



UNIVERSITAT POLITÈCNICA  
DE CATALUNYA  
BARCELONATECH

## **2025 Roadmap for UPC Open Science**

**Governing Council Decision CG/2023/07/08, of 5 July 2023,  
approving the 2025 Roadmap for UPC Open Science.**

**Office of the Vice-Rector for Research**

- A favourable report on this document was issued by the Research Committee on 22 June 2023.

## BACKGROUND

- Open science is a paradigm shift in the way of doing science that involves carrying out all the stages of a scientific study (design, data collection, review and publication) with an “open” perspective.
- Promoted by the European Commission since 2013, open science is a practice that is being adopted increasingly by universities and research centres worldwide to develop collaborative, reproducible, sustainable, transparent research that has a greater impact. In February 2022, the European University Association (EUA) published the document [The EUA Open Science Agenda 2025](#).
- At the legislative level, the practice of open science has been included in the Spanish [Law on Science, Technology and Innovation of 2022](#), the [Organic Law of the University System of 2023](#) and the Catalan [Science Law of 2022](#).
- Recently, the Ministry of Science and Innovation presented the implementation of the [National Open Science Strategy of 2023](#) (ENCA), with specific objectives and measures. In Catalonia, actions are being defined to implement the [Catalan Open Science Strategy of 2021](#).
- In the university environment, the impetus for open science is reflected in the document [Spanish Universities' Commitments to Open Science](#) of 2019 approved by the CRUE.
- In the context of Unite!, the [Strategic Open Science and Innovation Roadmap](#) was presented in 2022. This roadmap establishes objectives and recommendations to promote, develop and implement actions and incentives to advance in the adoption of open science practices in the universities in the alliance.
- The UPC Governing Council aims to foster open science among research staff, as indicated in the [2022-2025 Strategic Plan](#).

## FACTUAL AND LEGAL BASIS

This document, the 2025 Roadmap for UPC Open Science, presents a set of objectives and actions to promote open science in the coming years in our university.

For many years, the UPC has been a pioneer and leader in open access to scientific output (see Annex 2). It has carried out activities and established institutional repositories of full-text documents such as [UPCommons: Global access to UPC knowledge](#), which includes doctoral theses, articles and journals, bachelor's theses in open access that can be consulted on the internet, etc.

The UPC has also been a leader in the creation and development of open source software and in the approval of policies and mandates in favour of open science.

Currently, the European Union and the Spanish and Catalan governments are promoting open science with new laws to expand its reach within teaching and research and in the area of citizen science.

Consequently, we need this roadmap to implement the new laws and be able to advance in all aspects and disciplines in open science and citizen science at the UPC.

The 2025 Roadmap for UPC Open Science is an open programme for the entire university, and consequently it is not a finished work. It describes some actions to undertake in this area. We hope that these actions will be enriched by the entire university community in the coming years.

Given the above, the Governing Council, in exercising the functions conferred on it in Article 59 of the current statutes and Article 46 of the Organic Law on the University System, reached the following

## **DECISION**

The Governing Council HAS DECIDED to approve the 2025 Roadmap for UPC Open Science

Barcelona, 5 July 2023



Full de ruta 2025  
**Ciència Oberta**  
UPC

## **Table of contents**

- 1. Purpose of this document**
- 2. Introduction to open science**
- 3. Roadmap for UPC Open Science**
- 4. Organisation, communication and dissemination, monitoring and results**

## 1. Purpose of this document

This document, the **2025 Roadmap for UPC Open Science**, gathers a series of objectives and actions to promote open science in the coming years in our university.

For many years, the UPC has been a pioneer and leader in open access to scientific output (see Annex 2). It has carried out activities and established institutional repositories of full-text documents such as [UPCommons: Global access to UPC knowledge](#), which includes doctoral theses, articles and journals, bachelor's theses in open access that can be consulted on the internet, etc. The UPC has also been a leader in the creation and development of open source software and in the approval of policies and mandates in favour of open science.

Currently, the European Union and the Spanish and Catalan governments are promoting open science with new laws to expand its reach within teaching and research and in the area of citizen science. Consequently, we need this roadmap to implement the new laws and be able to advance in all aspects and disciplines in open science and citizen science at the UPC.

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This document has been drawn up and written by:

- Jordi Llorca, vice-rector for Research, UPC
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## 2. Introduction to open science

- Open science is a paradigm shift in the way of doing science that involves carrying out all the stages of a scientific study (design, data collection, review and publication) with an “open” perspective.
- Promoted by the European Commission since 2013, open science is a practice that is being adopted increasingly by universities and research centres worldwide to develop collaborative, reproducible, sustainable, transparent research that has a greater impact. In February 2022, the European University Association (EUA) published the document [The EUA Open Science Agenda 2025](#).
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## Roadmap for UPC Open Science

### *Area of activity. Aims. Key actions in 2023. Indicators (\*). Stakeholders involved*

The Roadmap follows [the EU's 8 areas of action in open science](#) so that the University's activities can be monitored.

- A. Scientific publishing**
- B. FAIR research data**
- C. Citizen science**
- D. Research integrity**
- E. Open science skills**
- F. Metrics and recognition**
- G. Open education**
- H. Research infrastructure and EOSC**

(\* ) When an action does not have an indicator, this means that the indicator is considered to have been achieved when the action is completed.



## A. Scientific publishing

Open-access publishing has become the main way to publish research articles and other research publications such as doctoral theses. However, to achieve immediate, full open-access publishing, the UPC will advance in the following areas:

Aims	Actions 2023	Indicators	Stakeholders involved
<b>1. Increase the number of articles published in immediate open access by research staff at the UPC.</b>	<ul style="list-style-type: none"><li>● Publish 90% of UPC articles in open access through transformative agreements and grants to publish in open access, article processing charges (APC), the Open Research Platform and the rights retention strategy (RRS).</li></ul>	<ul style="list-style-type: none"><li>● Number of transformative agreements signed with publishers.</li><li>● Number of grants signed with publishers.</li><li>● Annual percentage of articles published in immediate open access.</li></ul>	<ul style="list-style-type: none"><li>● SBPA</li><li>● ARiT</li></ul>
<b>2. Support digital journals and open-access journals that are published by the UPC through an annual call for grants and the development and improvement of the services that are offered to their publishers.</b>	<ul style="list-style-type: none"><li>● Announce the 2023 call for grant applications for the publication of digital journals.</li><li>● Review the current call model and</li></ul>	<ul style="list-style-type: none"><li>● Number of journals published or co-published by the UPC that receive grants from the UPC.</li></ul>	<ul style="list-style-type: none"><li>● SBPA</li><li>● IDP</li><li>● ARiT</li></ul>

