

CORSI DI FORMAZIONE



**Consiglio Nazionale
delle Ricerche**
ILIESI

L'alternativa Open

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 @egiglia



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In questo modulo impareremo:

1. Open Science è solo la scienza, fatta bene
2. «Open by design»
3. Open, equità e inclusione

MESSAGGI CHIAVE

- C'è una comunità lì fuori che vi sostiene (soprattutto giovani ricercatori)
- Il mondo lì fuori sta cambiando: c'è ricchezza infinita di buone pratiche

...un po' di ispirazione...

The best thing about **Internet** is that it's **open**. In every field it let us **share and innovate**.

In science, **OPENNESS IS ESSENTIAL**.

Open science doesn't mean ignoring economic reality.

Of course **we need business models to be sustainable**. But that **doesn't mean we have to carry on doing things the way they have always been done**.

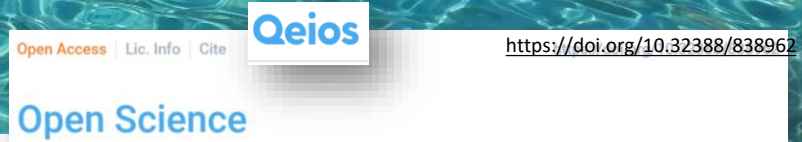
So, wherever you sit in the value chain, whether you're a researcher or an investor or a policy maker, my message is clear: **let's invest in collaborative tools that let us progress...**

Let's tear down the walls that keep learning sealed off.

And let's make science open.



Open Science: definizione



'Open Science' stands for the transition to a new, more open and participatory way of conducting, publishing and evaluating scholarly research. Central to this concept is the goal of increasing cooperation and transparency in all research stages. This is achieved, among other ways, by sharing research data, publications, tools and results as early and open as possible.

Open Science leads to more robust scientific results, to more efficient research and (faster) access to scientific results for everyone. This results in turn in greater societal and economic impact.

<https://www.accelerateopenseience.nl/what-is-open-science/>

RICORDIAMOCI
CHE STIAMO
PARLANDO DI
RICERCA
FINANZIATA
CON FONDI
PUBBLICI

NUOVO MODO DI

- CONDURRE
- PUBBLICARE
- VALUTARE

LA RICERCA

CONDIVIDENDO

- DATI/TESTI
- STRUMENTI
- RISULTATI...

PRIMA E PIÙ APERTO POSSIBILE

OPEN
SCIENCE NON
È IL FINE, MA
UN MEZZO

QUESTO PORTA A
SCIENZA PIÙ SOLIDA, ACCESSO PIÙ RAPIDO
CHE SI TRADUCE IN **IMPATTO SOCIALE/ECONOMICO**

Open Science

- CONCETTO INCLUSIVO CHE COMBINA PRATICHE ATTE A RENDERE LA CONOSCENZA SCIENTIFICA APERTA, ACCESSIBILE E RIUSABILE
- PER AUMENTARE LA COLLABORAZIONE E LA CONDIVISIONE A **BENEFICIO DELLA SCIENZA E DELLA SOCIETÀ**



6. For the purpose of this Recommendation, **open science** is defined as an inclusive construct that combines various movements and practices aiming 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. It comprises all scientific disciplines and aspects of scholarly practices, including basic and applied sciences, natural and social sciences and the humanities, and it builds on the following key pillars: open scientific knowledge, open science infrastructures, science communication, open engagement of societal actors and open dialogue with other knowledge systems.

