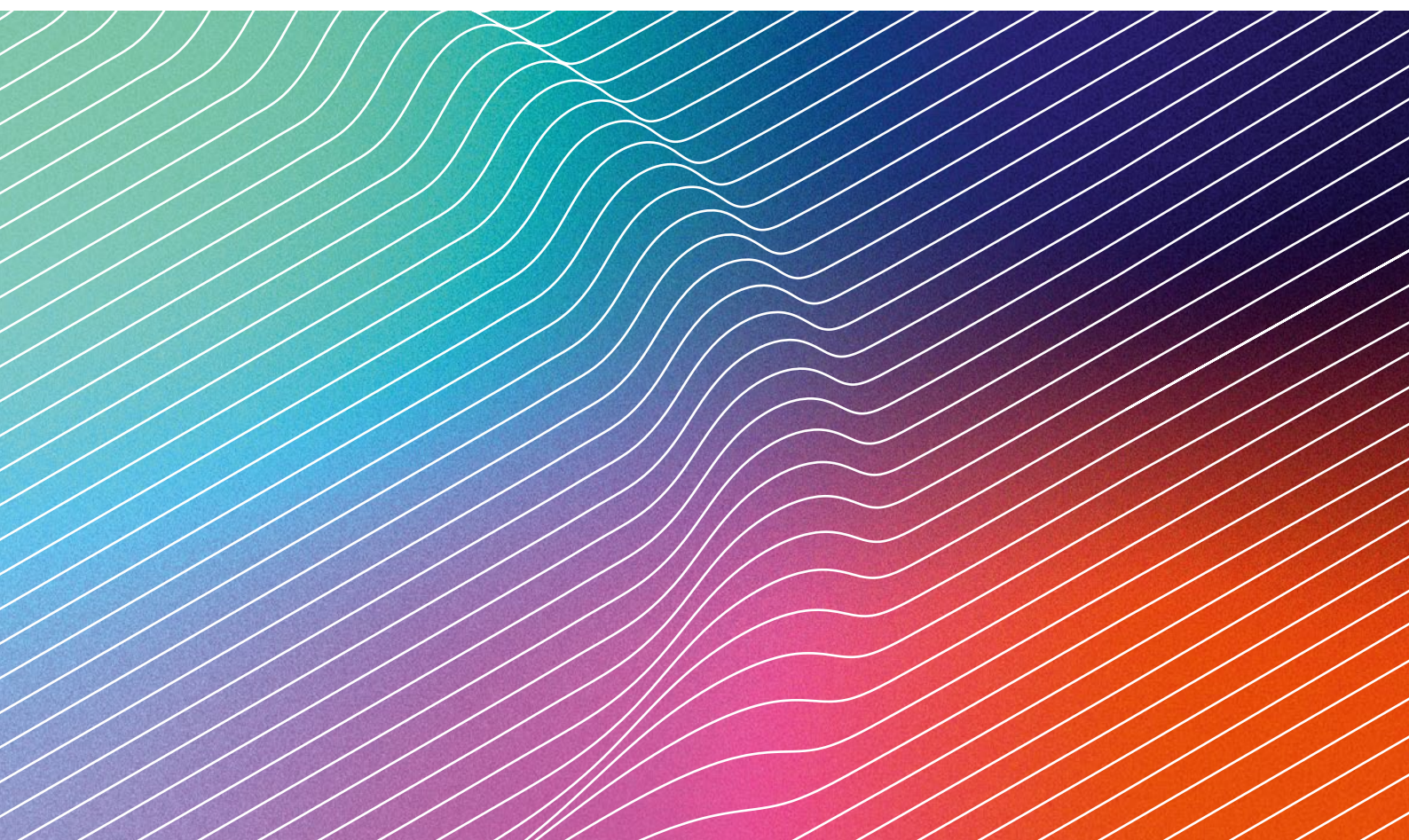
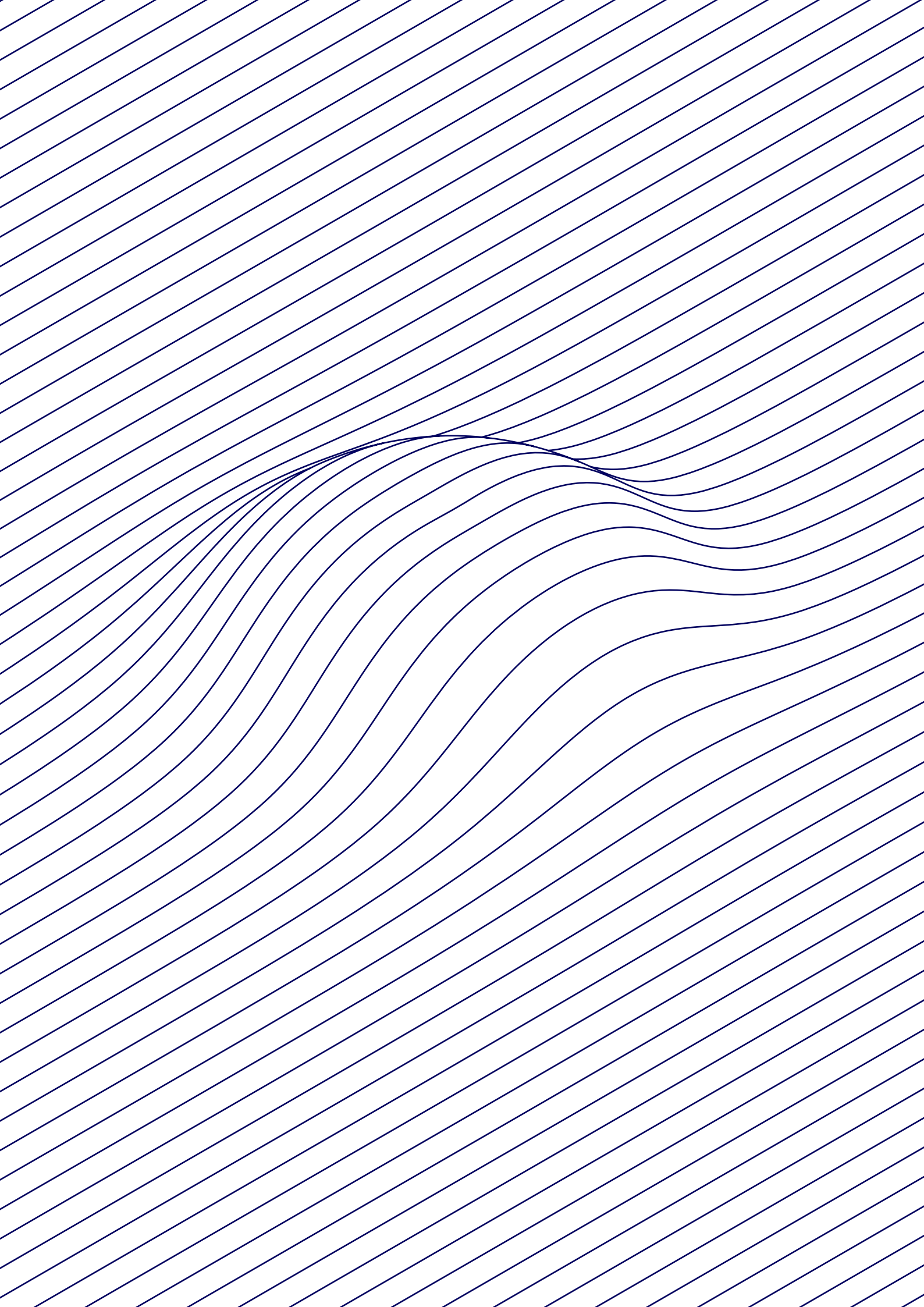


Annual Report 2021





20th anniversary!

Editorial

In 2021, we celebrated HAL's 20th anniversary. It was an opportunity to assess how far we have come and outline future prospects with the key parties involved in its creation and development.

At the beginning of its third decade, HAL has become the national open archive, the real “shared home of French research”. The figures speak for themselves: we exceeded 80 million annual downloads, 85,000 active users, 130 institutional portals and one million scientific documents.

The dynamic of filing full text is properly established with 146,000 new documents. We continued work on improving HAL interfaces, with the first phase of deployment taking place in 2022, and managing identifiers—integration of ROR into the metadata of research structures, automatic recovery of metadata associated with a SWHid, curation of metadata of ANR projects, optimisation of Author identifiers.

The CCSD team also successfully kicked off two Episciences projects—FNSO, OpenAIRE Nexus—, formalised a service offering for the publication of diamond journals and enabled the creation of 1,500 events with Sciencesconf.

All of these achievements work towards a shared goal, namely to simplify the procedures of our user communities and establish the three CCSD platforms as part of the national and international Open Science ecosystem. This led to HAL+, encompassing HAL, Episciences and Sciencesconf, being recognised as a research infrastructure in the 2021 edition of the national roadmap of the Ministry of Higher Education, Research and Innovation.

Finally, year 2021 saw the implementation of a new governance model for the CCSD, validated by the Committee for Open Science—Steering Committee, Orientation Committee, HAL Partners Assembly. This shared and inclusive governance now involves users, i.e. researchers and institutions, in defining the strategy of the three CCSD platforms. The last brick of this new system will be laid in 2022 with the establishment of an International Scientific Council.

Nathalie Fargier,
director of the CCSD

March 2022

Publication director: Nathalie Fargier

Writing : Agnès Magron, CCSD's team

Page layout and data visualisation: Marion Gaigeot

Graphic design: Graphéine



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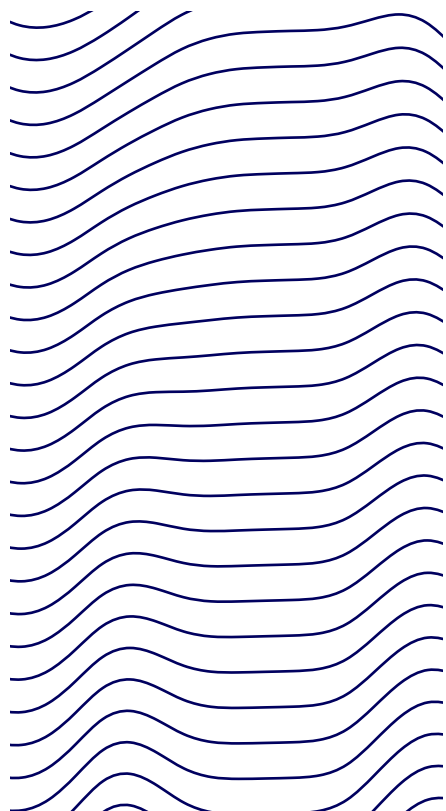
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The CCSD

The French Steering Committee for Open Science approved a new system of governance for the CCSD in 2020. Open to all HAL partner institutions and internationally-oriented, it comprises 4 bodies: a Steering Committee, an Orientation Committee, a Partners' Assembly and an International Scientific Council.



