



**Université
Jean Monnet**
Saint-Étienne

Roadmap for
a policy of

Open Science

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Open science refers to the unhindered dissemination of results, methods and products from scientific research. It draws on the opportunity provided by recent digital progress to develop open access to publications and – as much as possible – data, source code and research methods. It is a means for publicly funded research projects to retain control over the results they produce.

It builds an ecosystem in which science becomes better substantiated and more transparent, reproducible, effective and cumulative. It aims to democratize access to knowledge, which is useful for teaching and training, and for the economy, public policy, citizens and society as a whole. Finally, it constitutes a lever for scientific integrity and builds citizen trust in science.

(2nd National Plan for open science,
6th July 2021)

Preamble

Open Science is a national and European movement that has been running for over thirty years. The aim is to prioritize the open access to scientific productions, publications and data in the sharing of results and methods, thus embracing a far-reaching evolution in research practices. For the [Committee for Open Science](#), the Open Science movement “aims to build an ecosystem in which science will be more cumulative, more supported by data, more transparent, faster and will provide universal access.”

The roadmap for an Open Science policy at the Université Jean Monnet (UJM) is in line with policies launched at national level (Law for a Digital Republic in 2016, [National Plans for Open Science](#)) and European level ([PlanS](#), [The EU's open science policy](#)). Since 2020, European funding organisations and the French National Research Agency (FNRA) have been requiring immediate open access to publications resulting from calls for projects (CFP) that they fund, and the drafting of a Data Management Plan. In March 2023, the French research funding agencies drew up a [joint roadmap](#) for open science. Opening science – making results and data accessible – is also part of a drive to consolidate scientific integrity and fight against the spread of fake information. The aim is to give citizens access to the debates taking place in scientific communities and to make it easier for them to learn about the results of research.

The UJM is aware of the challenges posed by the new methodological and ethical requirements of research, and has therefore committed in its [2021-2025 strategy](#) to supporting and promoting an Open Science policy. Throughout 2022, a multi-disciplinary working group comprising lecturers, staff from the Central Documentation Service (CDS) and research engineers helped to draw up this roadmap, which was discussed by the Research Commission and laboratory managers. In October 2022, the UJM appointed an Open Science Coordinator: Filippo A. E. Nuccio Mortarino Majno di Capriglio, a lecturer and researcher in Mathematics. His role is to coordinate the UJM's Open Science policy and help those involved in research to become more familiar with the challenges and opportunities offered by Open Science. He provides researchers, lecturers, PhD students, librarians and students with the tools they need to answer the practical, legal, economic and political questions they may have about these issues. He represents the UJM at the HAL Partners Assembly and at the network of the Open Science Coordinators of French universities. He is supported by a correspondent at the CDS level, François Couronné, appointed in September 2022.

In a multidisciplinary university like the UJM, implementing an Open Science policy requires attention to the diversity of publication and research practices, without renouncing some common methodological principles. The UJM has therefore reaffirmed its commitment to bibliodiversity, as proposed in [the Jussieu Appeal](#), which calls for support

for the diversity of players in scientific publishing and for the development of innovative publishing models, and which is taken up in the report [*Pour une science ouverte réaliste, équilibrée et respectueuse de la liberté académique \(Towards a realistic, balanced open science that respects academic freedom\)*](#) presented to the French Senate and National Assembly in March 2022.

The roadmap for an Open Science policy is divided into 3 sections as well as 3 axes and suggests 17 concrete, realistic actions. It aims to increase the dissemination and visibility of research produced at the UJM, and to provide pragmatic support for researchers by offering them contacts identified through a single office as well as training tailored to their needs and to the research projects they are carrying out. It pays particular attention to spreading practices and methods, especially to young researchers. Led by the Vice-President for Research and the Open Science Coordinator, the policy is resolutely cross-disciplinary: it involves the CDS, which was a pioneer in setting up the [UJM HAL portal](#) back in 2006; the Vice-President for Digital Strategy as well as the Digital Office, which are leading an ambitious Data Plan for the storing, sharing and securing of data. It also involves the Saint-Étienne University Press (PUSE) for the editorial distribution of research works, whether in the form of books or journals; the PUSE have undertaken to open up publications, in partnership with Open Edition. Finally, it involves the Communication Office, which is responsible for spreading information internally and externally, setting up a dedicated web page, and supporting events.