Open Science



FACT SHEET: Biden-Harris
Administration Announces
New Actions to Advance
Open and Equitable Research

Jan 11, 2023

- **OSTP and the National Science and Technology Council (NSTC)** today released an official definition of open science for use across the U.S. government: *“The principle and practice of making research products and processes available to all, while respecting diverse cultures, maintaining security and privacy, and fostering collaborations, reproducibility, and equity.”* A unified, official definition will galvanize federal efforts, promote interagency collaboration, and **drive progress.**

- RISULTATI E PROCESSI DI RICERCA DISPONIBILI PER TUTTI
 - NEL RISPETTO DELLE DIVERSE CULTURE
 - NEL RISPETTO DI SICUREZZA E PRIVACY
- PROMUOVENDO COLLABORAZIONE, RIPRODUCIBILITÀ, EQUITÀ
 - **TO DRIVE PROGRESS**

Open Science

**OPEN SCIENCE:
JUST
SCIENCE
DONE RIGHT**

At the [OECD STI Multi-Stakeholder event 'Shared challenges, transformative actions'](#), on 23 April, [CODATA President, Mercè Crosas](#), was the first speaker on a panel with the theme '[Making Open Science a reality for the benefit of society](#)'. Mail: CODATA Apr. 24 2024

Mercè started by arguing that Open Science can best be understood as 'being scientific', doing science properly, according to longstanding scientific principles but in the context of 21st century technologies. Doing science properly means that scientific claims must be verifiable. This in turn means that the data, methodologies, protocols and analytical code must be available for scrutiny. Furthermore, science builds on previous work, stands on the shoulders of giants, and so the historical corpus of scientific claims and knowledge must be open as a shared heritage and resource of humankind.

Having set the scene in this way, Mercè went on to make four specific points and calls for action.

1. Open science must be global and inclusive.
2. Seize the opportunity of AI and sensitive data.
3. Engage wider society in Open Science.
4. Make Open Science work through the science of science.



- OPEN SCIENCE MEANS «BEING SCIENTIFIC» i.e. VERIFIABLE
- WHICH MEANS THAT THE ENTIRE WORKFLOW MUST BE AVAILIABLE
 - INCLUSIVE AND GLOBAL, OPEN TO SOCIETY
 - SEIZE THE OPPORTUNITY FOR AI

Open Science

Why is open science so crucial? 2023



**OPEN SCIENCE
MUST BE THE
STANDARD**

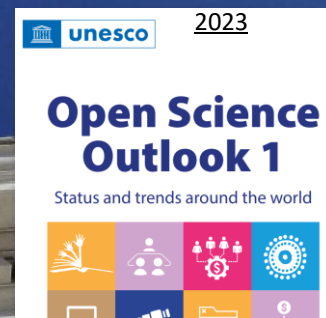
In the face of challenges such as climate disruption, pandemics, and biodiversity loss, recent years have shown that we need science more than ever. But to address these global risks in a truly effective way, we require not just any science but an open, collaborative, and inclusive form of it.

Open science revolutionizes the scientific endeavor by breaking down barriers and ensuring that scientific results, tools, processes, and methods are accessible to all. By also bringing scientists together, regardless of their cultural, political, and religious backgrounds, open science democratizes the scientific realm, turning science into a shared heritage rather than a privileged commodity.

Open science can serve as a powerful tool to bridge existing gaps in science, technology, and innovation, contributing to both the greater good for science and society and the achievement of the Sustainable Development Goals (SDGs).

Op

- OPEN SCIENCE NON È IL FINE, È UN MEZZO PER UNA SCIENZA PIÙ EQUA
- PER MISURARLO NON SERVONO INDICATORI TRADIZIONALI MA BISOGNA BASARSI SUI VALORI: HA OTTENUTO UNA SCIENZA PIÙ EQUA?



Building the pillars of openness to advance the values and principles of open science

Open science is not an end in itself, but a means towards fairer, more equitable, diverse and inclusive research systems that are better geared towards the production, dissemination and use of scientific knowledge that helps address societal challenges with benefits for all. It is therefore important to understand and monitor the degree of openness not only of the outputs of science but also across all the pillars of open science and across all the stages of the scientific cycle. A combination of open qualitative and quantitative assessments, as well as innovations in the understanding of and response to change, will be needed for a monitoring system for open science that itself adheres to the values and principles of open science.

