near future. It had become impractical to continue managing certificate renewals manually.

Combined with the change in the certification authority for academic websites, the management of certificates has been completely overhauled. These policy changes have had an impact on portals whose URLs had not yet been migrated to the hal.science domain.

## Support

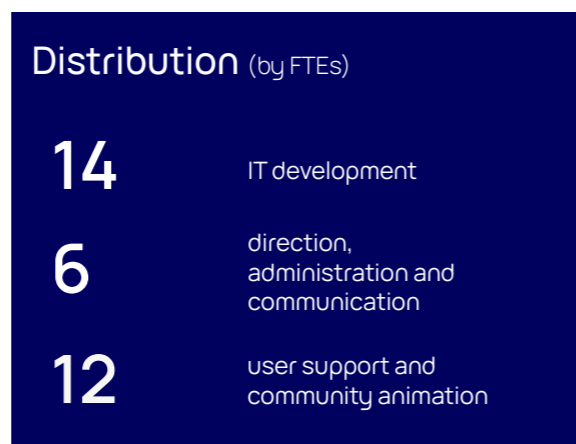
The CCSD provided support for the migration of Lilloa, the University of Lille's archives server, as well as for the migration of Univoak, the archives of the University of Strasbourg.

# Resources

## Human resources

In 2025, the CCSD had 32 FTEs (full-time equivalent employees), working in the fields of IT development, network system administration, scientific and technical information, publishing, communication and management.

During the year, 1 person was appointed, 9 fixed-term contracts were recruited and 1 permanent agent, 7 fixed-term contracts staff left the CCSD.



# Budget data

- Operating expenses
- Investment expenses
- Payroll expenses
- Resources
- Multi-year resources bound to projects