The CCSD's missions

The CCSD's key mission is to offer researchers and associated institutions—universities, schools and research institutes—the tools they need to facilitate any form of direct scientific communication and to support the communities who use them. It is a major player in national policy and institutional policies in favour of Open Science, including the French National Plans for Open Science—*Plan national pour la Science Ouverte*, PNSO—whose objectives are to generalise open access to publications and to structure and open up research data.

The CCSD designs, develops and administers three platforms for archiving, disseminating and capitalising on scientific publications and data:

- HAL, the multidisciplinary open archive of French research and all its associated portals,

- Episciences for journal publishing and editorial innovation, and
- Sciencesconf for organising scientific events.

These platforms allow the research and higher education community to make their output visible, findable, usable and accessible in the long-term and thus regain control of the scientific production process.

The CCSD fulfils two key missions: the first is to participate in the work of developing and creating the repositories needed to identify French scientific output and the second is to participate in any French and international—particularly European—initiative concerning open archives and Open Science that helps improve the quality of the service provided to scientific communities and the visibility of their output.

Governance

The first milestones

2021 saw the gradual implementation of this new system of governance.

In January, the Steering Committee approved the method and timetable for setting up the various bodies.

In July, for the first time, the CCSD arranged a meeting of all institutions with their own HAL portal. This assembly marked a new phase of interaction and dialogue between the CCSD and its institutional partners.

The members of the assembly elected five representatives to sit on the Orientation Committee, which met in October. Finally, the chair of the Steering Committee engaged experts in public scientific publishing and open archives to form the future International Scientific Council of the CCSD whose work will begin in the first half of 2022.

Composition of the bodies

Steering Committee

CNRS, INRAE, Inria, MESRI, France Universités, director of the CCSD.

Orientation Committee

The members of the Steering Committee along with the 5 elected representatives of the Partners' Assembly, a representative of the Episciences platform and the president of the International Scientific Council.

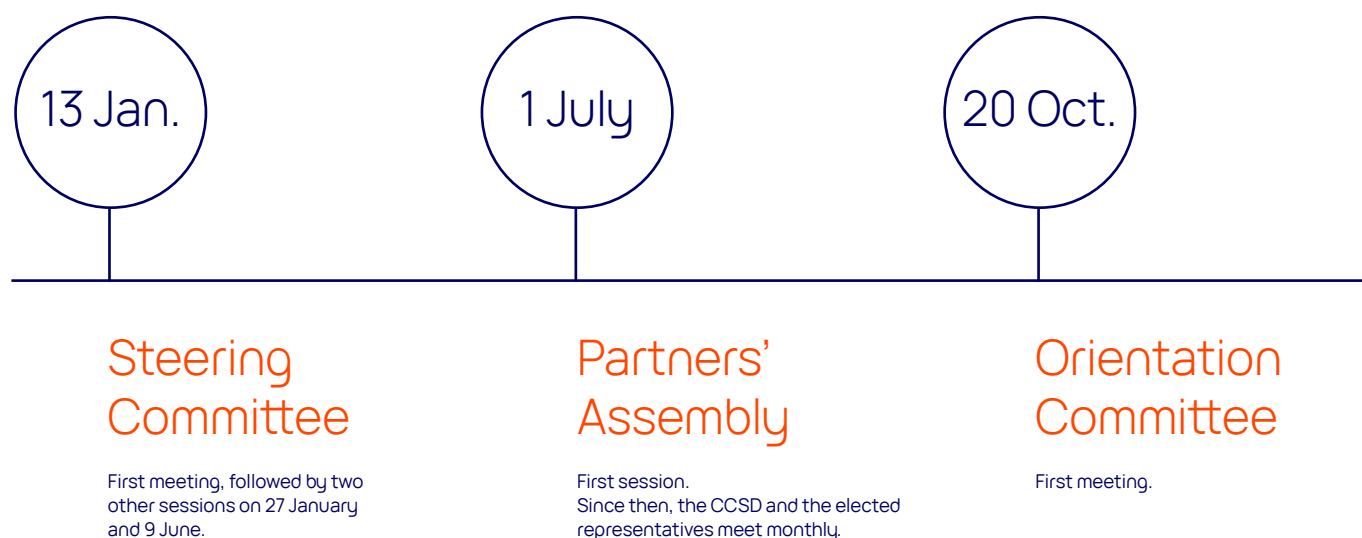
Partners' Assembly (PA)

One representative from each institution with a HAL portal.

International Scientific Council—

Conseil scientifique international, CSI
11 experts in the field of scientific publishing and open archives.

Meetings of the different bodies



2021 highlights

An anniversary, a new milestone for the CCSD's governance, a new development in the national Open Science policy



Celebration of HAL's 20th anniversary

2021 marked HAL's 20th anniversary: we were reminded of this throughout the year by a logo on the platform's homepage, a section in the newsletter and tweets—timeline, quiz—but it was on 24 November that the CCSD celebrated the event at the Musée des Confluences in Lyon.

The CCSD team and governing bodies were joined by the key players in its history as well as the people and partners who support it. All the speeches highlighted the collective

work represented by HAL, which has become a cornerstone of the national strategy for Open Science, a "shared home for French research" in the words of the government minister of Higher Education, Research and Innovation (MESRI), Nicolas Chaillet. The new visual identity of HAL and the CCSD platforms was presented during the occasion.

The ceremony was broadcast live on YouTube and a brochure "The Odyssey of HAL 2001-2021" was produced.

First session of the Partners' Assembly

Part of the CCSD's new system of governance, the Partners' Assembly brings together representatives of institutions with their own HAL portal. Spring of 2021 was dedicated to creating this body—each of the 130 institutions was invited to appoint a representative—and organising the election to appoint five of these representatives who sit on the Orientation Committee.

On 1st July, the first meeting of the assembly was held remotely, attended by 104 representatives. The CCSD offered insights on the projects it is involved in. This was followed by a period of discussion about the Assembly conducted jointly with the five elected officials. A survey sent to the

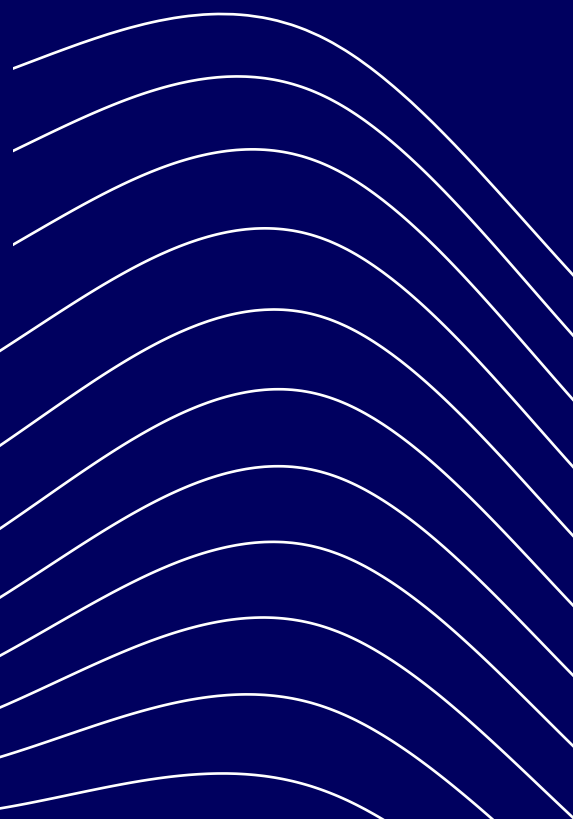
representatives in advance determined the themes of five workshops: strategies to increase full-text articles in HAL; indicators to facilitate research monitoring; links between publications and related/associated data; repositories and affiliations; and ways to optimise the moderation of deposits.

These discussions and workshops helped lay the foundations of how activities will be organised, including monthly meetings involving the CCSD and the elected representatives of the Partners' Assembly since September 2021, a webinar on the changes in HAL ergonomics organised in December and a working group on moderation created in autumn.

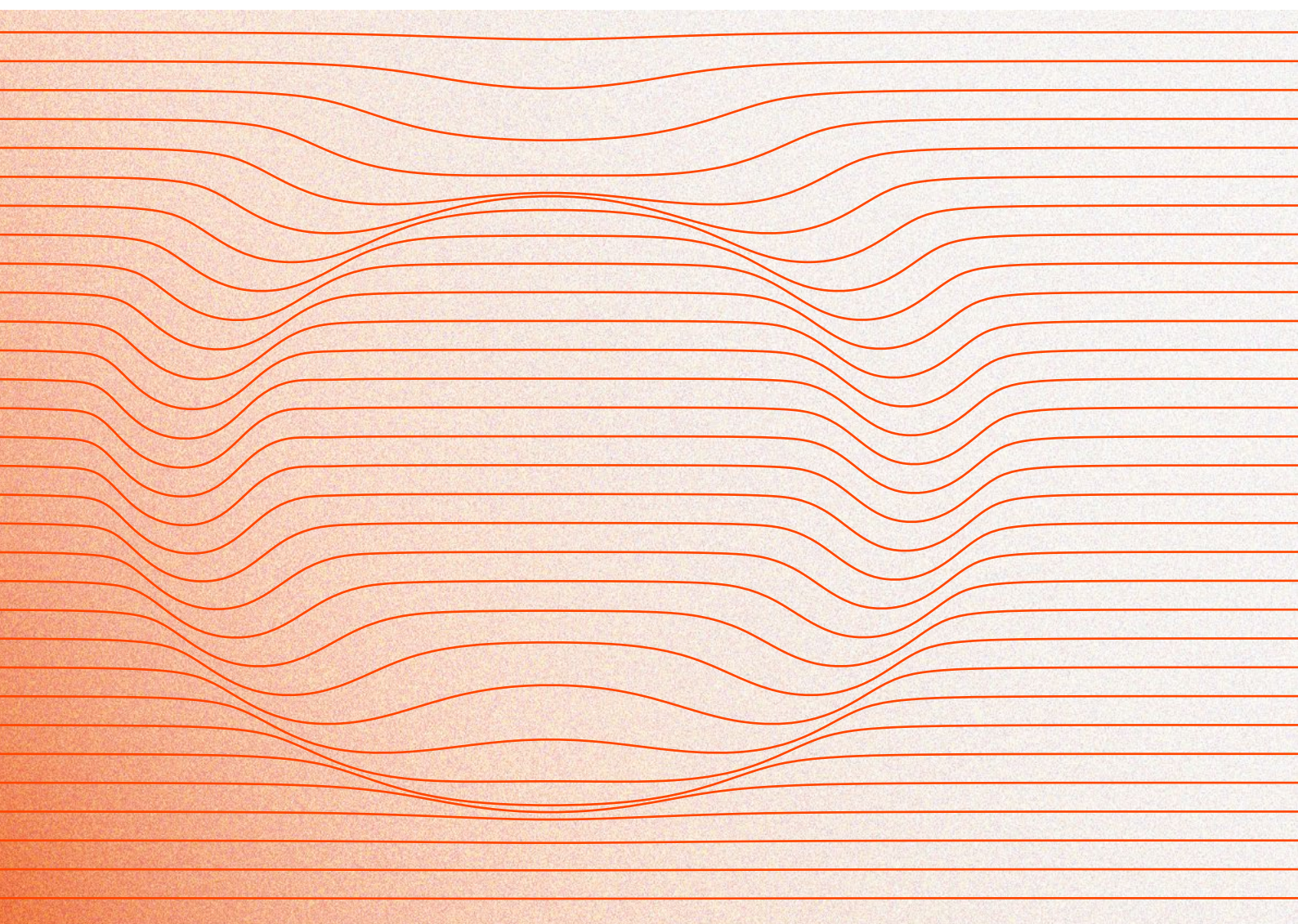
HAL+, a labelled research infrastructure