For some elements of open science, assessing changes and measuring progress can be aided by the use of indicators and data sources. In addition to being accurate, efficient and reproducible across regions and disciplines, these indicators and sources need to respect the core values and principles of open science as identified in the 2021 UNESCO Recommendation on Open Science.

However, there is a real risk that assessments of specific quantifiable open science practices or outputs may distract from the overall need to monitor a comprehensive transformation to open science and its impacts on the science, technology and innovation (STI) ecosystem and on society.

Hence, the aspects of open science that do not lend

Open Science

Open Science Depends on Open Minds



Neelie Kroes ✓

Iscriviti 851



Jeff Rouder

@JeffRouder

Segui

What is Open Science? It is endeavoring to preserve the rights of others to reach independent conclusions about your data and work.

Traduci il Tweet

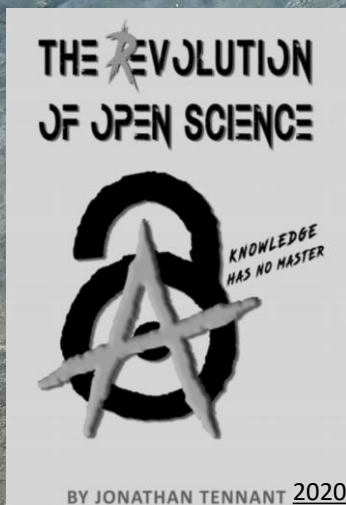
21:47 - 5 dic 2017



Open Science @openscience · 5 h

"Being open and transparent is an ongoing practice and not a check box at the end." - @biocrusoe #openscience

13 8



Open Science = Open Outputs + Open Infrastructure X Culture (change)

Access, reuse & discoverability

Evaluation & Researcher behaviour

C. Mac Callum, UKSG, April 2018

[...cambiamento culturale o alibi?]

NON ASPETTIAMO CHE CAMBINO LE REGOLE DI VALUTAZIONE
PER CAMBIARE PRATICA...
SE NO DIVENTA ALIBI PER NON CAMBIARE MAI.
IL CAMBIAMENTO SIAMO NOI.
LE REGOLE VANNO FATTE CAMBIARE

'Devastating career event': scientists caught out by change to Australian Research Council fine print

Aug. 20, 2021

Researchers say a ban on preprint material citations in funding applications is a 'remarkably stupid own-goal for Australian science'

Preprint rule out of line with 'modern publication culture'

In their 41-page document of instructions to DECRA applicants, the ARC asks researchers to "include information about national and international progress" relevant to their application and field of research

14 September 2021

One scientist said without referring to the preprint. Another said.

Another said: "I m... These are two fair... cite them I would

One astrophysicist... comments from A... citing a piece of sc... a preprint.

"I was really anno... ruled out on a tech

A Future Fellowship applicant, who described feeling angry, destroyed,



Australian Government
Australian Research Council

Adjustments to the ARC's position on preprints

For future scheme rounds, the Australian Research Council (ARC) will allow the referencing and inclusion of preprints in a grant application. This includes within the Research Outputs list as well as the body of an application.

This adjustment to ARC's policy position reflects contemporary trends and the emerging significance of preprint acceptance and use across multiple research disciplines as a mechanism to expedite research and facilitate open research, as well as to provide greater equity across disciplines and career stages.



Yvonne Nobis @yvonnenobis · 1h

Aug. 20

This is bonkers. One of my partner's most highly cited papers (Planck collaboration) is a pre-print. It does not differ in any material way from the final published article, which followed several years later (a special journal ed).

(nb. citations from the preprint don't count)



The Hidden Professor @thehiddenprof · 1h

Sent 14 2021

rdian.com/education/2021...

