

Barcelona City of Science

Reflections and initiatives for showcasing
Barcelona in the international scientific and
academic context



Ajuntament de
Barcelona

Pla Barcelona Ciència
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Context

Barcelona is a city of science. A fact made very clear, for example, in the index of *Nature*¹ magazine, which ranks **Barcelona** as the **leading city in Spain in terms of scientific production**, and **fourth in the European Union**. This is the result of scientific excellence, of innovation and the impact of research generated in Barcelona thanks to a scientific network rich in infrastructure, research centres and first-rate universities.

The **knowledge, research and innovation sector** stands out for its potential capacity for growth and resilience, and it is Barcelona City Council's intention to support this network in order to consolidate Barcelona as an internationally recognised city of science.

The primary focus of the **2020-2023 Barcelona Science Plan** – the new version of which was presented in May 2021 after being updated to take into account the impact of the pandemic – is Barcelona, city of science in Europe. This focus is constructed around a total of 25 initiatives based on the following objectives: consolidation of the **Hypatia Prize**; making Barcelona a European venue for ethical, political and social debate on scientific advances; **recognition of the scientific merit** of the local and international research community, and establishing collaboration agreements on scientific matters with European and other international cities.

In addition to the aforementioned objectives, other initiatives already implemented by the **City Council Department of Science and Universities** have also grown out of the plan, and are helping to consolidate the local scientific network for **research into the urban challenges** facing the city, facilitating accelerators for entrepreneurial scientific projects, and promoting a permanent programme fostering a scientific culture in the city, with the **City and Science Biennial** (now in its second year) as an excellent example of this.

We are now getting ready to take **another step forward in the City Council's science policy strategy**, emphasising the **internationalisation of Barcelona** as a city of science based on the objectives set out in the Barcelona Science Plan, helping to raise the profile of the city's scientific production and excellence both in Europe and in the wider world. This model can only succeed in a city where science and knowledge are a part of the daily life of all its citizens, in a city with a science culture and a commitment to scientific education, and one that is also promoting itself as an international hub for research and innovation.

City of Science Barcelona Conferences

Covid-19 and the changes that it has brought about have made it difficult to promote Barcelona as a city of science on the international stage as originally planned. The pandemic has led to restrictions on international travel, and has thrown up numerous obstacles to the global positioning of the city and its powerful science and universities ecosystem, making scientific and academic conferences and the reception of students and visiting researchers extremely difficult.

Given this scenario, Barcelona City Council has opened up a space for reflection in the research centres, universities and institutions within the sector to consider **how we can give a new impetus to this model**, strengthen it in the face of current challenges and project it onto possible future scenarios. With this in mind, we began **a process of debate** involving different stakeholders with a view to reaching a shared diagnosis of the current situation, and to putting forward proposals that could be implemented by the municipal administration.

The aims of this exercise were twofold. The first was to **identify the major challenges** facing the academic world and the city's research ecosystem, all made more acute by the complex scenario deriving

1- "Top 200 science cities", Nature Index 2020 Science Cities.

from the Covid-19 pandemic. The second was to **explore proposals** that could facilitate adaptation to new ways of working that would allow the **continued promotion of Barcelona's international standing as a city of science and knowledge**.

Taking into account the diversity of stakeholders that had to be included in this collective reflection, the Department of Science and Universities broke the process down into **three meetings**. The first of these was held at the beginning of March, with the participation of the city's **Scientific Advisory Council**; the second was at the end of March, with the **rectors** of the public universities and the **directors** of the city's major scientific infrastructures and research centres, and the third took place on 23 April. This was the core meeting, and it was attended by representatives from the **research centres and universities** that make up the scientific and academic fabric of the city and its metropolitan area.

A total of 53 people from 35 academic and scientific institutions have taken part in this process of debate.

The reflection on challenges and proposals

At the **first two sessions the framework for the debate was established**, focusing on two questions that would be the starting point for the Barcelona Science City proposal: *What do we understand 'city of science' to mean, and how has this concept been used in Barcelona to date? What should be our future aims when promoting the local and international model of Barcelona as a city of science?*

Unsurprisingly, the answers to these apparently simple questions turned out to be more complex and nuanced than expected. Thus, we were able to confirm that the city of science is embodied in a diverse **scientific fabric** that is structured around unique facilities; in a citizenry that feels a sense of ownership of the **scientific culture** of its city, and takes pride in belonging to a knowledge society; in the value that the **Administration** attributes to science, and in its role in **the formulation and evaluation of public policy**; in a science that is in tune with the city and that responds to the **urban challenges** it faces; in an excellent dynamic **academic fabric** and a commitment to vibrant **lifelong learning**, and also in the **economic impact** of science and its contribution to the **generation of well-being and quality employment**.

Taking these initial reflections as a starting point, at the third working session we **drilled down to the detail** of each of the debates, organising them around **four central pillars**, and defining the challenges facing the city, existing good practice and the proposed solutions:

- **Promoting Barcelona internationally** as a city of science
- Barcelona, city of **scientific culture**
- Barcelona, a city that attracts, retains and consolidates **talent**
- Barcelona, city of **higher education**, and of vibrant, lifelong education

As a result of these three meetings, and always with the actions set out in the 2020-2023 Barcelona Science Plan in mind, we have drawn up this document. A shared, public document that aims to serve as a model and joint commitment between Barcelona City Council and the scientific sector within the city itself and its metropolitan area to continue to push ahead and consolidate a **Barcelona City of Science** on the international stage.