The implementation of this policy is also part of the collective actions that are carried out on the Lyon-Saint-Étienne site, particularly in the field of Human and Social Sciences (HSS) around the [MSH Lyon-Saint-Étienne](#), and at national level. A watch will therefore be kept on calls for projects and initiatives emanating notably from the Open Science Committee.

In accordance with the commitments made for the 2021-2025 term of office, the roadmap for the UJM's Open Science policy is part of a more global approach to improving and developing practices, which is reflected in the appointment of a Scientific Integrity Coordinator (2021), the application for the [HRS4R label](#) (2023), which takes Open Science practices into account, a reflection on research evaluation with the signing of the [DORA charter](#) (2023)) and the prospect of joining the [CoARA coalition](#), structured around a ten-point manifesto proposing a reform of research and researcher evaluation practices.

With this in mind, the actions proposed as part of this roadmap will be regularly monitored by the working group and reviewed annually by the Research Commission. The roadmap can therefore be amended and updated in line with these reviews and changing needs.

Christelle Bahier-Porte
Vice-President for Research

Section

Political commitments

1. Encouraging repositories in open archives and data warehouses

The second National Plan for Open Science (2021-2024) suggests that "Opening scientific publications must now become an essential practice". This can be done by depositing them in a public open archive or by publishing them in open access. Since 2020, publications from projects funded by the FNRA and Horizon Europe must be in open access. Besides, open archive deposits are necessary to ensure that scientific products are independent from commercial publishers, which is part of the Open Science approach too. In this context, the UJM is requesting that publications be deposited in open archives and is committed to the development and monitoring of the [UJM HAL Portal](#), which has been active since 2006. This is also driven by the desire to increase the visibility of its scientific output through better referencing. To this end, researchers are asked to deposit the full text of articles in an open archive systematically, **at the latest by the end of the embargo period provided for by law**, and to reference the metadata of other publications (monographs, manuals, conference proceedings, etc.) in the form of records in the UJM HAL portal. The interoperability of disciplinary open archives with the HAL platform will make it smooth and quick to feed the HAL UJM portal. This way, the referencing and increased visibility objectives of the University's scientific publications will be achieved.

Since July 2022, the conditions for creating and using HAL institutional portals have evolved. The UJM considers that the HAL platform is a major tool in the development of Open Science and for the promotion of the research carried out within it. **The UJM has therefore committed to supporting the funding of the platform and will be represented at the HAL Partners Assembly** (see 10). It has also opted for in-house moderation of the submissions made by its researchers to the UJM HAL Portal, in order to shorten the time needed to put them online. With this in mind, the administration of the portal has also been reviewed to ensure more optimal monitoring and increased support for researchers: an administrator for the HAL UJM portal was appointed in 2023 within the CDS and two moderators are responsible for monitoring the submissions and ensuring that they are properly referenced. At the same time, researchers will be invited to archive their data in reliable warehouses, whether national ([Huma-Num](#), [Recherche Data Gouv](#)) or local (at the Lyon - Saint-Étienne site) and as part of the UJM Data plan (see 16).

2. Publication and open access data for the calls for proposals (CFP)

As part of an incentive approach that converges with that of the FNRA and Horizon Europe, the UJM will ask researchers and lecturers who receive funding from the University (such as CFP from the UJM or the Fondation Université Jean Monnet) **to deposit in an open archive (like HAL) the pre-release products resulting from research carried out thanks to these funds** and to affix a CC-BY licence. As for other works, it is requested that the metadata be referenced in the form of records on the HAL platform. This request was initiated in 2022 for the Élan Recherche UJM CFP and will be generalised for CFP from 2023 onwards.