Twitter

PREPRINT NON ACCETTATI PER
GRANT PROPOSALS.
PROTESTE PERCHÉ ORMAI SONO DI
USO COMUNE E SONO LA RICERCA
PIÙ AGGIORNATA
ORA SONO ACCETTATI

...Open

FOCUS SULL'INTERO PROCESSO,
NON SOLO SULLA SINTESI FINALE
(ARTICOLO)

EU

OPEN
SCIENCE ≠ OPEN
ACCESS

TUTTI QUESTI
COMPONENTI VANNO
CONSIDERATI
E DECLINATI
COERENTEMENTE AL
PROGETTO NEL **PROPOSAL
TEMPLATE**, 1.2
EXCELLENCE-
METHODOLOGY

APPUNTO PERCHÉ OPEN
SCIENCE È UN METODO
PER FARE RICERCA **VIENE
VALUTATO NEL CRITERIO DI
«ECCELLENZA»**



Components of Open Science

UNESCO

[...Houston, abbiamo un problema

NOT PEER-REVIEWED
Ten myths around open scholarly publishing

10 Myths around Open Scholarly Publishing March 11, 2019

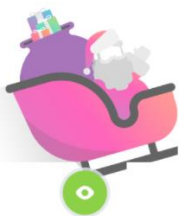
Myth 1 Preprints will get your research 'scooped' Preprints typically provide a time-stamp and a DOI, therefore establishing priority of discovery	Myth 6 Copyright transfer is required to publish and protect authors Copyright transfer procedures do not protect authors nor contribute to the advancement of scientific progress
Myth 2 JIF and journal branding are measures of quality for researchers The JIF is a flawed metrics that was never meant to be used for evaluation of research and researchers	Myth 7 Gold Open Access is synonymous with the APC business model Most DOAJ-indexed journals do not have APCs and are funded from other sources, such as research institutes and grants
Myth 3 Approval by peer review proves that you can trust a research article The current peer review system is prone to a number of flaws including corruption, human bias and ghostwriting	Myth 8 Embargo periods on 'green' OA are needed to sustain publishers Traditional journals can peacefully coexist with zero-embargo self-archiving policies on author manuscripts
Myth 4 Without journal peer review, the quality of science suffers Researchers are more than responsible and competent enough to ensure their own quality control as part of intrinsic scientific integrity	Myth 9 Web of Science and Scopus are global databases of knowledge Neither represent the sum of current global research knowledge including Africa, Latin America and Southeast Asia
Myth 5 Open Access has created predatory publishers Predatory journals have been around for a long time before the recent push towards Open Access publishing	Myth 10 Publishers add no value to the scholarly communication process Publishers are responsible for quite some key functions, from peer-review management to production and archiving of final version articles

CALENDARIO DELL'AVVENTO OPEN SCIENCE

1 dicembre



2 dicembre



3 dicembre



4 dicembre



5 dicembre



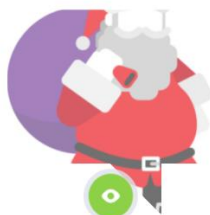
7 dicembre



8 dicembre



9 dicembre



10 dicembre



11 dicembre



genially 2021

LA PERCEZIONE IN ITALIA:
- OPEN SCIENCE=OPEN ACCESS
- OPEN ACCESS=SOLO RIVISTE
- SI PAGA SEMPRE PER PUBBLICARE
- EDITORI PREDATORI

Open Science definition

AUMENTA COLLABORAZIONE E
CONDIVISIONE A BENEFICIO
DELLA SCIENZA E DELLA
SOCIETÀ

Open science
increases scientific
collaborations and sharing
of information for the benefits
of science and society