HAL+ was recognised as a research infrastructure in the 2021 edition of the national roadmap, which pays greater attention to the cross-cutting issues of Open Science and Data, in accordance with France's commitments in this area.

HAL+ encompasses the three CCSD platforms: HAL, the multidisciplinary open archive of French research and all its associated portals, which is the primary driver; Episciences for editorial innovation and publication of articles in diamond open access; SciencesConf for the organisation of scientific events.



Scientific open archive



Redesign of HAL ergonomics

The project is part of an effort to simplify HAL for its users, with a redesign of interfaces to improve the overall user experience.

The first phase of the project is under development: it focuses on the researchers' background and includes account creation, deposit form, idHAL creation and, more generally, the paths from home page to deposit (search, view).

A second phase of the project focuses on the administration screens: portal administration, collection management, user management, deduplication and moderation. The CCSD has set up a working group involving users to monitor the design agency's services. The developments are planned as part of the EquipEx+ HALiance project.

In addition to these two phases, a cross-sectional study is being conducted on upgrading the general interface of the portals and standardising their design in the HAL environment. Integrating recommendations requires awareness-raising and communication actions—webinar organised for the members of the partners' meeting—and will require CCSD support in 2022.

AuréHAL

Changes in Author reference data

The planned overhaul of the author base continued in 2021 and was presented at the event organised by users group CasuHAL in June. A test platform was made available with the aims of collecting comments from administrators on the interface and identifying bugs.

In anticipation of migration to the new base, the CCSD carried out an essential data clean: correction of ID entry mistakes, drop due to automatic retrieval from the PDF file or copy/paste during filing, elimination of multiple author forms. This clean related to about 100,000 author forms.

Curation of ANR project data

In partnership with the National Research Agency—*Agence Nationale de la Recherche*, ANR—, a major data curation project was also carried out on the reference data of projects funded by the ANR: nearly 6,000 duplicates deleted and more than 4,500 unknown projects requalified.

The portal is now automatically fed with the data that the ANR now publishes on the national platform data.gouv.fr.

This work allows researchers to easily associate their publications with an ANR project. It is now possible to have a complete view of a project, its actors and its publications. More than 30,000 documents associated with an ANR project are referenced in HAL.

Implementation of national licence agreement with the publisher Elsevier

5,745 files imported

The national license agreement signed with the publisher Elsevier (2019-2022) provides for the supply of the metadata of articles by authors affiliated with French higher education and research—*enseignement supérieur et la recherche*, ESR—as well as the files containing the accepted version—accepted author manuscript or AAM—of the corresponding affiliated authors for incorporation into HAL. Dissemination within HAL is authorised 2 years after the publication date of the article.

Implementing this part of the agreement is CCSD's responsibility and required significant preparatory

work (6 months FTEW by an engineer): analysis of the data supplied by the publisher (metadata and files), development of a workflow, data curation, identification of author affiliations and alignment with the reference data of the research structures and implementation of an opt-out feature.

With the support of the CasuHAL user community who offered to help, meticulous verification work was carried out for the research structures of about thirty institutions, representing a volume of just over 4,200 affiliations processed by the CCSD prior to import.

Strengthening interoperability

Author ORCID iDs are retrieved during metadata retrieval with Crossref (DOI) or by Grobid (file).

The ROR identifier is available in the metadata of research structures (affiliations). Existing data with this identifier, based on a match with the ISNI identifier, was supplemented on 663 structures.

Metadata associated with a SWHid (Software Heritage) identifier can be retrieved automatically for filing software notices.

Changes in document typology

Distribution of the working group report

Created at the end of 2020, the working group made up of representatives of user communities and led by the CCSD published its recommendations in May 2021 for a change in the typology of textual documents, common to all HAL users and corresponding to the

archive values—full text of scientific documents, simplicity of deposit and interoperability).

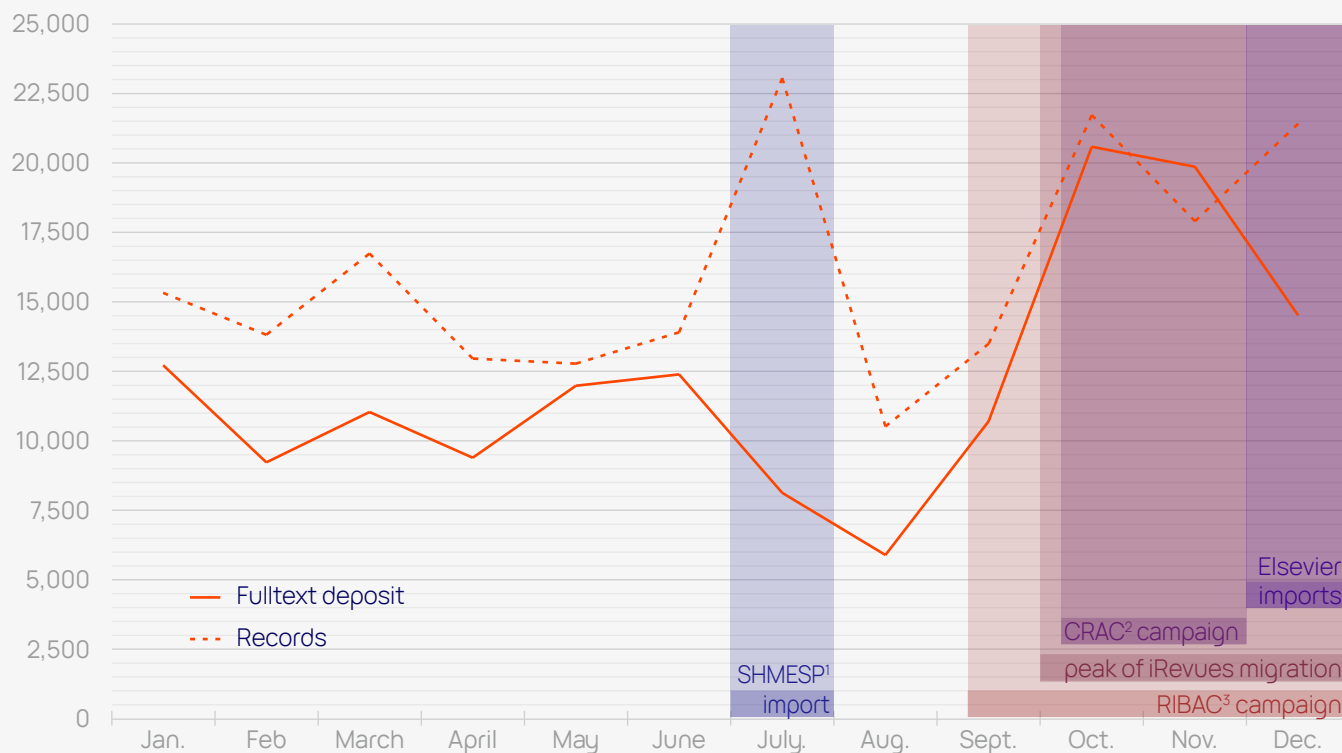
Developments to integrate this new typology are in progress.

86,353

active accounts

as of 6 January, 2022

Deposits per month in 2021



¹Society of mediaevalist historians of the public higher education

²Activity report for CNRS researchers

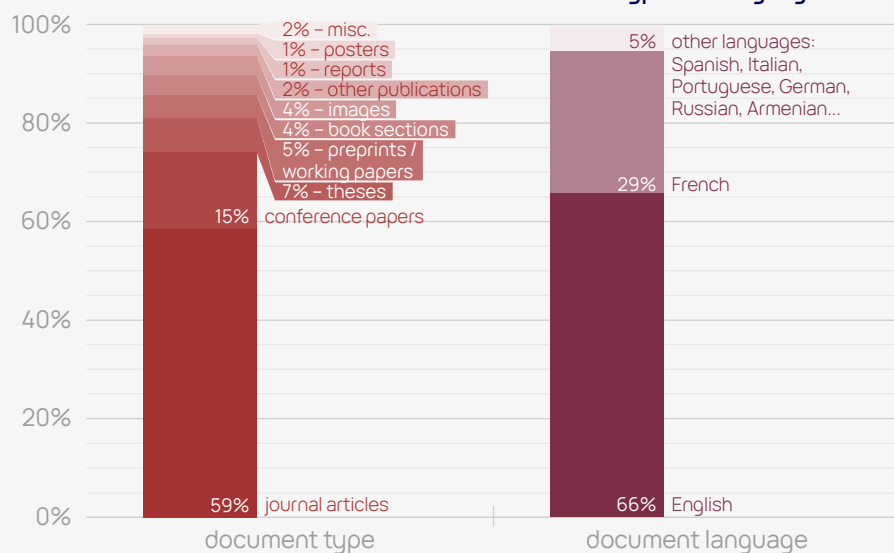
³Activity report for CNRS HSS researchers

1,000,334
fulltext documents

in HAL as of
6 January 2022

146,338 of which
deposited in 2021

Fulltext document type and language in 2021



Use of software source codes

The collaboration with Software Heritage (SWH) and Inria IES (information and scientific publishing) continued in 2021 leading to a new stage in the use of source codes in HAL.