	<p>make proposals for improvement for 2024.</p>	<ul style="list-style-type: none"> <li>● Number of downloads of articles of journals published or co-published by the UPC in UPCommons.</li> </ul>	
<p><b>3. Update the UPC mandate to assign research activity points (PAR) for open-access publications, in accordance with transformative agreements and the rights retention strategy (RRS).</b></p>	<ul style="list-style-type: none"> <li>● Analyse the changes to make to the mandate (self-archive, open-access journals and hybrid model) to foster immediate open access.</li> </ul>	<ul style="list-style-type: none"> <li>● Mandate updated and approved by governing bodies.</li> </ul>	<ul style="list-style-type: none"> <li>● SBPA</li> <li>● Legal Services Area</li> </ul>
<p><b>4. Continue to improve the services offered by UPCommons. Global access to UPC knowledge, the institutional repository of the UPC, to university authors and their publications that are available in open access.</b></p>	<ul style="list-style-type: none"> <li>● Start the development of a new version of UPCommons.</li> <li>● Improve and expand the introduction of persistent unique identifiers, mainly the digital object identifier (DOI).</li> </ul>	<ul style="list-style-type: none"> <li>● New version of UPCommons in use.</li> <li>● Annual increase of 10% in the number of downloads of documents from the repository.</li> <li>● Number of documents with a UPC DOI assigned.</li> </ul>	<ul style="list-style-type: none"> <li>● SBPA</li> </ul>

	<ul style="list-style-type: none"> <li>• Improve the information offered on the website on the use of UPCommons.</li> </ul>		
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**B. FAIR research data**

In accordance with European Commission requirements, research data must be FAIR (findable, accessible, interoperable and reusable) and follow the principle of “as open as possible and as closed as necessary”. In this respect, the UPC will advance in the following areas:

Aims	Actions 2023	Indicators	Stakeholders involved
<p><b>1. Provide infrastructure and tools for managing FAIR research data (virtual research spaces, repositories, tools to draw up data management platforms or DMPs) and inform research staff about them.</b></p>	<ul style="list-style-type: none"> <li>• Carry out 20 actions of dissemination/training among UPC teaching and research staff to promote research data management according to FAIR</li> </ul>	<ul style="list-style-type: none"> <li>• Increase of 10% in the number of UPC datasets published in CORA-RDR or UPCommons compared to the previous year.</li> </ul>	<ul style="list-style-type: none"> <li>• SBPA</li> <li>• ICT Area</li> <li>• ARiT</li> </ul>

	<p>criteria, the preparation of DMPs and the publication of datasets in repositories.</p>		
<p><b>2. Provide advice and support on research data management to research staff through the services involved and based on the UPC Research Data website to support research data management (one-stop shop).</b></p>	<ul style="list-style-type: none"> <li>● Launch and disseminate the UPC Research Data website (one-stop shop) to ensure best practices in the management of research data by research staff.</li> <li>● Offer two training activities on FAIR research data management and the creation of DMPs (within FAIR research data).</li> </ul>	<ul style="list-style-type: none"> <li>● Public one-stop shop.</li> <li>● Number of queries resolved.</li> </ul>	<ul style="list-style-type: none"> <li>● SBPA</li> <li>● ARiT</li> <li>● Legal Services Area</li> <li>● ICT Area</li> <li>● Ethics Committee</li> </ul>

**3. Establish an institutional policy on research data management at the UPC.**

- Present to the governing bodies and approve the institutional policy on research data management at the UPC, based on FAIR criteria and on the principle of data “as open as possible and as closed as necessary”.
- Include in academic regulations for doctoral studies the requirement of including a data management plan in the research plan submitted by students during the first year of the doctoral programme.

- Approval of the UPC institutional policy on research data management and its updating, in accordance with the current legislation.

- SBPA
- ARiT
- Legal Services Area
- Doctoral School



## C. Citizen science

Citizen science is the open participation of the general public in research processes and activities. Citizens and the community are an active agent in research, development and innovation, both in the gathering of data and in the formulation of challenges and needs to be resolved by the University. In turn, the University contributes the overall results of its research, development and innovation to citizens who are agents and receivers of the results of the activity. Further information is available in the UPC Citizen Science Portal. In citizen science, the UPC will advance in the following areas:

Aims	Actions 2023	Indicators	Stakeholders involved
<b>1. Provide knowledge and resources for research staff to include citizen science in their research projects.</b>	<ul style="list-style-type: none"><li>● Design activities for the dissemination/training of UPC teaching and research staff to promote their participation in citizen science projects.</li></ul>	<ul style="list-style-type: none"><li>● Increase the number of applications for citizen science projects in the various local, regional, national and European calls, and the number of active citizen science projects at the UPC (currently 15).</li></ul>	<ul style="list-style-type: none"><li>● ARiT</li><li>● GIC</li><li>● SBPA</li><li>● Research and Innovation Support Service</li></ul>

<p><b>2. Organise activities to build bridges between research and social participation communities (citizen associations, social entities, government bodies, companies, other citizen science projects, etc.)</b></p>	<ul style="list-style-type: none"> <li>● Design an activity to channel the participation of associations that are already established in the territory to create new initiatives that have a social impact with the UPC or get involved and disseminate information about existing citizen science projects that could benefit them.</li> </ul>	<ul style="list-style-type: none"> <li>● Number of participants in general.</li> <li>● Number of collaboration agreements with other entities.</li> </ul>	<ul style="list-style-type: none"> <li>● ARiT</li> <li>● GIC</li> <li>● SBPA</li> <li>● Research and Innovation Support Service</li> </ul>
<p><b>3. Meet the requirements of the various calls for funding in the area of citizen science.</b></p>	<ul style="list-style-type: none"> <li>● Design specific content to help teaching and research staff to apply for calls for funding of citizen science projects. In the framework of the UPC Citizen Science Portal.</li> </ul>	<ul style="list-style-type: none"> <li>● Number of proposals submitted to calls for funding that have used the template.</li> </ul>	<ul style="list-style-type: none"> <li>● ARiT</li> <li>● GIC</li> <li>● SBPA</li> <li>● Research and Innovation Support Service</li> </ul>