3. Commitment to bibliodiversity

Back in 2017, the [Appel de Jussieu](#), (signed by the UJM in January 2018), called for support for the diversity of players in scientific publishing and the development of innovative editorial models. It also encouraged the development of additional services such as text mining. The report [Towards a realistic, balanced open science that respects academic freedom](#), submitted to the French Senate on 9 March 2022 and to the French National Assembly on 10 March 2022 on behalf of the Parliamentary Office for the Evaluation of Scientific and Technological Choices, raises the issue of the different sensitivities to "diamond" open access within academic communities. As the UJM is a multidisciplinary institution, such questions naturally interact with any Open Science policy that may be implemented by the University. It has to be said that, at the moment, almost all scientific publications take one of the three following forms: articles in specialised reviews, monographs and chapters thereof, or research data collection. **The UJM advocates the "diamond" open access as the privileged way to publish articles, by encouraging researchers to commit to it as far as possible.** Moreover, by considering that works such as conference proceedings and monographs can be published by commercial publishers, the University is encouraging researchers to choose publishers whose commercial practices remain compatible with a policy of openness and wide dissemination of publicly-funded research. Regarding the opening up of research data, the approach cannot be the same for all disciplines; the UJM's guiding principle will be that data should be "as open as possible, as closed as necessary", as recommended by the Committee for Open Science.

The practices of publication in HSS are notoriously different from those in Science Technology and Medicine (STM): centrality of book format, coexistence of numerous specialised publishing houses, research carried out on data protected by copyright (such as the works of living artists), practices of bibliographical referencing different for each discipline, etc. Due to those practices, the direct publication in HAL of certain scientific productions is not really adapted to the needs of the communities besides being hardly realistic. **The publication of some essential metadata** (authors and their affiliation, year of publication, publisher, ISSN, etc.) must nevertheless be developed (see 1.). The UJM will set up any training that may be needed in the disciplines concerned to increase awareness of this issue.

4. Publishing policy of the Saint-Étienne University Press (PUSE)

Because of their history, the PUSE possess the scientific and technical skills required to publish works in open access, particularly in the field of HSS. The PUSE staff is familiar with the Lodel and Métopes software. They publish an online review in diamond open access on [OpenEditionJournal](#) and, in 2022-2023, the [collection](#) "19th Century in representation(s)" was put online on OpenEditionBooks with freemium access. Over the 2023-2025 period, the PUSE will intensify **its move towards open access** by completing the process of bringing its procedures and business model into line. The data and metadata needed for ensuring proper Open Science practices will continue to be made available online. Four additional active collections will be digitised and made available online too. A response to the National Fund for Open Science's CFP (February 2023) has been proposed to this end. The digitisation of certain old collections is also being studied with the scientific interest group Persée. The PUSE have joined the national network of public publishers committed to open science.

In parallel with this commitment to open access, and in line with the UJM's commitment to bibliodiversity, the PUSE regularly publish books and monographs with financial support from the University. As the economic model is mainly based on the publication of books, with a limited number of journals, diamond open access cannot be the only way forward for the PUSE. **In the interests of openness and transparency, the financial statement will be published [on the PUSE website](#) at the end of each financial year.**

5. Documentary policy of the CDS

The UJM CDS, which is a member of the [Couperin](#), consortium, has for several years been committed to a documentary policy aimed at open access, through subscriptions (OpenEdition since 2019, EDP Sciences in 2023, for example) and memberships (DOAJ since 2019, SPARC since 2021). Open access journals and databases in the [catalogue Brise-es](#), Brise-es catalogue [Dissem.in](#) platform, which allows researchers to check the accessibility of their publications, has been integrated into the web page of the digital journals catalogue. In the same vein, a consultation between the CDS and the Open Science Coordinator was set to decide on membership to consortia, to select subscriptions to virtuous journals and withdraw subscriptions to the less virtuous ones, to take part in transforming agreements and **to support publishers who develop Open Science**. An assessment of the documentary policy in this area will be presented to the Research Commission and may be the subject of a shared communication between the CDS and the Open Science Coordinator, so that better information will be provided, both on subscriptions and on the business models involved.