OPEN
SCIENCE

RENDE LA CONOSCENZA IN
DIVERSE LINGUE DISPONIBILE
E RIUSABILE DA TUTTI

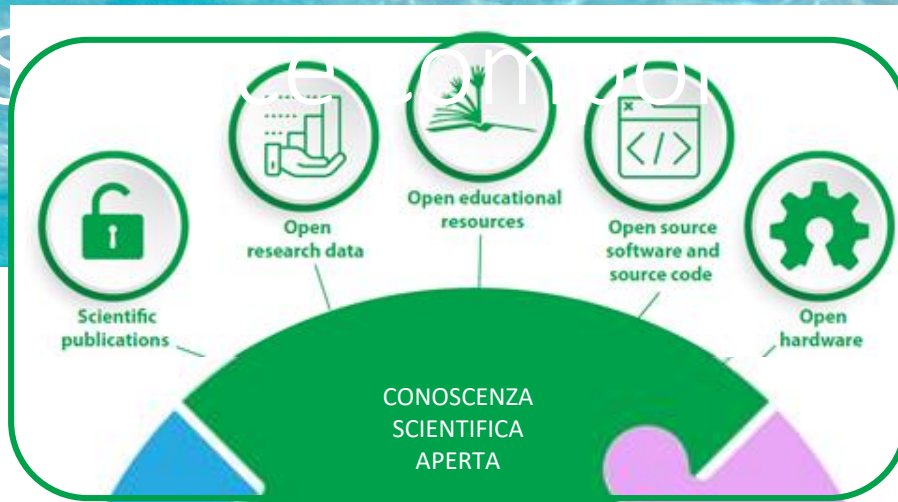
makes multilingual scientific
knowledge openly available,
accessible and reusable for
everyone

APRE IL PROCESSO DELLA
CREAZIONE DI CONOSCENZA E
LA COMUNICAZIONE AGLI
ATTORI SOCIALI AL DI LÀ DELLA
COMUNITÀ SCIENTIFICA
TRADIZIONALE

opens the processes of scientific
knowledge creation, evaluation and
communication to societal actors
beyond the traditional scientific
community.



...Open Science



NON SOLO CONOSCENZA SCIENTIFICA:
- INCLUSIONE
- COINVOLGIMENTO

Members of the Open Science community react to the UNESCO Recommendation

We asked 11 leading experts and advocates of the Open Science and Open Access movement to share their views on the significance of the UNESCO Recommendation on Open Science adopted in late 2021. Here are their responses and their own recommendations for how to achieve the objectives set by UNESCO.



Barend Mons

STIAMO
METTENDO VINO
NUOVO IN OTRI
VECCHIE (IL
SISTEMA DELLE
RIVISTE)

Jan. 2022

...MA / 1...

NON È PREMETTENDO
«OPEN» CHE
RISOLVIAMO...

LA COLPA
È
NOSTRA!

recommendations. But, so far, most continue to put this still-fermenting new wine into the old wineskins of their current reward systems and publishing requirements. Ultimately, the escape from the 17th-century scholarly communication prison is *not* about blaming the publishers, but about facing our own, dried-out, elitist, and anachronistic ivory-tower scholarly communication practice (from which the publishers live lavishly).

primarily communicated via human-readable narrative. However, we must realise that the evidence on which we base our knowledge should be centered on data and relevant, reproducible, observations and patterns that lead to precise claims[2], rather than on storytelling. Narrative is necessary but is *supplementary* to data and actual claims.

fortunate people of their playful youth and natural resources so that we in the Global North can have our electric cars and cleaner cities? Why would science be different? The (almost) universally agreed-upon (among intellectuals) new wine, *although wonderful and tasty*, goes quickly into the old wineskins of the current, journal-based scholarly communication and reward system, which *will resist until it finally bursts*. Many



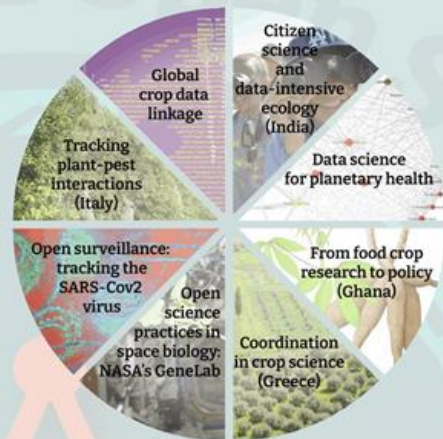
Una questione di filosofia

Subprojects

PHIL_OS includes empirical research on several research sites with a number of partners and collaborators, organised around eight sub-projects led by a **team** member with the support of the PI.