<p><b>4. Incorporate citizen science into the framework of the UPC's social engagement.</b></p>	<ul style="list-style-type: none"> <li>● Prepare a major citizen science campaign for public transport.</li> </ul>	<ul style="list-style-type: none"> <li>● Increase in the number of people and the diversity of communities from outside the UPC who participate in citizen science projects.</li> </ul>	<ul style="list-style-type: none"> <li>● ARiT</li> <li>● GIC</li> <li>● SBPA</li> <li>● Research and Innovation Support Service</li> </ul>
<p><b>5. Establish the coordination of the units that participate in citizen science actions.</b></p>	<ul style="list-style-type: none"> <li>● Establish the participation and the resources allocated to work on citizen and community science at the UPC.</li> </ul>		<ul style="list-style-type: none"> <li>● ARiT</li> <li>● GIC</li> <li>● SBPA</li> <li>● Research and Innovation Support Service</li> </ul>

## D. Research integrity

The UPC Code of Research Integrity includes transparency, responsibility and FAIR data among the general principles that the University's research staff must follow. In addition, it promotes an open and inclusive culture in all stages of research, in accordance with the principles of open science. Regarding research integrity, the UPC will advance in the following areas:

Aims	Actions 2023	Indicators	Stakeholders involved
<b>1. Promote knowledge of the UPC Code of Research Integrity and the UPC Code of Ethics among the research community, and meet the general objectives established in the strategic plan of the UPC Ethics Committee (CEUPC).</b>	<ul style="list-style-type: none"><li>● Organise training days for the heads of research support units and for specialists in national and international projects (2023).</li><li>● Collaborate with other vice-rector's offices to organise training activities for students, within curricula or as university extension activities, with a particular focus on bachelor's, master's and</li></ul>	<ul style="list-style-type: none"><li>● Number and quality of videos made in relation to the target areas.</li><li>● Number of training capsules.</li><li>● Number of training days provided and percentage in relation to the target areas and groups.</li><li>● Number of training projects and activities on ethics that are included in the curricula or as university extension activities.</li></ul>	<ul style="list-style-type: none"><li>● Ethics Committee</li><li>● ARiT</li><li>● Knowledge, Research and Innovation Management Service</li></ul>

	<p>doctoral theses (2022-2023).</p>	<ul style="list-style-type: none"> <li>● FAQ section organised into areas on the CEUPC website.</li> </ul>	
<p><b>2. Ensure an ethical review of research projects.</b></p>	<ul style="list-style-type: none"> <li>● Keep all communication channels active between groups (teaching and research staff/administrative staff and students) so that the applications reach the CEUPC.</li> </ul>	<ul style="list-style-type: none"> <li>● Number of reviews that have reached the CEUPC.</li> <li>● Number of applications processed successfully.</li> </ul>	<ul style="list-style-type: none"> <li>● ARiT</li> <li>● SGCRI</li> </ul>

## E. Open science skills

The incorporation of open science in research activity requires skills, knowledge and the exchange of good practices. To promote open science skills among the research community, the UPC will advance in the following areas:

Aims	Actions 2023	Indicators	Stakeholders involved
<b>1. Offer specific training activities in open science in training programmes for teaching and research staff and doctoral students at the UPC.</b>	<ul style="list-style-type: none"><li>● Offer five specific training actions in open science in training programmes for teaching and research staff and doctoral students at the UPC.</li></ul>	<ul style="list-style-type: none"><li>● Number of training actions undertaken.</li><li>● Percentage of doctoral students who attend training workshops on open science out of the total number of doctoral students.</li><li>● Percentage of SGR research groups in which at least one member has attended an open science training workshop.</li></ul>	<ul style="list-style-type: none"><li>● SBPA</li><li>● Doctoral School</li><li>● ARiT</li><li>● ICE</li></ul>

**2. Promote in the university community raised awareness, knowledge, debate and the exchange of good practices in relation to open science through Open Science Days at the UPC and Research Cafés.**

- Organise the Fourth Open Science Day at the UPC.
- Organise four Research Cafés on open science at UPC libraries.

- Number of Open Science Days organised.
- Number of attendees of Open Science Days.
- Number of Research Cafés organised.
- Number of attendees of Research Cafés.

- Culture and Community Area
- SBPA
- ARiT

## F. Metrics and recognition

Traditional methods to assess the results of scientific research will change as open science prospers. In this respect, the UPC will advance in the following areas:

Aims	Actions 2023	Indicators	Stakeholders involved
<b>1. Make progress, along with the rest of Catalan universities, in the new research assessment processes, including the concepts of open science.</b>	<ul style="list-style-type: none"><li>Propose to governing bodies that they should support the Declaration on Research Assessment (DORA) and the Leiden Manifesto to promote best practices in research assessment at the UPC.</li></ul>		<ul style="list-style-type: none"><li>GPAQ</li><li>ARiT</li></ul>

**2. Participate in the Coalition for Advancing Research Assessment (CoARA) and explore research assessment criteria at the UPC that include open science, in accordance with the experience of leading universities (UCL, UUtrecht, etc.).**

- Join the National Chapter of CoARA and participate actively in the discussions and proposals that are carried out to reform research assessment.
- Share the good practices that are carried out at the UPC.

- GPAQ
- ARiT

## G. Open education

Open educational resources are among the most frequently consulted digital content at the UPC and are becoming key elements in the improvement of teaching and learning. In this respect, the UPC will advance in the following areas:

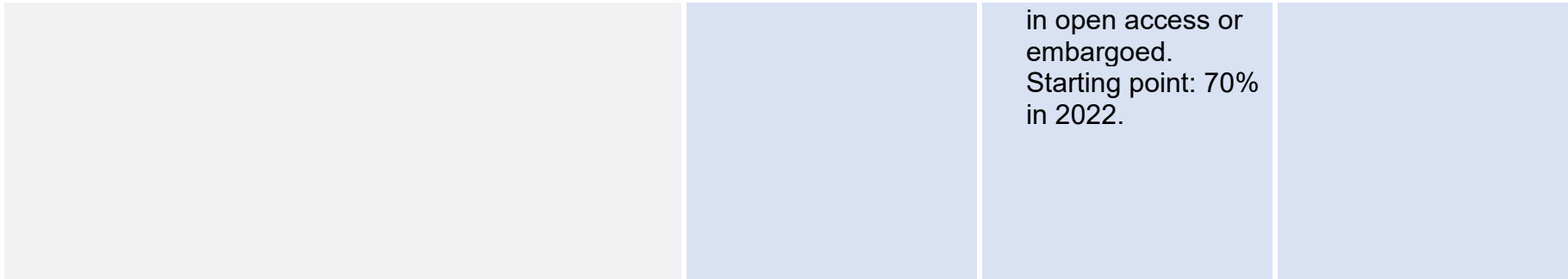
Aims	Actions 2023	Indicators	Stakeholders involved
<p><b>1. Strengthen the Aprèn portal for teaching output by UPC professors as a point of access to content created by the University's teaching and research staff in their teaching activity.</b></p>	<ul style="list-style-type: none"> <li>● Incorporate new teaching content in the Aprèn portal, for example, course guides.</li> <li>● Assess and improve the model of integration of the Aprèn portal with the Atenea campus.</li> </ul>	<ul style="list-style-type: none"> <li>● Number of items of teaching content available in the Aprèn portal in open access and number of downloads from UPCommons repositories.</li> </ul>	<ul style="list-style-type: none"> <li>● SBPA</li> <li>● ICE</li> <li>● ICT Area</li> </ul>
<p><b>2. Continue to promote open-access publishing of teaching books by the University's teaching and research staff.</b></p>	<ul style="list-style-type: none"> <li>● Improve aspects relating to the accessibility of books published as part of the collections UPCGrau and UPPostgrau.</li> </ul>	<ul style="list-style-type: none"> <li>● Number of books available in open access in UPCommons, published by the UPC.</li> <li>● Percentage of books in Catalan in the book collections</li> </ul>	<ul style="list-style-type: none"> <li>● SBPA</li> <li>● IDP</li> </ul>