6. Positioning on APCs (Article Processing Charges)

The author-pays publishing model is based on the payment by the author's institution of publication charges intended to fund the immediate distribution of the article in open access on the journal's website. The issue of APCs (Article Processing Charges) is complex and the UJM is not opposed to their use. Notably, even if a fund dedicated to the payment of APCs at institutional level won't be created, laboratories will be free to devote part of their operating funds to paying publication fees. In disciplines where the diamond model is starting to become the reference, the UJM will encourage researchers working in these fields to give priority to the journals that adhere to it. However, **the University is opposed to the payment of APCs for journals published using the "hybrid" model from laboratory allocations as well as from funding received from the FNRA or from the European Union.** Particular attention will be paid to this point when monitoring the institution's APC expenditure. These journals are distributed according to the traditional subscription model, but with the option for authors who wish to do so to pay a certain fee in order to create an open access to their article. The UJM's position thus follows that of the CNRS (National Centre for Scientific Research), detailed in its [Roadmap \(2021\)](#), which considers that the HAL repository makes it possible to achieve the same result of broad dissemination of scientific productions without additional expenditure of public money.

As the UJM is aware of the growing importance of APCs in the laboratory budgets and the University, it will set up a procedure for monitoring APC expenditure with the support of the Financial Services Office.

7. Open Science and research evaluation

The UJM does not use bibliometric criteria (such as impact factors) to evaluate the scientific output and career of researchers. This practice is in line with the recommendations of the [DORA manifesto](#) on research evaluation signed by the UJM (May 2023). The University will also pay particular attention to ensuring that all research products (codes, algorithms, software, etc.) that are considered in the evaluation process are available in open access. The UJM, which is a member of the European university [Transform4Europe](#), is also committed to analysing its research and career evaluation practices with a view to joining the European [CoARA](#) coalition. As this is not an issue for Open Science alone, the University's Academic Council will be involved in this process.

Section

Training and Information

A commitment to Open Science requires support for everybody contributing to research. The second National Plan for Open Science thus encourages to "develop and enhance Open Science skills all along the career path of students and of research staff." The UJM will therefore offer awareness, communication and training campaigns in various formats: plenary conferences addressed to a large audience, training workshops organized by the CDS, interventions on demand in laboratories, personalised support, graduate courses. Although the Open Science approach is becoming more popular, the appropriation of its issues (the legislation regarding open science publishing, and the familiarity with different tools, notably those related to data management) are essential elements for its development within the scientific community.

8. Roadmap launch day

An inaugural day of discussion and presentation of the challenges of Open Science was organised in March 2023 to officially launch the UJM's roadmap and to present the major issues related to Open Science to the entire university community: open publishing, data, negative results, etc. The presentations by documentation professionals and researchers were filmed and can be accessed via a specific tab on the Open Science page of the UJM website.

The day provided an opportunity to present the roadmap, to detail the proposed actions and to establish an initial contact between all the different players involved in Open Science issues.

9. Training and awareness-raising for doctoral students

A customisable programme of courses will be offered as part of **doctoral training**, complementing the modules provided by the Doctoral College of the Comue Université de Lyon, which offers a joint training catalogue for doctoral students on the Lyon - Saint-Étienne site. Key points that may be addressed include:

- The major issues and values associated with open science
- Creation and use of idHAL and Orcid identifiers (see 12.)