The focus is on biology and biomedicine, including plant science, animal behaviour and ecology, epidemiology and genomics:

- **Citizen science and data-intensive ecology** (Rose Trappes)
- **Open science practices in space biology** (Paola Castaño)
- **Global crop data linkage** (Sabina Leonelli)
- **Tracking plant-pest interactions** (Emma Cavazzoni)
- **Tracking the SARS-Cov2 virus** (Nathanael Sheehan)
- **Coordination in crop science** (Fotis Tsiroukis)
- **From food crop research to policy** (Joyce Koranteng-Acquah)
- **Data science for planetary health** (Sabina Leonelli)



<https://opensciencestudies.eu/subprojects/>

OPEN?

The OS movement is transforming research, with OS policies adopted around the globe and widespread agreement on implementing key OS principles like openness, transparency and reproducibility. However, the philosophy of science underpinning the OS movement has not been clearly articulated. Moreover, there are significant epistemic risks in implementing OS across widely different research settings, such as the marginalisation of contributions from low-resourced environments. This raises questions about the relation between *open* and *good science*.

To address these concerns, this project combines a philosophical analysis of the epistemic significance of research environments with empirical research on how researchers working in different environments enact and conceptualise OS. This "philosophy of science in practice" [PSP] approach is ideally suited to investigating the meaning and implications of OS for the conduct of research. This project extends PSP by grounding conceptual analysis of scientific practice on qualitative research as well as collaboration with scientists and policymakers. We aim to develop a conceptualisation of OS that reframes its key principles by outlining how exchanges across environments can boost research excellence.

The empirical focus of the project is on OS practices within the plant sciences broadly conceived including botanical research carried out at field stations, breeding farms and seed collections. The project thus aims to understand how concerns around Open Science can support current and future transnational research on food security and environmental challenges.

<https://opensciencestudies.eu/project/>

CAMBIARE PROSPETTIVA

FOCUS SUL PRIMA E DURANTE
(**CREAZIONE DI CONOSCENZA**)
INVECE CHE SUL DOPO
(**CIRCOLAZIONE DI CONOSCENZA**)

Some points of attention

- Align top down and bottom-up initiatives.
- Be inclusive and engage (better) with bottom up initiatives like the Open Science, research software engineers and data stewards communities.
- Address the main barriers for researchers (time, effort and financial costs, data protection and legal restrictions; lack of recognition).
- A stronger focus on Open Science activities before and during a research project (creating knowledge) instead of (mainly) after (circulating knowledge).
- Develop expertise (and capacity) in multiple disciplines (team science).
- Design research workflows and integrate local, national and international services in these workflows.
- Collaborate with Local Data Competence Centre, Thematic Data Competence Centre and EOSC.
- Stimulate FAIR by design.

Ecologia della conoscenza

- LA CONOSCENZA SCIENTIFICA È SOLO «UNA» DELLE TANTE FORME DI CONOSCENZA
- «DIALOGO APERTO» CON ALTRE FORME DI CONOSCENZA SIGNIFICA
COMUNICAZIONE IN DUE DIREZIONI
NON SOLO «ACCESSO», «CONDIVISIONE»
DALL'ACCADEMIA VERSO L'ESTERNO



Connecting the building blocks of Open Science: an ecological approach Nov. 2022

Pierre Mounier (EHES)

Beyond the building blocks: towards an ecology of knowledge

In many texts about open science, starting with the definitions, there is often a versatile usage of “science” and “knowledge” that can be mentioned as if they were perfect synonyms. The UNESCO definition of open science is on the contrary very precise on this, considering science (or “scientific knowledge” as they put it) as one of the many types of knowledge that are produced in human societies. Hence, this challenging objective to “open dialogue with other knowledge systems”, which touches upon several dimensions of scientific communication: citizen science, DEI (Diversity, Equity and Inclusivity), education, societal engagement. If everyone agrees that open science is ultimately for the benefit of society, it is often conceived as a basic right for non-academic actors to access the results of academic research, or as an active action to disseminate the outputs of research to the society through various channels. But, by no means this is what we could consider as “an open dialogue” that would require, at least, bidirectional communication. It thus implies to consider science on an equal footing with other types of knowledge (produced by practitioners, journalists, educators, amateurs, communities for example) to contribute to a common good that extends beyond the borders of academia (Okune et al., 2019). In my