	<ul style="list-style-type: none"> <li>● Increase the presence of Catalan in book collections published by the UPC.</li> </ul>	<p>UPCGrau and UPCTPostgrau.</p>	
<p><b>3. Promote the development of services to support the creation of teaching content mainly in multimedia formats.</b></p>	<ul style="list-style-type: none"> <li>● Improve the process of publishing teaching videos in the <a href="#">Zonavideo</a> portal by teaching and research staff.</li> <li>● Assess and implement (if necessary) the model of integration of <a href="#">Zonavideo</a> into the Atenea campus.</li> <li>● Improve the accessibility of audiovisual content.</li> </ul>	<ul style="list-style-type: none"> <li>● Number of items of audiovisual content available in the Zonavideo service.</li> </ul>	<ul style="list-style-type: none"> <li>● SBPA</li> <li>● ICT Area</li> <li>● ICE</li> </ul>

<p><b>4. Improve the recognition of the creation of open-access teaching content in the assessment of teaching and research staff and UPC units.</b></p>	<ul style="list-style-type: none"> <li>Analyse and adapt to the UPC the <a href="#">Proposal for a policy of open educational resources</a> drawn up by REBIUN.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>SBPA</li> <li>ICE</li> <li>GPAQ</li> </ul>
<p><b>5. Foster the use of infrastructure related to open knowledge, for example Wikipedia, in the development of new teaching practices.</b></p>	<ul style="list-style-type: none"> <li>Review and update the <a href="#">Wikiproject UPC</a>, drawn up in 2018, with the association Amical Wikimedia, to increase the UPC's presence and use of the initiatives of the Wikimedia Foundation.</li> <li>Sign an agreement with the Amical Wikimedia association to establish the areas of work of the project, the units involved and the support that the Association will</li> </ul>	<ul style="list-style-type: none"> <li>Increase the use of Wikipedia as a teaching practice tool, by following the page of UPC teaching Wikiprojects.</li> <li>Number of UPC teaching and research staff and associated publications in the <a href="#">Scholia</a> project.</li> </ul>	<ul style="list-style-type: none"> <li>SBPA</li> <li>ICT Area</li> <li>ICE</li> </ul>

	<p>offer to the UPC in the project implementation.</p> <ul style="list-style-type: none"> <li>• Update the <a href="#">UPC teaching Wikiprojects</a> page to obtain an updated list of the teaching projects that the UPC is undertaking in this environment.</li> </ul>		
<p><b>6. Complete the implementation of the UPC Academic Regulations for Bachelor's and Master's Degrees as regards open-access publishing by default of UPC students' final theses.</b></p>	<ul style="list-style-type: none"> <li>• Coordinate the process by which students can withdraw from open-access publication of their final thesis in UPCommons.</li> <li>• Draw up a report on the state of open access to final theses deposited in UPCommons.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of final theses available in open access in UPCommons.</li> <li>• Increase in the percentage of final theses published in open access in UPCommons, out of the total number that are presented at the University.</li> <li>• 2025 target: 90% of final theses that are submitted at the UPC are available</li> </ul>	<ul style="list-style-type: none"> <li>• SBPA</li> <li>• ICT Area</li> <li>• Teaching Area</li> </ul>



## H. Research infrastructure and EOSC

The European Open Science Cloud (EOSC) is based on the European Commission's objective to promote access and reuse of research data from research financed with public funds. According to this principle, the UPC will advance in the following areas:

Aims	Actions 2023	Indicators	Stakeholders involved
<b>1. Provide research staff with storage infrastructure and other services (computing, etc.) for research data.</b>	<ul style="list-style-type: none"><li>● Guarantee UPC storage spaces for research data and data services.</li><li>● Follow up on the REACT project (CSUC).</li></ul>		<ul style="list-style-type: none"><li>● ICT Area</li><li>● ARiT</li></ul>
<b>2. Incorporate improvements in FUTUR that are aligned with open science objectives.</b>	<ul style="list-style-type: none"><li>● Make datasets, data management plans and scientific dissemination activities visible in FUTUR.</li></ul>		<ul style="list-style-type: none"><li>● SBPA</li></ul>

<p><b>3. Align research data infrastructure at the UPC in accordance with the European Open Science Cloud (EOSC).</b></p>	<ul style="list-style-type: none"> <li>● Monitor and participate in the EOSC project.</li> <li>● Align research data infrastructure at the UPC in accordance with the European Open Science Cloud (EOSC).</li> </ul>		<ul style="list-style-type: none"> <li>● ARiT</li> <li>● SBPA</li> </ul>
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#### **4. Organisation, communication and dissemination, monitoring and results**

In response to the increase in open science at the UPC and to carry out the actions in this roadmap, the University needs an organisation, structure and resources to achieve the agreed objectives and actions and to promote communication and dissemination in the community.

The most immediate actions will be:

- Reorganise library services to respond to current and future needs and demands relating to open science, by creating the Open Science Office at the UPC within the Libraries, Publications and Archives Service (SBPA).
- Convert the UPC Open Science website into the UPC Open Science portal.
- Establish and promote the UPC Open-Access Award.
- Draw up a plan for the dissemination and communication of open science at the UPC.
- Include open science in promotion and training activities.
- Other.