As a follow-up to the Scholarly Infrastructures for Research Software (SIRS) report, new discussions between HAL and SWH were arranged. If the source code is already in Software Heritage, the researcher can indicate this in HAL by associating the metadata with the SWHID. Mechanisms for automatic retrieval of metadata using the SWHID were also added.

Under test in the HAL-Inria portal, the workflow requires a moderation of the records thus created.

The partnership was presented at the 5th anniversary of Software Heritage in Paris on November 30th.

Consolidation of the management of viewing statistics

Improving the management of viewing and download statistics continued in 2021.

The CCSD engaged a specialised Elasticsearch service provider to perform an audit on the infrastructure which backed the choices made and gave recommendations. Viewing logs from 2011 to 2017 were securely integrated into the database, doubling the volume already managed to 820 million events.

From 2018, the system set up for viewing event management is ezParse, used by University libraries to analyse logs to the electronic resources they are subscribed to. The data was already available in the Kibana tool made available to portal administrators. Developments have been carried out so statistical indicators are also available in HAL.

The HAL code used for disseminating documents issued by the Prime Minister's Office

Officially opened in December 2021, the platform for official government documents `documentation-administrative.gouv.fr` uses the HAL code and is hosted by the CCSD.

Requested by the Direction of Administrative and Financial Services of the Prime Minister's services—*Direction des services administratifs et financiers*

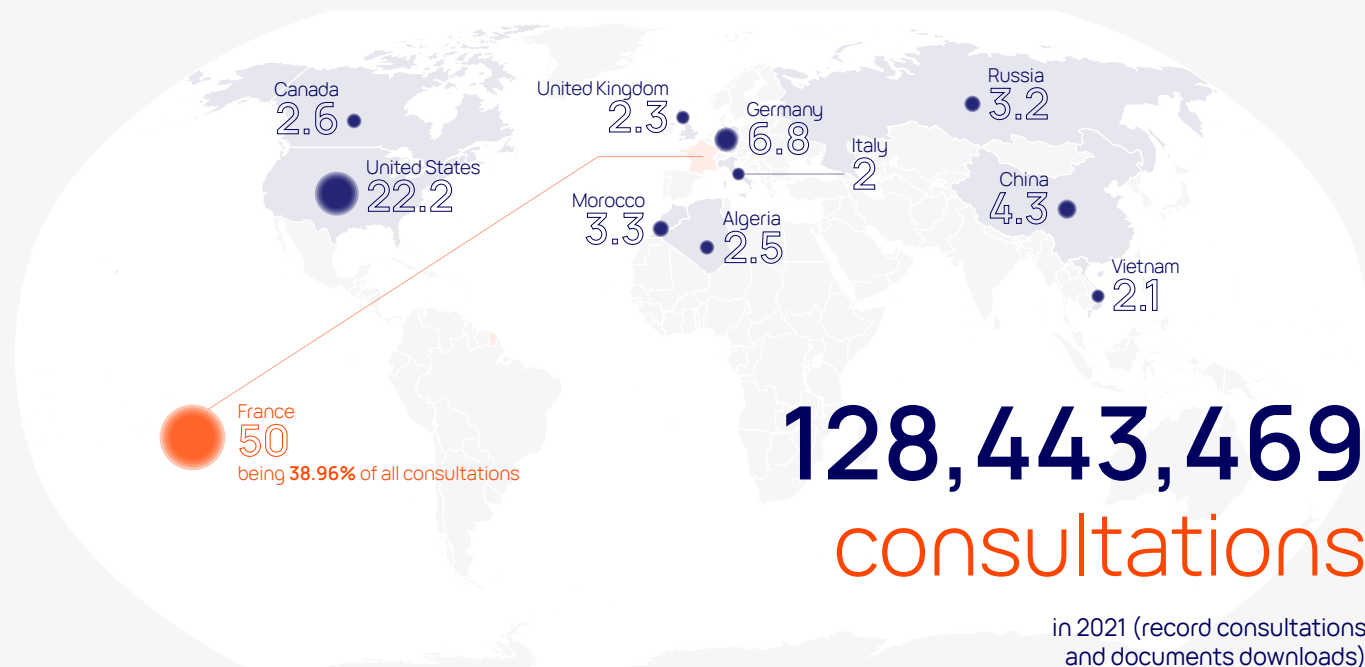
des services du Premier ministre, DSAF—, under the authority of the Prime Minister, the project began in 2018. It consists of a separate platform from HAL's since it is intended for storing and disseminating administrative documents described by specific metadata and reference data.

As part of the project, two audits were conducted to ensure HAL complied

with the specification: a security audit that allowed the correction of multiple vulnerabilities and an accessibility audit.

Since the project has its own test platform, it was also possible to test the HAL code on new architectures (SolrCloud, new version MySQL...).

Top 10 countries—plus France—with the most consultation logs
(record consultations and document downloads) in 2021 (billions)



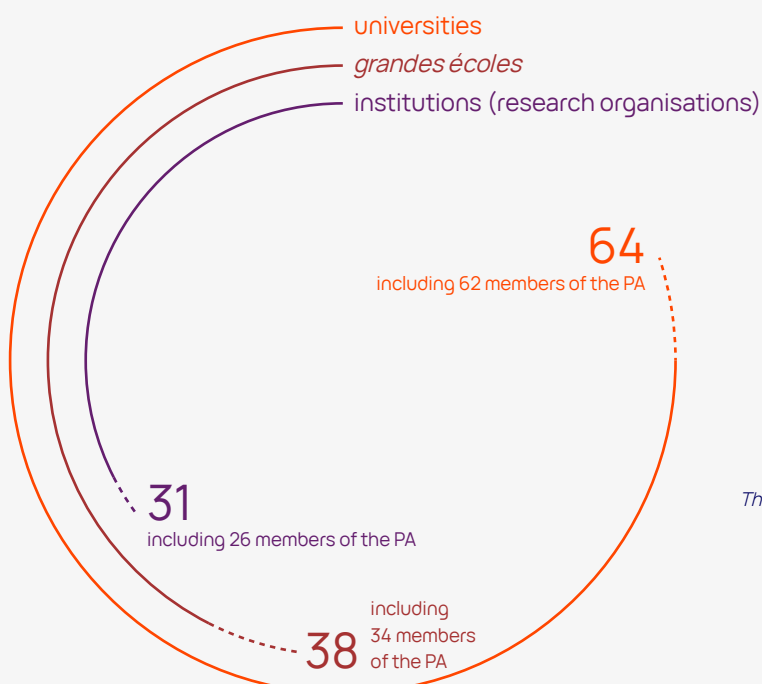
About HAL portals

4 portals were created in 2021:

- Université de Picardie Jules Verne,
- INSA Lyon,
- Université catholique de l'Ouest,
- Université du Littoral Côte d'Opale.

Sciences Po Paris project

The closure of the SPIRE institutional open archive had a significant impact on HAL, with the migration of SPIRE data not present in their existing HAL portal and a project to improve the quality of data. The portal will open in 2022.



133
institution
portals

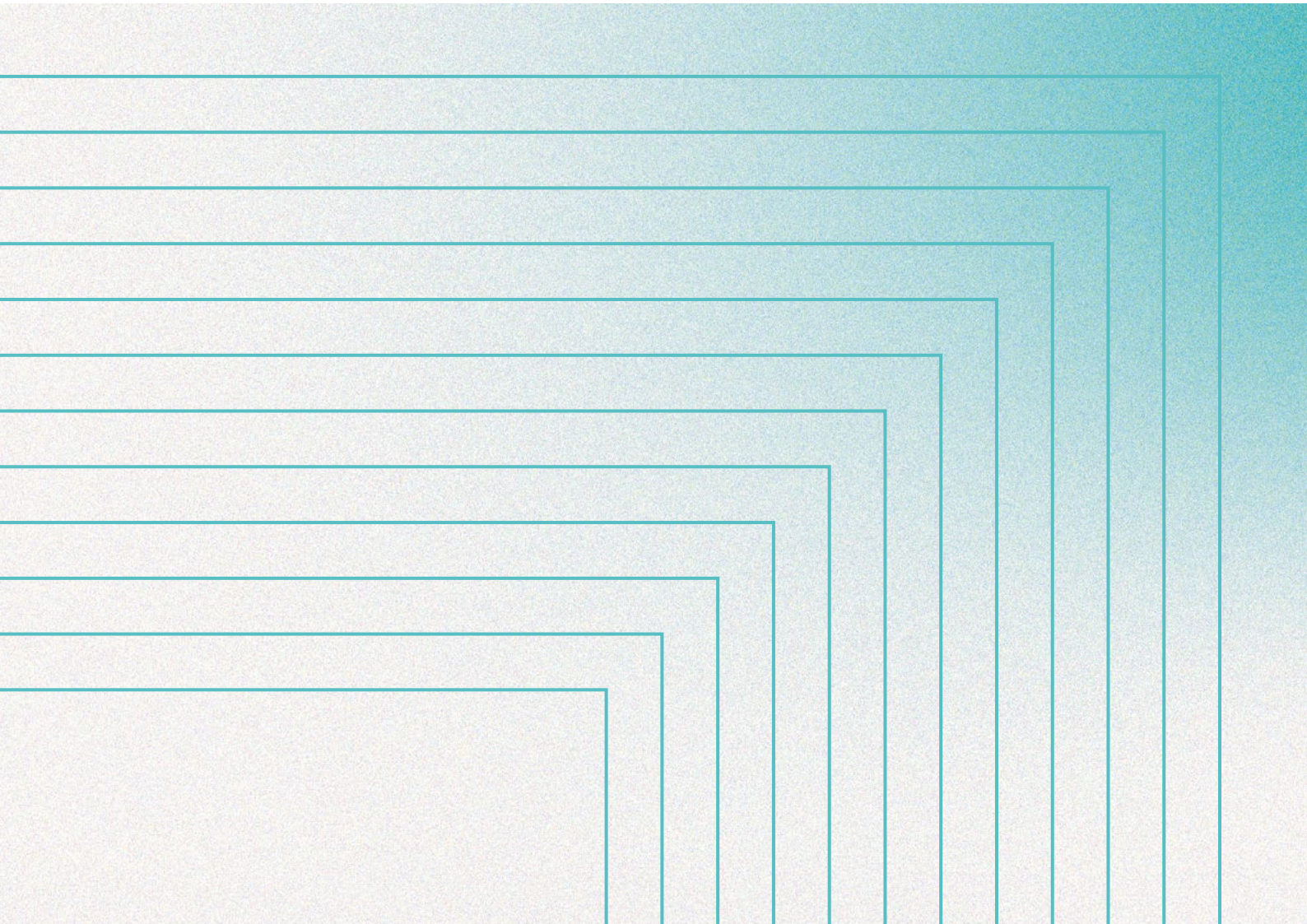
The dotted lines are for institutions with no representatives at the Partners' Assembly—supervising bodies, applications not yet answered. In 2021, 122 institutions attended the Partners' Assembly (PA).