- The risks associated with predatory journals
- The challenges of APC
- The role and use of Data Management Plans (see 11.)
- The different existing licences and their use

10. HAL and data warehouses

Encouraging researchers to publish the results of their research on the HAL platform requires the University to commit to raising awareness and to training lecturers who express the need. This training could take different forms:

- a. training to the deposit in HAL, especially regarding the metadata and the affiliation of lecturers to the UJM laboratories;
- b. a meeting during the welcome day for new researchers and lecturers in order to inform them about the Open Science policy and the way in which HAL is used within the UJM;
- c. training to the concept and use of HAL identifiers of the various laboratories;
- d. training in the various existing publication licences (CC-BY, CC-BY-SA, CC-0, Open Database Licence, Open Licence, etc.) and role of CC-BY in the strategy of non-assignment of rights;
- e. training, for a targeted audience, in data mining in HAL, both as a tool for searching bibliographic data and as a tool for identifying the scientific production of a laboratory or institution;
- f. training for the HAL administrators at the level of the institution and at the level of the laboratories whose systematic use of HAL makes the creation of a dedicated collection relevant.
- g. Alongside the HAL repositories, researchers will be encouraged to publish their data sets in dedicated warehouses. The choice of such repositories will vary from one discipline to the next: some have disciplinary repositories, others even have "certified" repositories, and sometimes institutional repositories (for example, [the one](#) proposed by the Ministry of Higher Education, Research and Innovation (MHERI)) are preferable. Training courses and resources will be offered to enable researchers to improve their grasp on these tools.

The training courses mentioned in points a.-c.-d.-e.-g. will be aimed at both researchers and doctoral students (see 9.).

11. Data Management Plans (DMPs) and FAIR principles

Since the implementation of the Law for a Digital Republic (2016) and according to the national plans for Open Science, the opening up of research data must be the norm. The recommendations for this openness concern the management, conservation and sharing of data in accordance with the FAIR principles (easy to Find, Accessible, Interoperable, Reusable). Data management plans (DMPs), which have been required since 2020 by funding agencies (FNRA,

Horizon Europe), aim to structure data according to these FAIR principles for each project.

The University wishes to support researchers in this process, taking the specificities of each discipline into account.

In HSS, researchers can already benefit from training courses and workshops organised by the [MSH Lyon Saint-Étienne](#). The engineers supporting laboratory research also play an important role, and a skills-sharing workshop initiative in the field of HSS data management is underway (Fall 2023).

In the medium term, **the UJM wishes to return to personalised support for FNRA and European project sponsors, both in the preparation phase and in monitoring the data life cycle** throughout the project and beyond. We will follow the recent recommendations of the joint roadmap of the French funding agencies, using the [Opidor DMP](#) tool. At the same time, data storage capacity at institutional level will be increased (see 16).

12. Promoting the use of unique identifiers for researchers

A researcher identifier or author identifier is a permanent alphanumeric code assigned to all authors of research products: articles, patents, scientific data sets, funded projects, software, etc. This identifier enables the author to be identified unequivocally in a given digital environment, such as institutional databases (for instance an open archive of publications, the institution's data warehouse, or the website of a scientific journal published by the institution), or national/international databases (such as the European Zenodo data warehouse or the HAL open archive), or bibliographic databases (such as the Web of Science or Scopus). The identifier unequivocally attributes to a researcher the productions of which they are the author. This is primarily for the benefit of the authors themselves, as it avoids any confusion caused by multiple names, changes of surname, or career changes within different institutions. The University, in collaboration with the CDS, will launch a campaign to raise awareness and promote the use of researcher identifiers and will offer support to those who wish to do so.

In alliance with the promotion of the [HAL-UJM portal](#) (see 1), the interoperability of certain identifiers (such as [ORCID](#)) with the idHAL will be particularly emphasised. During their welcome day, as part of the presentation of the institution's Open Science policy (see 10), **all new lecturers who do not have an idHAL will be helped to create one.**

A researcher identifier will gradually be made compulsory for files requiring access to scientific output (CFP, applications for paid leave, delegations, promotions, etc.).