Annually, a report on monitoring and results will be drawn up and disseminated to the community. It will be available on the [UPC Open Science website](#).

## Annex 1. Actions planned for 2024 and 2025

### A. Scientific publishing

Open-access publishing has become the main way to publish research articles and other research publications such as doctoral theses. However, to achieve immediate, full open-access publishing, the UPC will advance in the following areas:

Aims	Actions 2024	Actions 2025
<b>1. Increase the number of articles published in immediate open access by research staff at the UPC.</b>	<ul style="list-style-type: none"><li>● Publish 95% of UPC articles in open access through transformative agreements and grants to publish in open access, article processing charges (APC), the Open Research Platform and the rights retention strategy (RRS).</li></ul>	<ul style="list-style-type: none"><li>● Publish 100% of UPC articles in open access through transformative agreements and grants to publish in open access, article processing charges (APC), the Open Research Platform and the rights retention strategy (RRS).</li></ul>
<b>2. Support digital journals and open-access journals that are published by the UPC through an annual call for grants and the development and improvement of the services that are offered to their publishers.</b>	<ul style="list-style-type: none"><li>● Announce the call for grants for publishing in digital journals 2024.</li><li>● Update the <a href="#">Recommendations for the publication of journals at the UPC</a>.</li></ul>	<ul style="list-style-type: none"><li>● Draw up a report on the state of journals edited or co-edited at the UPC, based on recommendations created in 2024, and establish proposals to improve their visibility and impact.</li></ul>



<p><b>3. Update the UPC mandate to assign research activity points (PAR) for open-access publications, in accordance with transformative agreements and the rights retention strategy (RRS).</b></p>	<ul style="list-style-type: none"> <li>● Present to the governing bodies the update of the UPC mandate on immediate open access for UPC scientific output.</li> </ul>	<ul style="list-style-type: none"> <li>● Monitor the improvements incorporated in the UPC mandate for open-access publications.</li> </ul>
<p><b>4. Continue to improve the services offered by UPCommons. Global access to UPC knowledge, the institutional repository of the UPC, to university authors and their publications that are available in open access.</b></p>	<ul style="list-style-type: none"> <li>● Complete the launch of the new version of UPCommons.</li> <li>● Improve and expand the implementation of persistent unique identifiers, mainly the digital object identifier (DOI), the Open Researcher and Contributor ID (ORCID) and the Research Organization Registry (ROR).</li> </ul>	

## B. FAIR research data

In accordance with European Commission requirements, research data must be FAIR (findable, accessible, interoperable and reusable) and follow the principle of “as open as possible and as closed as necessary”. In this respect, the UPC will advance in the following areas:

Aims	Actions 2024	Actions 2025
<b>1. Provide infrastructure and tools for managing FAIR research data (virtual research spaces, repositories, tools to draw up data management platforms or DMPs) and inform research staff about them.</b>	<ul style="list-style-type: none"><li>● Carry out 20 actions of dissemination/training among UPC teaching and research staff to promote research data management according to FAIR criteria, the preparation of DMPs and the publication of datasets in repositories.</li></ul>	<ul style="list-style-type: none"><li>● Carry out 20 actions of dissemination/training among UPC teaching and research staff to promote research data management according to FAIR criteria, the preparation of DMPs and the publication of datasets in repositories.</li></ul>
<b>2. Provide advice and support on research data management to research staff through the services involved and based on the UPC Research Data website to support research data management (one-stop shop).</b>	<ul style="list-style-type: none"><li>● Consolidate the research data management support service among the services that are involved.</li></ul>	<ul style="list-style-type: none"><li>● Assess the research data management support service among the services that are involved.</li></ul>
<b>3. Establish an institutional policy on research data management at the UPC.</b>	<ul style="list-style-type: none"><li>● Follow up the institutional policy on research data management at the UPC.</li><li>● Ensure digital preservation in the long term of UPC research data.</li></ul>	<ul style="list-style-type: none"><li>● Follow up the institutional policy on research data management at the UPC.</li><li>● Ensure digital preservation in the long term of UPC research data.</li></ul>

## C. Citizen science

Citizen science is the open participation of the general public in research processes and activities. Citizens and the community are an active agent in research, development and innovation, both in the gathering of data and in the formulation of challenges and needs to be resolved by the University. In turn, the University contributes the overall results of its research, development and innovation to citizens who are agents and receivers of the results of the activity. Further information is available in the UPC Citizen Science Portal. In citizen science, the UPC will advance in the following areas:

Aims	Actions 2024	Actions 2025
<b>1. Provide knowledge and resources for research staff to include citizen science in their research projects.</b>	<ul style="list-style-type: none"><li>● Carry out two sessions of training on citizen science for teaching and research staff. From the first funding calls or examples of projects that have had a high social and scientific impact to the various stages of a project and how to involve the social communities in each one.</li></ul>	
<b>2. Organise activities to build bridges between research and social participation communities (citizen associations, social entities, government bodies, companies, other citizen science projects, etc.)</b>	<ul style="list-style-type: none"><li>● Undertake a session for each of the campuses, through their libraries, to connect researchers who have an interest in citizen science with third-sector entities with high social engagement.</li></ul>	<ul style="list-style-type: none"><li>● Create ties with other entities that work in the area of community science.</li></ul>

<p><b>3. Meet the requirements of the various calls for funding in the area of citizen science.</b></p>	<ul style="list-style-type: none"> <li>● Draw up a template for projects that includes the main aspects that the UPC could contribute and helps to achieve a favourable solution.</li> </ul>	
<p><b>4. Incorporate citizen science into the framework of the UPC's social engagement.</b></p>	<ul style="list-style-type: none"> <li>● Implement the citizen science campaign in public transport.</li> </ul>	
<p><b>5. Establish the coordination of the units that participate in citizen science actions.</b></p>		

## D. Research integrity

The UPC Code of Research Integrity includes transparency, responsibility and FAIR data among the general principles that the University's research staff must follow. In addition, it promotes an open and inclusive culture in all stages of research, in accordance with the principles of open science. Regarding research integrity, the UPC will advance in the following areas:

Aims	Actions 2024	Actions 2025
<b>1. Promote knowledge of the UPC Code of Research Integrity and the UPC Code of Ethics among the research community, and meet the general objectives established in the strategic plan of the UPC Ethics Committee (CEUPC).</b>	<ul style="list-style-type: none"><li>● Organise activities to disseminate the UPC Code of Research Integrity among the university community (2024-2025).</li><li>● Intervene on ethical criteria in meetings to present calls for competitive projects (2024-2025).</li></ul>	<ul style="list-style-type: none"><li>● Make a collection of short videos (ethical dilemmas in research) in which experts with recognition in UPC areas discuss the dilemmas that research staff commonly face. The aim is to identify the research activities that require a focus on ethical issues (2022-2025).</li><li>● Organise days for dissemination and debate among the university community and for research staff (2022-2025).</li></ul>

**2. Ensure an ethical review of research projects.**

- Keep all communication channels active between groups (teaching and research staff/administrative staff and students) so that the applications reach the CEUPC.