EPIsciences
overlay journals

Diamond

open access journals



22 journals

The platform has 22 journals including 5 new ones created in 2021:

- *Communication in Mathematics*,
- *Environnement, Ingénierie & Développement*,
- *The Journal of Philosophical Economics*,
- *Open Communications in Nonlinear Mathematical Physics*,
- *TheoretiCS*.

The EpiSSH epiCommittee including researchers in the social sciences and humanities (SSH) was created in 2021. Its mission is to promote Episciences to SSH communities and evaluate and examine proposed journals for the platform.

Start of the European OpenAIRE Nexus project

2021 saw the start of the European OpenAIRE Nexus project funded by the European Commission grant 101017452: “OpenAIRE Nexus—OpenAIRE-Nexus Scholarly Communication Services for EOSC users”.

The objective for Episciences is to be an integral part of the EOSC structure, to be integrated into the European cloud service catalogue and interconnect with other OpenAIRE-Nexus Services.

In this context, Episciences is now interconnected with Zenodo platform, enabling researchers to propose pre-prints hosted by Zenodo to Episciences journals.

The Episciences platform is also connected to OpenAIRE Provide and OpenAIRE UsageCounts.

OpenAire Provide allows journal data to be harvested by OpenAIRE and then injected into OpenAIRE Research Graphs. OpenAIRE Research Graph is an open resource that brings together a collection of research data properties—metadata, links—available within the OpenAIRE Open Science infrastructure to link information using a semantic graph database approach. It will soon be possible to add to the metadata of articles hosted by Episciences through OpenAIRE graph APIs.

A developer has been recruited for this project.

Support for journals

Setting up a service offering

With our new editor, we have been able to progress the deployment of a complete range of services to provide daily support to teams in charge of overlay journals. The editor assists the editorial teams in choosing a CC licence, developing an ethics code according to the COPE principles and implementing a copyright assignment agreement. Work to raise awareness of the criteria of good editorial practice and open science (FAIR principles) has also been undertaken.

A “Listing” working group, across the three epiCommittees, has been created and is working collaboratively on the indexing of overlay journals in different specialised databases (DBLP, DOAJ, ERIH Plus, EZB, Mathscinet, Mir@bel, Sherpa Romeo, zbMath, etc.). We partnered with Mir@bel at the end of 2021 to enable the indexation of all journals.

The CCSD also handles ISSN requests submitted to the BnF and the acquisition of DOIs from Crossref.

Content Terms of Use

Work to develop the Terms of Use for the platform was undertaken in collaboration with the services of the Rhône Auvergne Delegation of the CNRS. This work, currently being reviewed by the CNRS legal department, should be completed in early 2022.

9,800
user
accounts

2,000 created
in 2021

COAR Notify Working Group

Episciences contributed to the COAR Notify Working Group by providing use cases representative of how an overlay journal works with an open archive. Use cases specific to HAL were also presented at this time.

DOI assignment

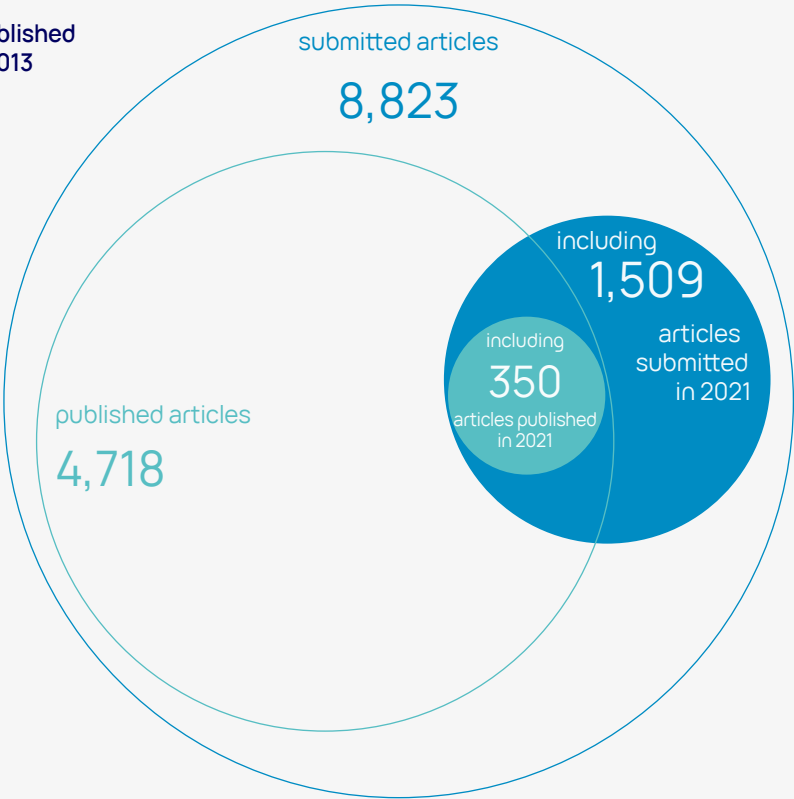
DOIs were assigned to all journal articles that did not have one, i.e. the majority of published articles.

For articles with DOI, DOI management was transferred from the previous publisher to the CCSD. All the operations were financed by the CCSD, through its membership of Crossref.

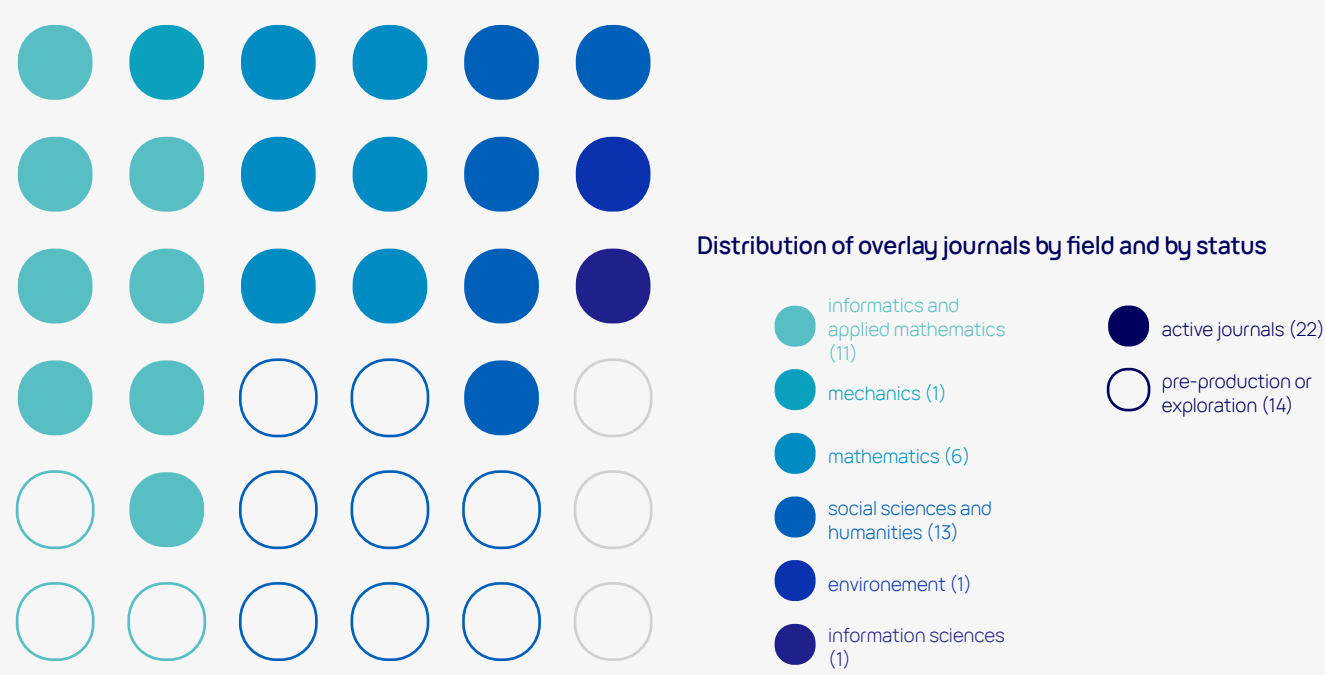
Opening and improving the platform

Following the opening of the Episciences code at the end of December 2020, it was decided to open and publicise requests for platform features and improvements. This has made it possible to develop new functionalities in a more open and collaborative way, such as conflict of interest management, or even improved links between publication, research data and software.

