

DIRECTION PAPER

OPEN SCIENCE AS PART OF A WELL-FUNCTIONING RESEARCH SYSTEM

2022



SCIENCE
EUROPE
Shaping the future of research

Colophon

October 2022

Direction Paper: Open Science As Part of a Well-Functioning Research System

DOI: 10.5281/zenodo.7214936

This direction paper has been prepared by the Science Europe Office and the members of its Working Group on Open Science.

Image credits

Cover Pexels/aidan-nguyen

For further information please contact the
Science Europe Office: office@scienceeurope.org

© Copyright Science Europe 2022.
This work is licensed under the Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original authors and source are credited, with the exception of logos and any other content marked with a separate copyright notice. To view a copy of this license, visit <https://creativecommons.org/licenses/by/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.



Introduction

Science Europe and its public research funding and performing member organisations are committed to support open science as part of a well-functioning research system. Recalling [Science Europe's strategic vision, mission, and values](#), they strive for open and seamless collaboration between all actors involved in the research process, as well as open access to research outputs. They also support meaningful involvement of societal actors whenever relevant in the research process.

Science Europe shares with the '[UNESCO Recommendation on Open Science](#)' the view that open science is a comprehensive ambition "*to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community.*"

The COVID-19 pandemic has been a stress test for the research community, adding urgency to consider the way forward within Europe and globally. It has demonstrated the benefits of open and transparent research practices,

notably accelerating the development of safe and effective vaccines, while at the same time highlighting obstacles and challenges that are preventing open research processes.

Open science is a [cross-cutting objective in Science Europe's strategy plan](#). In this direction paper, Science Europe and its members establish a direction for open science and their role in this process.

Now is the time to take the next step forward in the transition to open science. Science Europe and its members will work to make the direction and actions expressed in this statement a reality.

Towards Open Science in Europe and Globally

Highlighting the public nature of the research funding they provide, Science Europe members believe the transition to open practices should be just and equitable within Europe and globally.

Purposeful action should be taken to ensure all research communities can take part in this transition, while all segments of society should be able to reap its benefits.

An open research culture and practices underpin transparency in research, the ability to re-use and

build upon research, and enables reproducibility. To achieve this transition, Science Europe and its members strive to make the research process and its outputs as open as possible by default and only as closed as necessary.

The transition to open science must strike a balance to ensure open research practices can be sustained within the research system. This balance will differ depending on the disciplinary, institutional, and national context.

Science Europe's Role

Science Europe member organisations have together made substantial achievements developing open access policies since 2012. Building on these achievements, this paper goes a step further and establishes a more comprehensive focus and role in the years to come.

The work of Science Europe and its members has resulted in tangible progress for open practices within the communities they serve. A majority of members have developed and implemented leading policies on open access

to research publications. These are based on a [set of common principles](#) and are continuously improved based on [robust monitoring practices](#). Member organisations also promote Findable, Accessible, Interoperable, and Reusable (FAIR)

research data. They are internationally [aligning data management policies and procedures](#) and are ensuring the [long-term sustainability of research data](#).

Open science complements and is integral to Science Europe other strategic priorities. These most notably include the evolution of [research culture](#), establishing a [values framework](#) for the organisation of research, fostering the [review of research assessment processes](#) and a [reform of research assessment](#), as well as reinforcing [science communication](#) for greater research impact.

Together with its member organisations, Science Europe will pursue open science further through the following framework actions:

- Promote further alignment of policies in Europe to incentivise open science and facilitate basic and applied research across disciplinary, geographical, and other borders. Due attention and respect will be paid to disciplinary, institutional, and national diversity, as well as policy alignment in the global context.
- Raise awareness and advocate open science at global level to policymakers and the broader society on the importance, urgency, and added value of the transition to open science, with a focus on equity. Science Europe will

enhance its role as an advocate for open science in the global context, e.g. UNESCO, Global Research Council, and elsewhere.

- Provide input to European legislation and global and European policies and funding mechanisms shaping the research landscape. The comprehensive nature of the transition to open science closely connects it to the challenges and opportunities emerging from evolutions in research policy and funding, digital legislation, and other processes.

Sharing good practices and facilitating mutual learning between our members and with our partners is the foundation for these actions. A cornerstone of our work, this action will set its sights on open access to all research outputs and opening the research process in its entirety. It will also be central to ensuring an inclusive and equitable transition to open science within Europe and globally.

Science Europe is a driving force behind numerous open access initiatives such as [cOAlition S](#), [OA2020](#), and the '[Action Plan for Diamond Open Access](#)'. It is also a valued partner to other organisations, including the [European University Association](#), the [European Open Science Cloud Association](#), [LIBER](#), the [Research Data Alliance](#), and others. These initiatives and partnerships increasingly bring together European and global developments.

The transition to open science is a joint effort and a shared responsibility between partners in policy and practice. Itself representing major public research funding and performing organisations, Science Europe works together with policymakers, other representative organisations, and open science champions wherever they are found.



Science Europe AISBL

RUE DE LA SCIENCE 14, 1040 BRUSSELS, BELGIUM

Science Europe is the association of major research funding and research performing organisations in Europe.

Our vision is for the European Research Area to have the optimal conditions to support robust education and research & innovation systems.

We define long-term perspectives for European research and champion best-practice approaches that enable high-quality research for knowledge advancement and the needs of society.

We are uniquely placed to lead advancements to the European Research Area and inform global developments through participation in research initiatives where science is a strong and trusted component of sustainable economic, environmental, and societal development.

More information is available at www.scienceeurope.org