- Keep all communication channels active between groups (teaching and research staff/administrative staff and students) so that the applications reach the CEUPC.

## E. Open science skills

The incorporation of open science in research activity requires skills, knowledge and the exchange of good practices. To promote open science skills among the research community, the UPC will advance in the following areas:

Aims	Actions 2024	Actions 2025
<b>1. Offer specific training activities in open science in training programmes for teaching and research staff and doctoral students at the UPC.</b>	<ul style="list-style-type: none"><li>● Offer 10 specific training actions in open science in training programmes for teaching and research staff and doctoral students at the UPC.</li></ul>	<ul style="list-style-type: none"><li>● Offer 15 specific training actions in open science in training programmes for teaching and research staff and doctoral students at the UPC.</li></ul>
<b>2. Promote in the university community raised awareness, knowledge, debate and the exchange of good practices in relation to open science through Open Science Days at the UPC and Research Cafés.</b>	<ul style="list-style-type: none"><li>● Organise the Fifth Open Science Day at the UPC.</li><li>● Organise four Research Cafés on open science at UPC libraries.</li></ul>	<ul style="list-style-type: none"><li>● Organise the Sixth Open Science Day at the UPC.</li><li>● Organise four Research Cafés on open science at UPC libraries.</li></ul>

## F. Metrics and recognition

Traditional methods to assess the results of scientific research will change as open science prospers. In this respect, the UPC will advance in the following areas:

Aims	Actions 2024	Actions 2025
<b>1. Support the Declaration on Research Assessment (DORA) and the Leiden Manifesto to promote best practices in research assessment at the UPC.</b>		
<b>2. Participate in the Coalition for Advancing Research Assessment (CoARA) and explore research assessment criteria at the UPC that include open science, in accordance with the experience of leading universities (UCL, UUtrecht, etc.).</b>	<ul style="list-style-type: none"><li>• Study the results obtained in the National Chapter of CoARA and assess the incorporation of innovations in regulations, processes, indicators, etc. associated with research assessment.</li></ul>	<ul style="list-style-type: none"><li>• Establish frameworks for assessment, indicators and tools for putting them into practice that are aligned with CoARA.</li></ul>



## G. Open education

Open educational resources are among the most frequently consulted digital content at the UPC and are becoming key elements in the improvement of teaching and learning. In this respect, the UPC will advance in the following areas:

Aims	Actions 2024	Actions 2025
<b>1. Strengthen the Aprèn portal for teaching output by UPC professors as a point of access to content created by the University's teaching and research staff in their teaching activity.</b>	<ul style="list-style-type: none"><li>● Improve the information that the Aprèn portal offers in relation to the use of its content and the degree of openness (open access).</li></ul>	
<b>2. Continue to promote open-access publishing of teaching books by the University's teaching and research staff.</b>		
<b>3. Promote the development of services to support the creation of teaching content mainly in multimedia formats.</b>		
<b>4. Improve the recognition of the creation of open-access teaching content in the assessment of teaching and research staff and UPC units.</b>	<ul style="list-style-type: none"><li>● Draw up a policy of open educational resources at the UPC.</li></ul>	<ul style="list-style-type: none"><li>● Include the creation of open-access teaching content in the recognition of the UPC teaching staff's academic activity.</li></ul>

<p><b>5. Foster the use of infrastructure related to open knowledge, for example Wikipedia, in the development of new teaching practices.</b></p>	<ul style="list-style-type: none"> <li>● Coordinate a training plan for teaching and research staff and administrative staff on the use of Wikipedia and Wikidata.</li> <li>● Establish a calendar for participation in campaigns promoted by Wikipedia.</li> <li>● Organise a thematic Wikimarathon.</li> <li>● Increase the presence of the UPC on Wikidata: identification of UPC authors, identification of publications associated with the UPC, incorporation of UPC publications into Wikidata, thesis supervision, etc.</li> </ul>	<ul style="list-style-type: none"> <li>● Assess the project and make proposals to improve the work plan.</li> </ul>
<p><b>6. Complete the implementation of the UPC Academic Regulations for Bachelor's and Master's Degrees as regards open-access publishing by default of UPC students' final theses.</b></p>	<ul style="list-style-type: none"> <li>● Monitor the impact of UPC academic regulations in terms of open-access publishing of final theses.</li> </ul>	

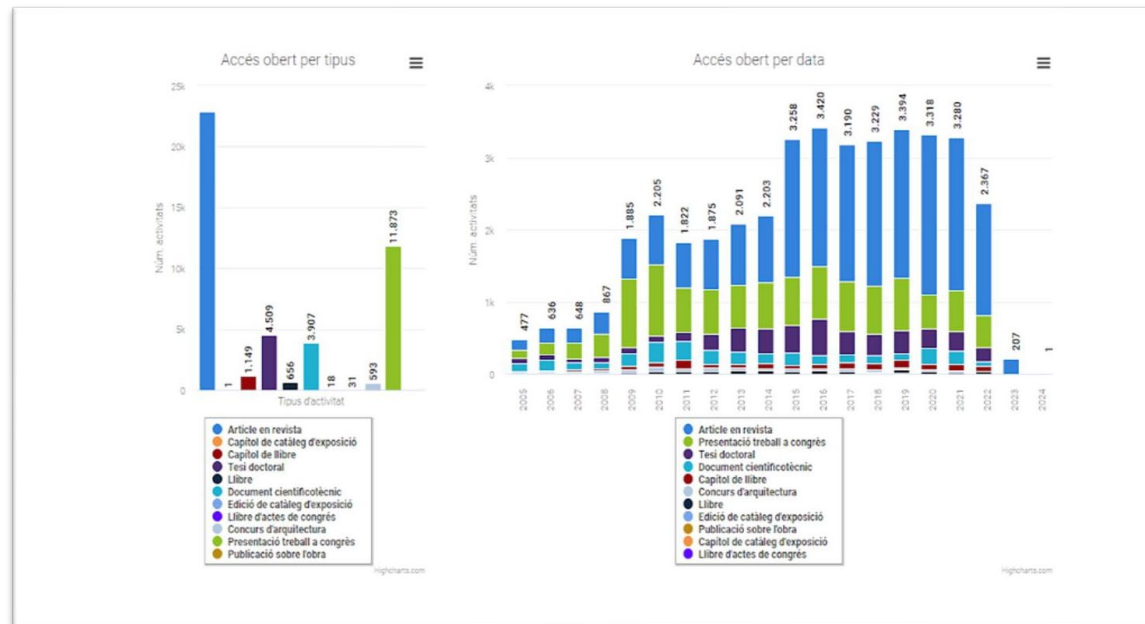
## H. Research infrastructure and EOSC

The European Open Science Cloud (EOSC) is based on the European Commission's objective to promote access and reuse of research data from research financed with public funds. According to this principle, the UPC will advance in the following areas:

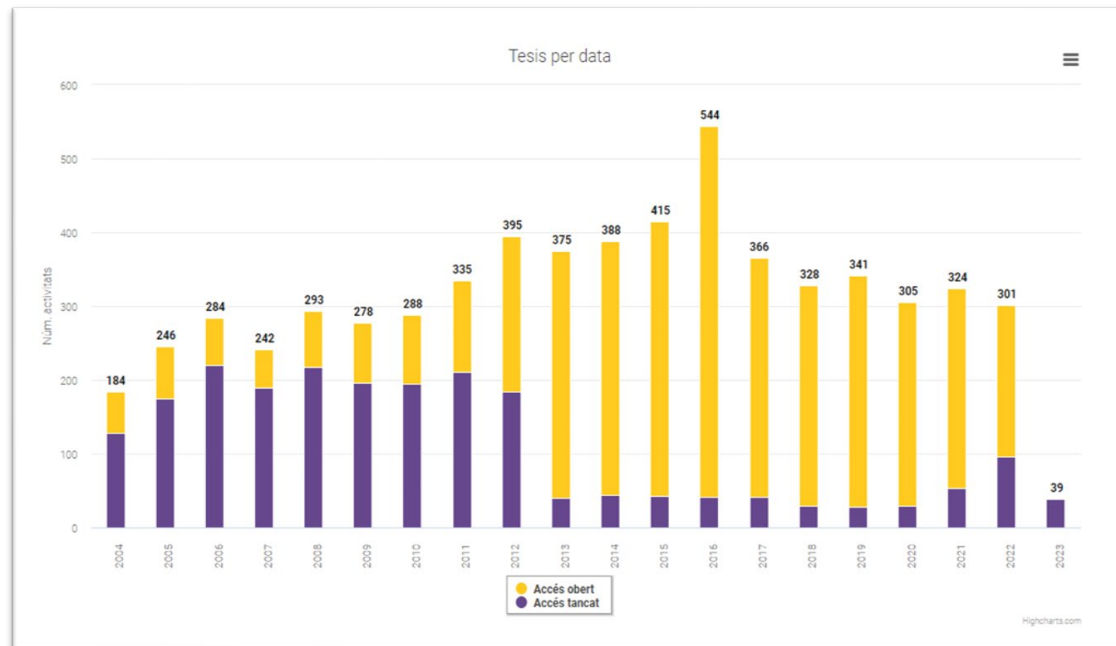
Aims	Actions 2024	Actions 2025
<b>1. Provide research staff with storage infrastructure and other services (computing, etc.) for research data.</b>	<ul style="list-style-type: none"><li>● Assess the research data storage service that is offered and identify potential improvements/needs.</li></ul>	
<b>2. Incorporate improvements in FUTUR that are aligned with open science objectives.</b>	<ul style="list-style-type: none"><li>● Adapt FUTUR for scientific communication through social media.</li><li>● Include scientific and technical services in FUTUR.</li></ul>	<ul style="list-style-type: none"><li>● Include automatic reporting in the FUTUR portal.</li></ul>
<b>3. Align research data infrastructure at the UPC in accordance with the European Open Science Cloud (EOSC).</b>	<ul style="list-style-type: none"><li>● Monitor and participate in the EOSC project.</li></ul>	

## Annex 2. Situation of open science at the UPC: indicators and actions undertaken

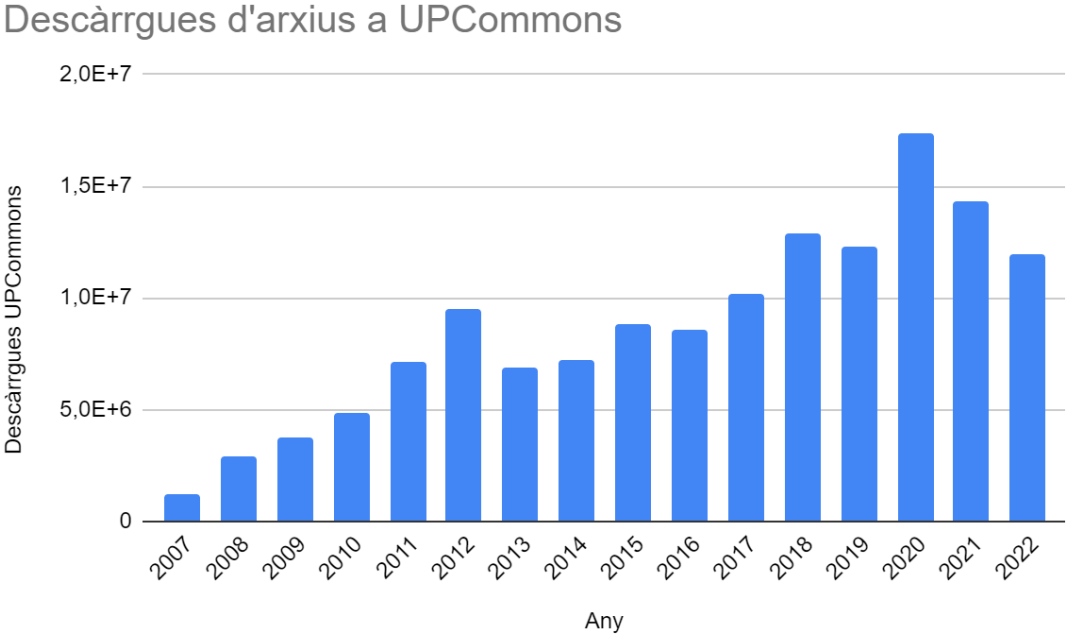
- Scientific output of the UPC in open access. Source: Futur



- **UPC doctoral theses.** Total number of theses available in open access per year (Source: UPCCommons/Futur)