Articles submitted and published in overlay journals since 2013



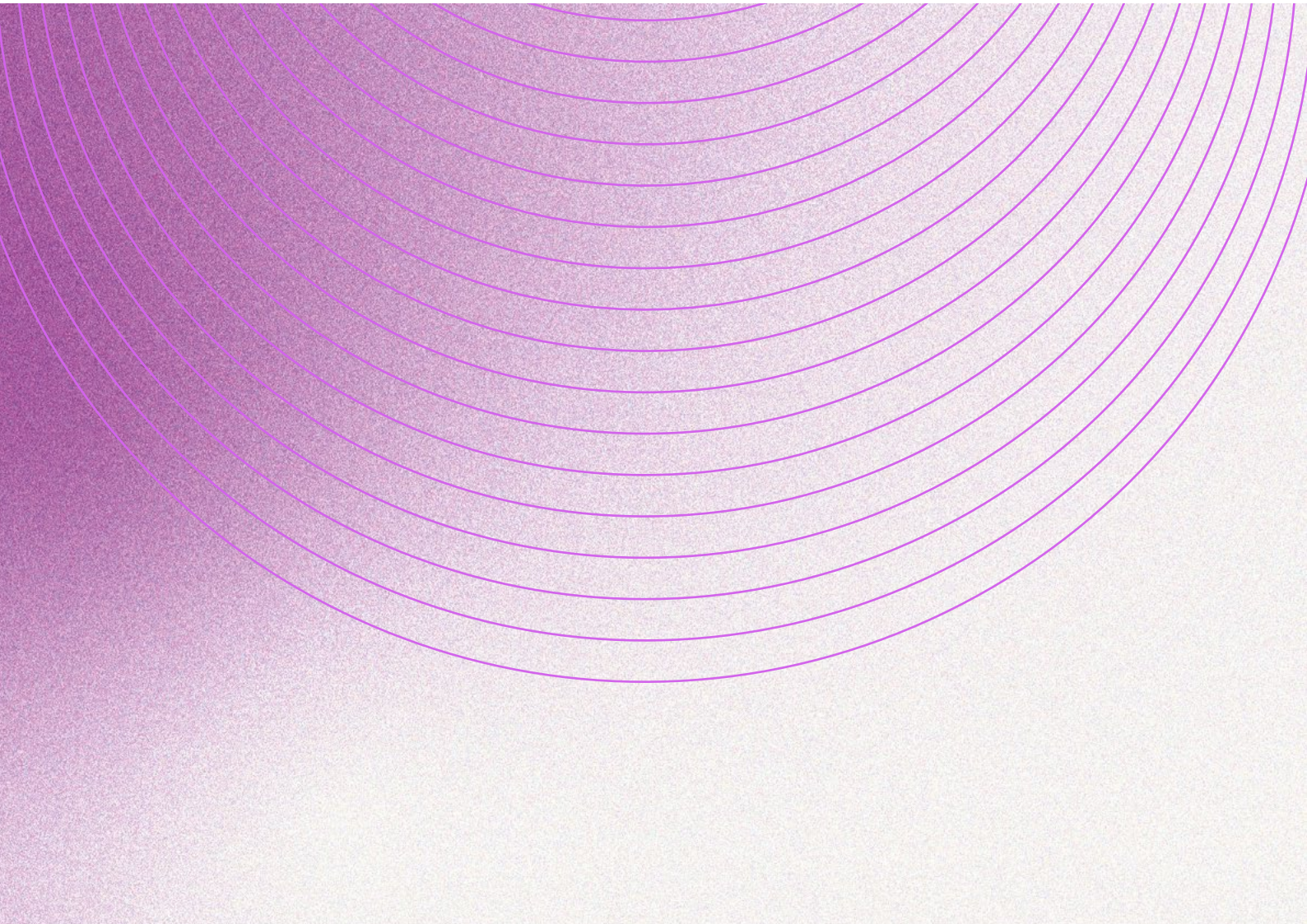
Origin of the article submitted to overlay journals





sciences **CONF**
conference management

Scientific conference management



9,865
conferences

as of 31 December 2021

1,509
requests

for new
conferences
in 2021,

a 30% increase
in comparison
with 2020

Platform analysis

An in-house in-depth study of the Sciencesconf platform was carried out in 2021 after ten years of operation.

The study is divided into four themes:

- a technical assessment of the platform;
- a quantitative and qualitative assessment;
- a competitive analysis of scientific conference management solutions;
- an analysis of user profiles.

This study will help create an action plan to develop the platform.

Transfer of old sites to static

The work on phasing out sites with the oldest events was continued in 2021: only the public part (offline) is visible, making it possible to optimise access times for the most recent sites.

In 2021, 1,670 sites corresponding to events between 2017 and early 2018 were therefore switched to static sites.

Content Terms of Use

The writing of the Terms of Use for Sciencesconf has been carried out alongside those for Episciences, in 2021, in order to guarantee their consistency.

This work is currently awaiting approval from the CNRS legal department.

41,922

communications

submitted to
Sciencesconf
(fulltext or abstract),
being a 25% increase in
comparison to 2020.

Improving the transfer of communications to HAL

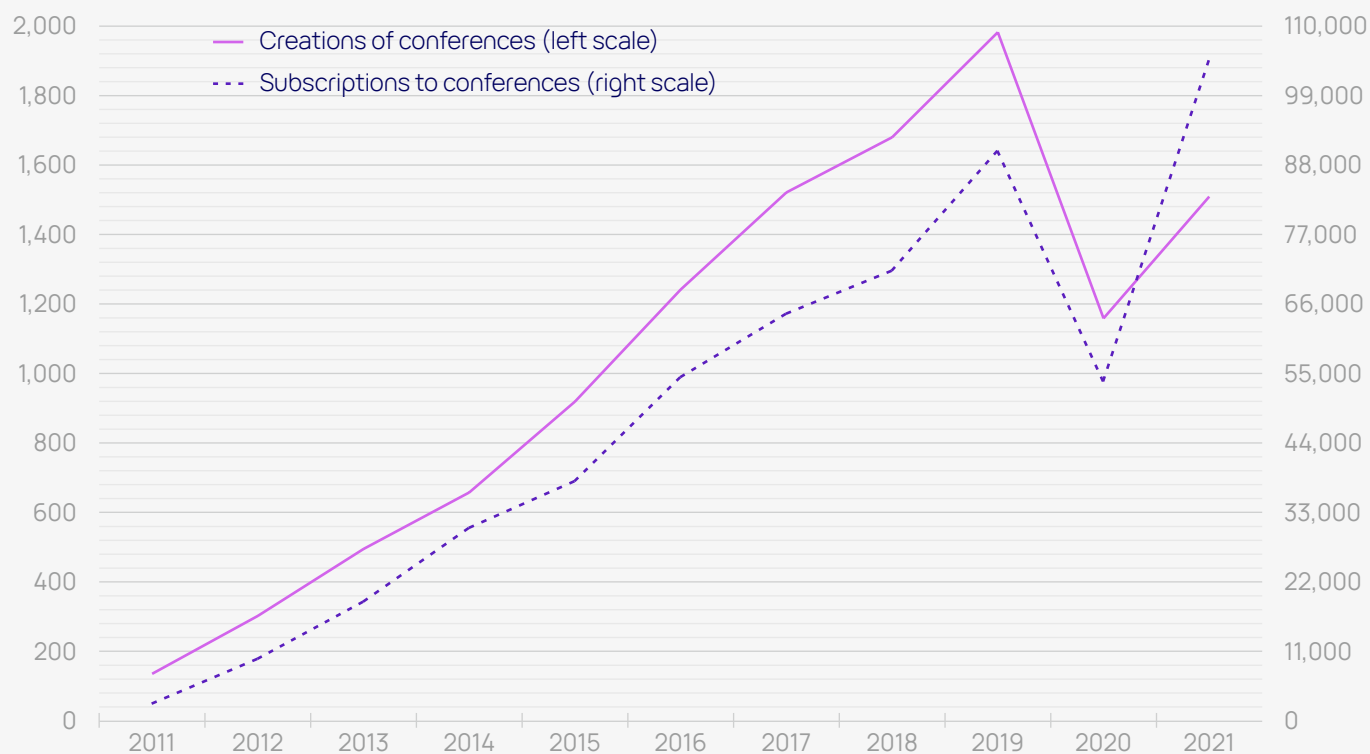
Becoming an established part of the HAL ecosystem and facilitating the transfer of full-text communications into the archive was defined as a priority by the Sciencesconf roadmap.

Various developments have been made to meet this objective:

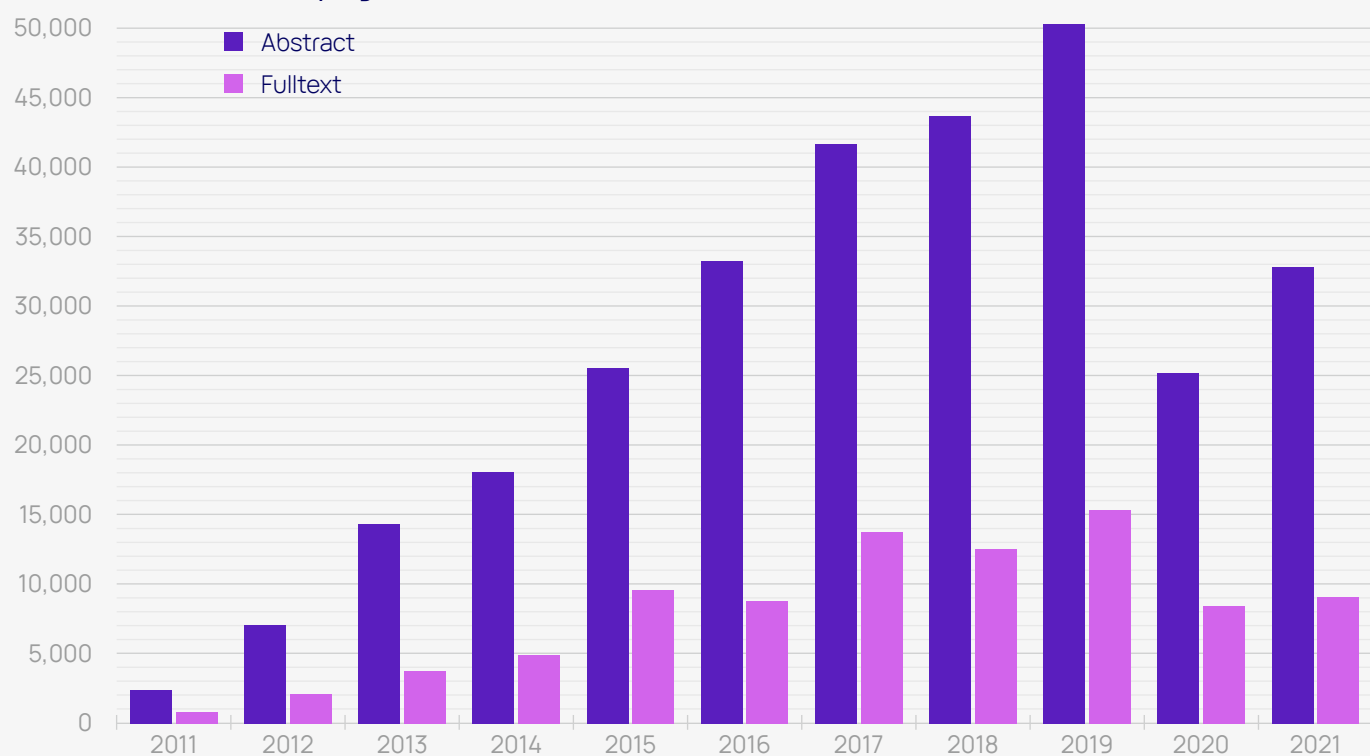
- the addition of a page about export to HAL in the Sciencesconf documentation,

- information about export to HAL was added to the request for creating a conference,
- the use of all levels of AuréHAL research structures for affiliations when submitting a communication,
- the systematic import of the abstract in the metadata.