Section *Support*

As part of its commitment to providing some pragmatic support that is adapted to the needs of the laboratories and the researchers, the UJM offers a number of support services and resources. The Open Science Barometer, whose local equivalent at the UJM was finalised in March 2023, is an information tool and an indicator of the evolution of open access publications.

13. Open Science support desk

Mainly run by the Open Science Coordinator and its CDS counterpart, **this service will enable all UJM research players to have an identified contact for Open Science issues.** In a context in which regulations and recommendations change rapidly, the UJM Coordinator and the CDS correspondent will keep a constant watch on new developments concerning publication models, the directives of the MHERI, the CNRS, the FNRA and other funding agencies, as well as on new virtuous journals and those considered to be "predators". The most frequently asked questions may be the subject of training courses or group support workshops, as required. Particular attention will be paid to legal issues, following the advice and recommendations of the National Committee for Open Science.

14. Surveys for laboratory managers and researchers

Following the discussions that began in 2022, one or more surveys will be sent to the directors of the UJM's research laboratories, and in some cases to all researchers, on the subject of Open Science. The aim of these surveys is **to ensure that the approaches put forward in this roadmap correspond to the needs and research practices of the various scientific communities represented at the UJM.** At the same time, an in-depth knowledge of bibliometric tools, reputable archives, survival times for scientific results, self-archiving practices, more respected journals and publishers - all of which vary from one community to another - will enable an overall study of the costs, investments and priority actions to be carried out, at the level of the institution, for the successful development of the UJM's Open Science policy.

15. Web page dedicated to Open Science

Since the Spring of 2023, the UJM has had [web page dedicated](#) to Open Science. This will be both a tool for following the news aimed at all those involved in research and a place for spreading information, both about the policy set out in this roadmap and about any questions that researchers and lecturers may have. **The web page will provide access to a range of resources, Moocs (online courses), tutorials and reference texts on Open Science.**

16. Data storage and security

The UJM has adopted the Data Plan (2021-2025) within its digital strategy and has thus implemented:

- Massive storage for all researchers so that they can back up and secure all their data;
- collaborative storage, so that researchers can exchange data (internally and externally) and carry out collaborative editing. Eventually, the aim is to make certain research data available as Open Data, even if it is massive. The success of this plan will depend on the simplification of procedures for allocating resources for massive storage and the absence of limitations for collaborative storage.

To help researchers get to grips with these storage devices as effectively as possible, they will be provided with **documentation, tutorials and training tailored to their scientific fields.**

17. Open Science Barometer at UJM

In order to assess the level of openness of scientific publications from different French institutions, the MHERI developed an Open Science Barometer (OSB) in 2018. This is an instrument that analyses publications and classifies them according to different degrees of openness: open access, restricted access but available on a public archive such as HAL, or completely closed. As part of the first National Plan for Open Science, the MHERI used this tool to draw up an overview of open access in France and its development over the period 2013-2018. Since 2021, this tool has been available to all institutions wishing to draw up a similar assessment for their publications, and from 2023 onwards a third version will also be available to assess the openness of data sets and source codes, with the possibility of adapting the assessment to the local context of each institution.

In March 2023, with the collaboration of the CDS, the Open Science Coordinator set up an OSB for the institution, based on the years 2020 and 2021. The multidisciplinary dimension of the UJM reveals a heterogeneity of research practices. As a consequence, the possibility of adapting the BSO according to the different disciplines is particularly useful in providing a precise picture of the situation. The collection of data on publications as well as on the openness of data sets and source codes will continue on an annual basis in order to build a virtuous dynamic of evaluating progress and advances in the University's Open Science commitments. Full details of the OSB will be available on the dedicated tab of the UJM Open Science web page.

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