- **Download of files from UPCommons per year**





- **Research data**

<b>Open repositories</b>	<b>Number of datasets / PGD</b>
UPCommons / CORA.RDR	40 datasets / 7 datasets
eiNA DPM	243 PGD

- **Transformative agreements signed with publishers to publish in open access**

<b>Publishers</b>	<b>APC 2022</b>	<b>APC 2023</b>
Elsevier, Springer, Wiley American Chemical Society	216	273

- **UPC citizen science**

<b>2022</b>
15 open proposals for citizen participation
7 competitive research, development and innovation projects have included citizen science in the research process
14 research groups have incorporated citizen science



- **Assessment**

The UPC provides support to open access with the institutional repository UPCommons and the regulations approved by the Governing Council:

- [Governing Council Decision no. 177/2014 approving the awarding of research activity points \(PAR\) for open access publications](#)
- [Decision no. 171/2009 Institutional open-access policy: access, visibility, impact and preservation of the academic output of the UPC on the internet](#)

- **Training, communication and dissemination**

In 2022, the first edition was held of the training session **Open science: 8 strategies to be open research staff at the UPC**, in the framework of the ICE and aimed at teaching and research staff and doctoral students. During the 2022-2023 academic year, two new editions of the workshop were held.

Three Open Science Days were organised in the community that were well attended by teaching and research staff:

- [First Open Science Day at the UPC](#): 23 January 2020
- [Second Open Science Day at the UPC](#): 26 January 2021
- [Third Open Science Day at the UPC](#): 30 June 2022

- Thematic web portals for visibility and access to open science at the UPC

### UPC Open Science portal



### FUTUR portal



## Aprèn portal

Professors 3.354

Organització 51

Assignatures 3.944

Titulacions 497

Contingut docent 104.827

Accés obert 46.074

Treball final 63.358

Vídeos 2.224

Futur

Destacats

Com publicar a APRÈN

Punt ATENEA Biblioteques-ICE

Serveis

Publicacions

Audiovisuals

Eines pel PDI

SLT

Publicar a APRÈN

- 1 Crea
- 2 Identifica
- 3 Publica
- 4 Comparteix

## UPCommons portal

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

Contacta Català Inicia sessió

### UPCommons. Portal del coneixement obert de la UPC

Accedeix a la nova comunicació acadèmica i científica de la UPC!

Pàgina inicial de UPCommons

El dipòsit institucional de la UPC recopila, gestiona, difon i preserva, en accés obert, la producció docent i de recerca de la UPC.

Sobre UPCommons

- Què és UPCommons?
- Com publicar a UPCommons
- Política d'accés obert de la UPC
- Estadístiques d'ús

Enllaços d'interès

- OpenAire
- DOAJ
- Recolecta

GeoCommons

24338 Geolocalitzacions 2911 Colaboradors

Filtra

Àmbit de coneixement

- Informàtica (20.893)
- Arquitectura (15.748)
- Enginyeria civil (15.530)
- Enginyeria de la telecomunicació (15.226)
- Matemàtiques i estadística (12.867)
- Urbanisme (8.846)
- Mostra'n més

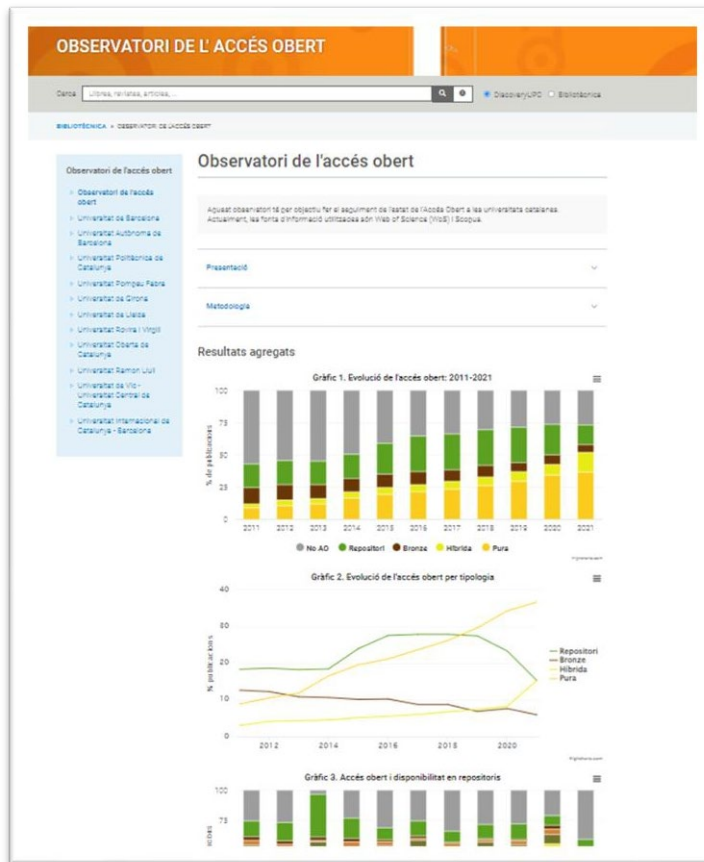
Tipus de document

- Article (42.876)
- Examen (34.898)
- Treball Final de Grau (27.598)
- Imatge (26.305)
- Text en actes de congrés (23.124)
- Projecte/Treball Final de Carrera (19.112)
- Mostra'n més

Condicions d'accés

- Accés obert (151.831)
- Accés restringit a la comunitat UPC (34.971)
- Accés restringit per decisió de l'autor

## UPC Open Access Observatory



## Citizen Science Portal

**Portal de Ciència Ciutadana de la UPC**

**Describe el que veus en pintures artístiques**

El projecte Sarré Gouge en a Bixa del BIC, a la UPC, necessita la col·laboració ciutadana per entrenar algorismes d'intel·ligència artificial capaçs de reconèixer, catalogar i descriure automàticament milers d'obres d'art.

[Participa-hi](#)

**Comparteix les teves dades de mobilitat urbana**

Amb l'app Mobilitapp desenvolupada per investigadores de la UPC, ho faràs de forma anònima i ajudaràs en la recerca de millores més sostenibles per als desplaçaments en la ciutat.

[Participa-hi](#)

**Identifica millores per a l'accessibilitat**

Cada 9 de desembre, per al dia internacional de les persones amb discapacitat, en celebrem diversos Mapathon al campus de la UPC per detectar conjuntament possibles millores a aplicar.

[Participa-hi](#)

**FORA BARRERES**