Creations of and subscription to conferences per year (2011–2021)



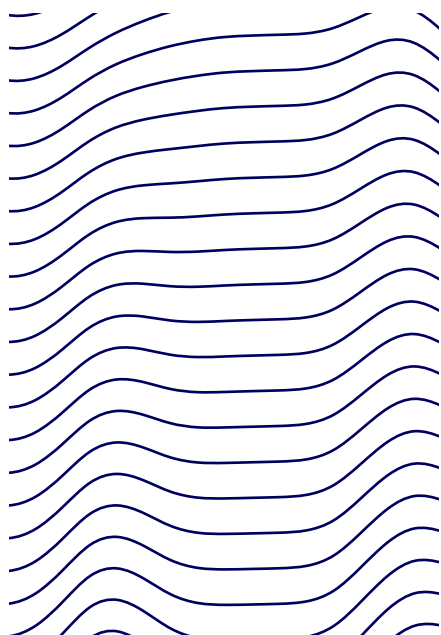
Communications submitted per year (2011–2021)



User support and assistance

1,085
users
trained

including 65% of
researchers



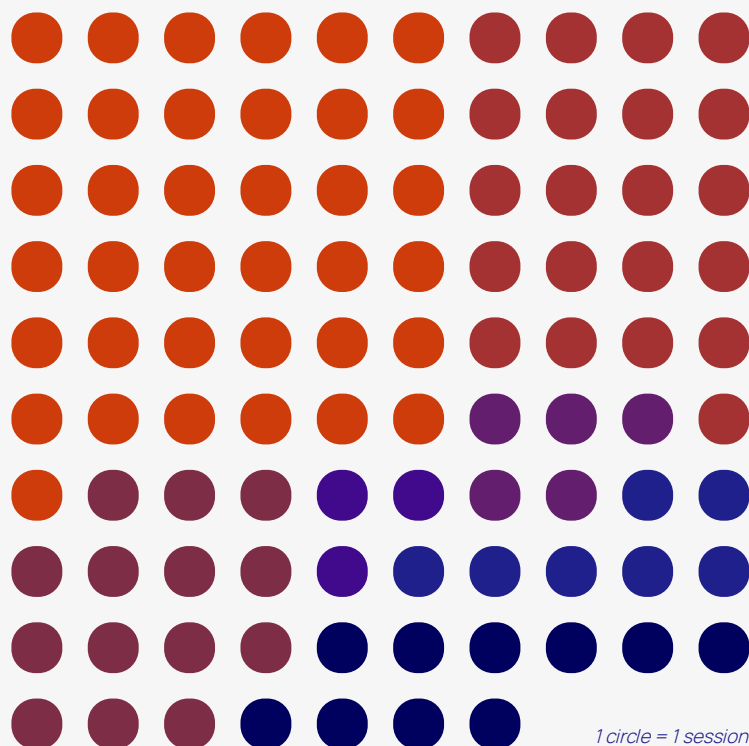
The support service in 2021

The period from the beginning of October to the end of November when CNRS researchers post their activity report—*Compte-rendu annuel d'activité des chercheurs*, CRAC—is a period of intense activity for the support service. In 2021, the level of use of the support service was reduced. This can be explained by the fact that it's the second year of the requirement for full-text deposits, and by the maintenance of the process set up in 2020 that decorrelates the entry

of the CRAC form from the deposit being put online after moderation.

In 2021, the CNRS extended the obligation to deposit the full text to include researchers in humanities and social sciences when entering their RIBAC form, which is the annual reporting campaign specific to CNRS HSS researchers. The campaign took place over a wider period (9 September 2021 to 6 January 2022).

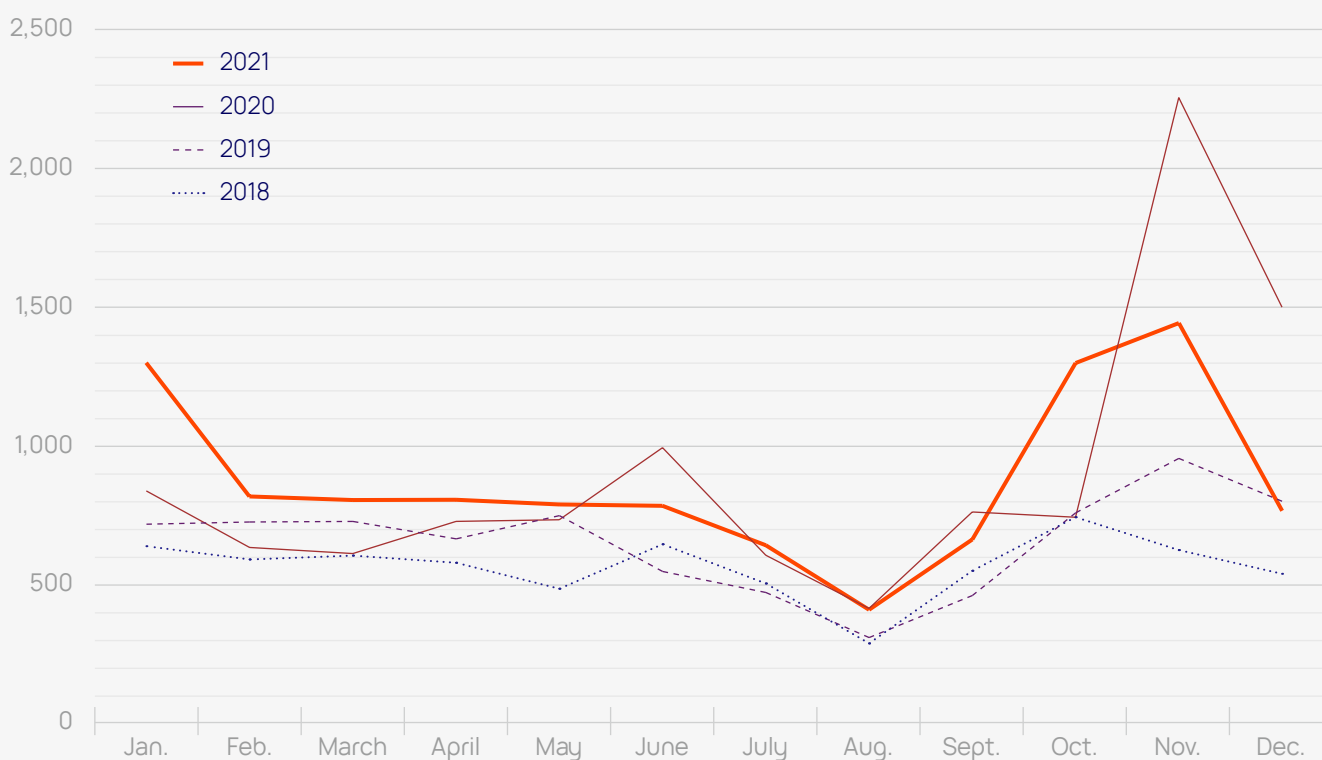
Training sessions in 2021



97 training sessions

- Webinar—Deposit in HAL
37 sessions / 411 participants
- Webinar—Creating an idHAL and a HAL CV
21 sessions / 173 participants
- Webinar—Collection and structure managers
14 sessions / 186 participants
- Training—Portal administration
5 sessions / 45 participants
- Training—Moderating
3 sessions / 7 participants
- Other training organised by the CCSD
7 sessions / 90 participants
- Training coordinated by other organisations (Urfist, Mediadix, Enssib...)
10 sessions / 173 participants

Tickets received per month between 2018 and 2021



Communication

Two important projects carried out in 2021

Redesign of the brand identity of the CCSD and its three platforms

Selection of service provider (Graphéine), project oversight, communication and deployment of new logos and new visual identity. The aim of the project is to create consistency and uniformity between the CCSD logo and the logos of the three platforms it is developing.

This project was also an opportunity to rename TEL, now HALtheses, to clarify that it's part of the HAL ensemble.

Celebration of HAL's 20th anniversary

Organisation of official ceremony, production of a brochure "The Odyssey of HAL 2001-2021".

The speeches at the ceremony were recorded and broadcast on the CCSD YouTube channel created for the occasion.

New brand architecture of the CCSD



CCSD ● ■ ■
Centre pour la Communication
Scientifique Directe

Additional content for CCSD website

New content has been added to the CCSD's institutional site to describe more clearly its involvement in the Open Science environment, notably through the list of working groups in which the team participates or winning projects for funding.

The member institutions of the Partners' Assembly are also presented, highlighting their commitment to Open Science.

ActuHAL newsletter

To improve communication with users, a newsletter called ActuHAL has been created and disseminating essential information and news about HAL and its environment every two months since January 2021.

Communication channels of the CCSD

Twitter account @hal_fr

8,759 followers,
+ **9%** in comparison with 2021

215,175 tweets impressions

2.29% average
engagement rate

Twitter account @ccsd_fr

3,307 followers,
+ **10%** in comparison with 2021

240,466 tweets impressions

2.57% average
engagement rate



CCSD Blog

14 blogposts published

4,363 cumulative visits
on blogposts

CCSD LinkedIn account

155 followers

3,533 unique impressions
combined on all posts

5.58% average
engagement rate

1,421 subscribers

by the end of
ActuHAL's first year
of existence.

An average of 1 out of
5 recipients clicked
on at least one link
in each one of six
ActuHAL issues.

List of communications

March

10 March

Raphaël Tournoy, *Episciences: an overlay journal platform*, OpenAIRE-Nexus Public Launch Event ; Publish Portfolio

April

28 April

Bénédicte Kuntziger, *France national policy and initiatives supporting RDM&FAIR data skills development*, FAIRsFAIR-OpenAIRE workshop: National policy and support actions for research data skills, impact and experiences

May

6 May

Nathalie Fargier, *Actualités de HAL*, Valorisation sur HAL de la production des laboratoires dans l'environnement de la Science ouverte, Study day organised by Geriico, DICEN-IDF and Urfist network

28 May

Nathalie Fargier, *Publications et données de la recherche : quels services pour les chercheurs et quel rôle pour HAL ?*, Rencontres Huma-Num 2021

June

7 June

Raphaël Tournoy, *Episciences*, OpenAIRE Tech-Clinic Webinar

7-11 June – Journées CasuHAL

- Nathalie Fargier, *HAL, infrastructure de recherche de la Science ouverte*
- Bénédicte Kuntziger and Bruno Marmol, *Carte blanche au CCSD*
- Yannick Barborini and Bénédicte Kuntziger, *Retour sur l'étude ergonomique réalisée par le CCSD en 2019*
- Bruno Marmol and Léa Pérez, *Le nouveau référentiel auteur*

9 June

Bénédicte Kuntziger, *A shared governance and a sustainable funding model for HAL, the French National Open Archive*, Open Repositories 2021

15-17 June – Journées Science ouverte, École centrale Nantes

- Bénédicte Kuntziger, *HAL, un atout français pour la Science ouverte*
- Bénédicte Kuntziger, *Identifiants dans HAL*