Barcelona Science and Universities
Deputy Mayor's Office for Culture, Education,
Science and Community

Challenges and initiatives

Below are the conclusions drawn from the process of debate and reflection at the Barcelona City of Science Conferences, which define and develop the core of the 2020-2023 Barcelona Science Plan dedicated to promoting the city in Europe and further afield in this area. Six major challenges and thirty lines of action have been collectively identified, and will be implemented over the next two years through collaboration between the scientific and research community and Barcelona City Council.

Challenge 1

Work and social environment of researchers: to make Barcelona an attractive city to live, work, and settle down in.

- 1.1. The creation of a digital tool to enable those planning to settle in the city to complete the necessary procedures, as well as providing a wealth of useful information.
- 1.2. The creation of a welcome programme to support international talent (*pre arrival & welcome pack*).
- 1.3. The creation of a public short- and medium-term housing programme for professionals working in the scientific and academic sectors who wish to settle in the city, and for their families.
- 1.4. The development of an agreement with ICREA (Catalan Institution for Research and Advanced Studies) to establish a system of International Barcelona Research Grants, aimed at generating scientific knowledge that will help solve the challenges that are important to city residents.
- 1.5. The promotion, jointly with the relevant authorities, of a debate on best practice in the recruitment of research professionals in order to assess the salary structure and precariousness of Barcelona's scientific fabric.

Challenge 2

Scientific innovation and technology and knowledge transfer: growth of the city's **scientific and economic fabric**.

- 2.1. Encouraging the creation of accelerators and infrastructure for scientific innovation near the city's research centres, with an emphasis on specialised co-working spaces (shared laboratories, high-level equipment for common use, etc.).
- 2.2. The creation of a support programme for spin-offs and start-ups, in order to facilitate permeability and the movement of professionals between scientific institutions and the scientific, economic and social fabric.
- 2.3. The involvement of the city's economic base in boosting scientific innovation, and creating public collaboration mechanisms in order to increase investment in R&D&I.

Challenge 3

Spaces for coordination between research centres and universities in the city itself and its metropolitan area.

- 3.1. The development of coordination and integration spaces for the scientific institutions of the city and its metropolitan area by Barcelona City Council.
- 3.2. Progress towards a more integrated vision among the different centres: creation of clusters, community practices between centres working in different scientific and research fields. Exploring models of shared governance.
- 3.3. The creation of a website that centralises information on the scientific fabric of the city and its metropolitan area, acting as a distributor to the different research centres and universities.
- 3.4. The establishment of work and infrastructure synergies between universities and research centres in order to optimise the use of the already existing resources in the city.
- 3.5. The creation of tools to generate a feeling of belonging to a single scientific and academic ecosystem: Barcelona Science.

Challenge 4

The “Barcelona Science” brand: a key point of reference for the city, research centres, universities and professionals working in the city’s scientific and academic sectors.

- 4.1. Consolidation of the “Barcelona Science” brand as a shared point of reference for institutions, centres, universities, projects and facilities within the scientific fabric of the city and its metropolitan area.
- 4.2. Raising the profile of scientific contributions and successes generated within the city via the Barcelona City Council websites and in collaboration with the media in order to link the image of the city with internationally recognised values.
- 4.3. Fostering the creation of “sabbatical” programmes for distinguished people in the field of research, enabling them to undertake a research stay in the city, with the aim of generating “pull effects” and creating “ambassadors” for the city.
- 4.4. The promotion of a tourism model centred on thematic itineraries and visits to the universities, research centres and scientific infrastructures of the city and its metropolitan area.
- 4.5. The presence of the “Barcelona Science” brand at the major trade fairs and congresses already held in the city, in order to showcase the city’s scientific sector in international forums.
- 4.6. The creation of a science ambassador programme to raise the profile of the “Barcelona Science” brand inside and outside the city.

Challenge 5

Scientific culture in the city, and **participatory science**.

- 5.1. The organisation of regular calls for research in citizen science from the City Council.
- 5.2. The promotion of local participatory science spaces to put forward solutions to the urban challenges facing the city.
- 5.3. Making Barcelona a benchmark centre in southern Europe for the promotion of synergies between art and science.
- 5.4. The incorporation of research centres and universities in strategy and programming for local facilities, driven by the City Council.
- 5.5. The generation of communication campaigns in municipal facilities and public spaces (airport, beaches, public transport, banners, stations, civic centres, libraries, museums, etc.) to promote Barcelona as a scientific hub.
- 5.6. The consolidation of educational activity programmes and the promotion of scientific careers in infant, primary and secondary education, and the exploration of new initiatives in this field.
- 5.7. Building spaces for coordination and collaborative work between universities, research centres and museums, in order to promote the role of the latter as a central force in the propagation of science and scientific culture.

Challenge 6

Dialogue and collaboration between research centres, universities and Barcelona City Council.

- 6.1. The pooling of shared agendas between social stakeholders and the Administration in order to discuss urban challenges and how these can be solved through science.
- 6.2. City Council support for the creation and organisation of international congresses and events promoted by the city's scientific sector.
- 6.3. The incorporation of research centres and their research staff in the design and evaluation of public policies.
- 6.4. The creation of a fake news verification office in the scientific field, along the lines of the existing anti-rumour network.
- 6.5. Barcelona's leadership role in submitting projects eligible for Next Generation funds and other European calls for proposals, to boost investment in infrastructure and the development of the local scientific fabric.

Barcelona Ciència

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