July

1 July – Partners' Assembly (1st session)

- Nathalie Fargier, *Ouverture de la journée*
- Hélène Begnis, *Panorama de l'Assemblée*
- Yannick Barborini, *Évolution des interfaces*
- Agnès Magron, *Évolution de la typologie des documents*
- Anaïs Elizéon, *Évolution du référentiel auteurs*

2 July

Raphaël Tournoy, *Episciences*, OpenAIRE Nexus Publish Portfolio, Journée OpenAIRE organised by Couperin, CCSD, IRD and Urfist network

September

23 September

Raphaël Tournoy, *Episciences: publishing in diamond open access with overlay journals*, Open Science Fair

October

4-8 October – Journées du RNBM, Marseille

- Raphaël Tournoy, *Episciences*
- Bruno Marmol et Léa Pérez, *Les évolutions du référentiel auteurs de HAL*

12 October

Bénédicte Kuntziger, *CorHAL, une voie pour les chercheurs : simplifier le dépôt des publications pour accroître le taux de texte intégral dans HAL* (poster), Journées ABES, Montpellier

19-20 October – La Science ouverte : vers les connaissances partagées, ANF CNRS, Meudon

- Raphaël Tournoy, *Comment publier en accès ouvert ?* (workshop)
- Bénédicte Kuntziger and Agnès Magron, *Les identifiants dans HAL : leur rôle majeur pour insérer HAL dans l'écosystème de la Science ouverte* (workshop)
- Bénédicte Kuntziger, *La Science ouverte : avantages pour le chercheur, bénéfices pour la recherche et astuces pour faciliter la pratique scientifique au quotidien* (round table)

November

23 November

Nathalie Fargier, *Un rôle d'éditeur de contenus* (round table), Biennale du Numérique, Enssib, Lyon

24 November – HAL's 20th anniversary, musée des Confluences, Lyon

- Nathalie Fargier, *Discours d'ouverture*
- Agnès Magron, animation of the round table: *Raconter l'aventure HAL*
- Nathalie Fargier, *Quelles perspectives pour HAL ?*

30 November

Céline Barthonnat, *Panorama de l'édition scientifique publique à l'heure de la Science ouverte et focus sur Épisciences*, Dialogu'IST #11

30 November

Yannick Barborini and Alain Monteil, *Curated Archiving of Research Software Artifacts on HAL*, Software Heritage 5 years anniversary, Unesco, Paris

32

communications

The CCSD contributed to 32 speakings, round tables and poster presentations during scientific events or events linked with the higher education and research in 2021.

December

2 December

Bénédicte Kuntziger, *HAL, un atout français pour la Science ouverte*, Rencontre du réseau Science ouverte des agences de financement françaises

14 December

Yannick Barborini et Hélène Begnis, *Une nouvelle IHM pour HAL* (Partners' Assembly webinar)

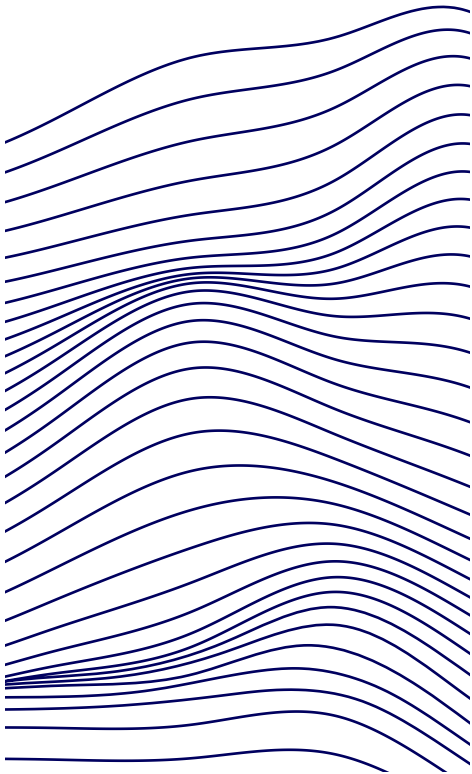
Publications

Adeline Joffres, Nicolas Larrousse, Yannick Barborini, Bénédicte Kuntziger, *Communications PoC between NAKALA and HAL*, EOSC-Pillar MS26, European Union, 2020 (<https://hal.archives-ouvertes.fr/hal-03170550v1>).

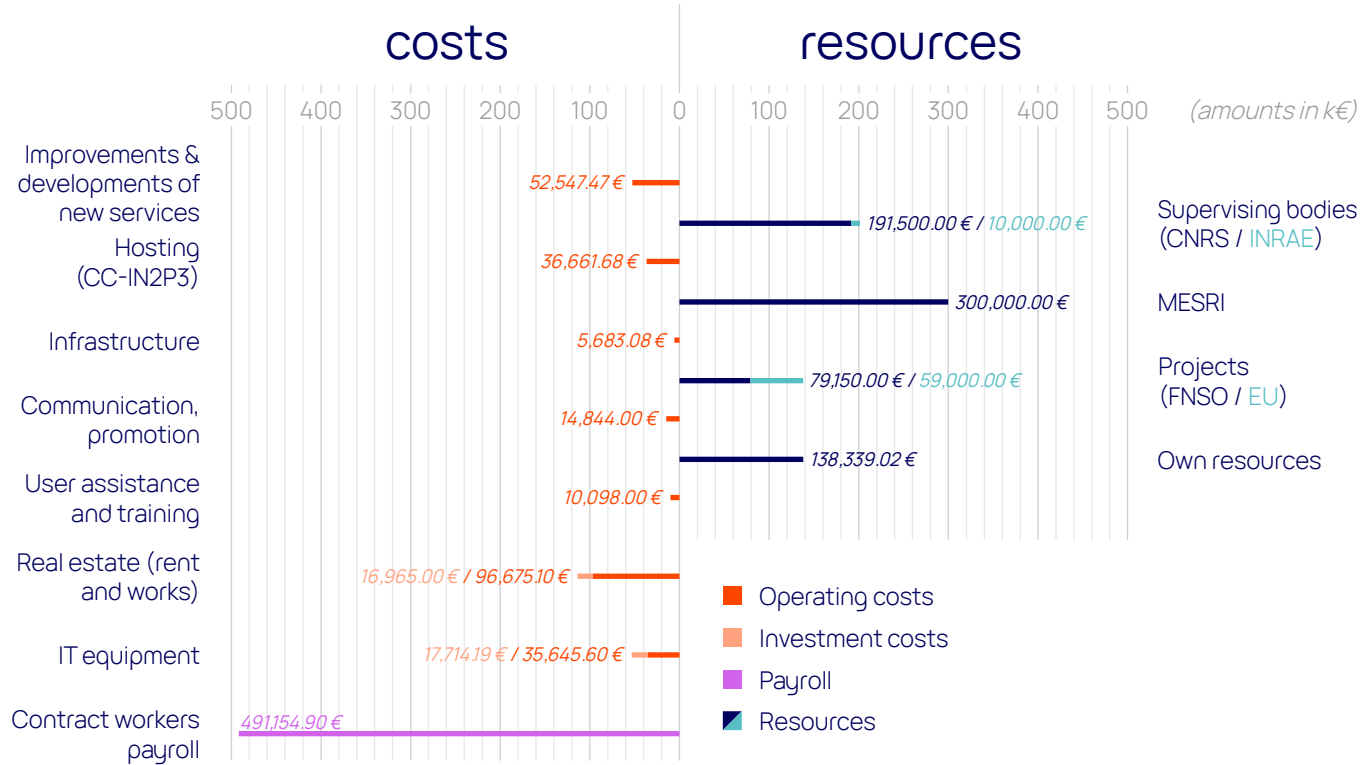
Stefano Cozzini, Elda Osmenaj, Adeline Joffres, Bénédicte Kuntziger, Mario Kulule, *Existing tools available for FAIRization identified and classified, V1.1*, EOSC-Pillar MS25, European Union, 2020 (<https://zenodo.org/record/5547624#.YgE0z2DjlW8>).

Christine Berthaud, Daniel Charnay et Nathalie Fargier, « Diffuser et pérenniser le savoir scientifique : 20 ans d'histoire de HAL », *Histoire de la recherche contemporaine*, Tome X - n° 2, 2021 (<http://journals.openedition.org/hrc/6330>).

Resources



Financial data



Human resources

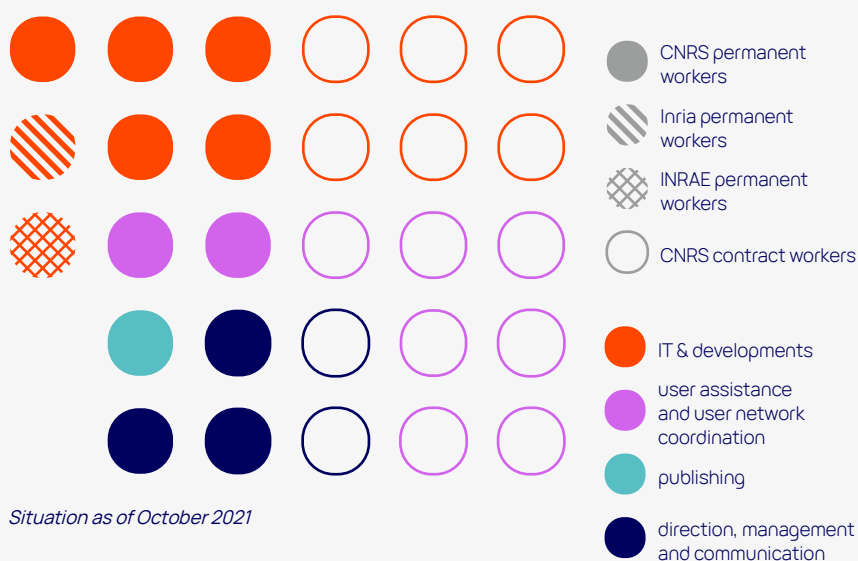
New premises for a growing team

With increasing activity, and new staff to cope with it, the CCSD's former premises became too cramped and it moved to larger premises in October.

The new premises enabled the space to be organised by department. The CCSD also has two meeting rooms so webinars and meetings between the whole team can be organised.

In 2021, the CCSD recorded a figure of 23.8 FTEW (full-time equivalent worked), in the fields of IT development, network system administration, scientific and technical information, publishing and communication.

During the year, 8 new people were taken on and 5 left.



Infrastructure

27 To of documents saved at the IN2P3's Computing Centre (CC-IN2P3)

5 To of documents preserved at CINES by late 2021

Installation of a Solr cluster

Six new Solr devices were created so as to foresee the update of the current production cluster.