...MA / 2

“Connecting the building blocks” of open science is thus much more than just creating connections: it is more than ensuring technical interoperability between different systems, more than coordinating various stakeholders, more than disseminating science in society: it is to create a *milieu* of knowledge, to build the community that supports it and to open it beyond the limits of academia. In other words, it is to consider that the sum is superior to the addition of its parts, and to adopt an encompassing approach that supports open knowledge as a whole. That is why I would like to submit to discussion the relevance of adopting an ecological approach to open science. The main consequence of it would be focus primarily not on the “blocks” taken individually, and not even primarily on the individual interactions between them, but on the systems of interactions that structure open science. The proposition would be to start from open science considered as an ecosystem supporting the creation of open knowledge, and then look at the elements from that perspective. What is in focus then, is the web of communications and interactions that compose the ecosystem. The objective is no more to “connect the building blocks” of open science, as bricks are assembled in a wall, but to support symbiotic systems of relations between initiatives, platforms, tools, communities and practices that thrive for and by open knowledge.

Winch means, when considering or even evaluating open science initiatives, projects, services and tools, to flip the order or priorities and to pay attention first to the way they move in their ecosystem: how do they nurture from it, how do they fertilise it, how do they cooperate with others, rather than other criteria that are usually considered as more important; such as innovation, efficiency, excellence. And then, when we have a comprehensive representation of the full web of interactions and interdependencies maybe we could start asking the right questions: is it sustainable? Is it inclusive? Is it creative? Is it alive?

- FOCUS SULLE INTERAZIONI, NON SUI COMPONENTI

- COME AGISCONO NELL' ECOSISTEMA? COME LO RENDONO FERTILE? SONO «VIVE»?

...QUESTI SONO I CRITERI, NON «ECCELLENZA»

Open Science

- È UN DIRITTO UMANO
- LEAVE NO ONE BEHIND

Jon Tennant ✓

107.241 Tweet

Following

[Open] Science is a Human Right

Article 27

- 1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to **share in scientific advancement and its benefits.**
 - 2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.
- 1) Toda persona tiene derecho a participar libremente en la vida cultural de la comunidad, a gozar de las artes y a participar en el **progreso científico y en los beneficios que de él resulten.**
 - 2) Toda persona tiene derecho a la protección de los intereses morales y materiales que le correspondan por razón de las producciones científicas, literarias o artísticas de que sea autora.

<https://www.un.org/en/universal-declaration-human-rights/>

@protohedgehog

Sept. 21, 2019

Also noting that the global COVID-19 health crisis has proven worldwide the urgency of and need for fostering equitable access to scientific information, facilitating the sharing of scientific knowledge, data and information, enhancing scientific collaboration and science- and knowledge-based decision making to respond to global emergencies and increase the resilience of societies,

Committed to leaving no one behind with regard to access to science and benefits from scientific progress by ensuring that the scientific knowledge, data, methods and processes needed to respond to present and future global health and other crises are openly available for all countries, in accordance with the rights and obligations, including the exceptions and flexibilities, under applicable international agreements,

Affirming the principles of the Universal Declaration of Human Rights, notably those contained in Articles 19 and 27 and also affirming the 2007 United Nations Declaration on the Rights of Indigenous Peoples,

unesco Nov. 23, 2021



UNESCO Recommendation on Open Science

Open [collaborative] inclusione



Dec.2021



Beyond Diversity and Inclusion:
Challenging Structural Racism and
Systemic Biases in Academic
Knowledge Production

Leslie Chan
Global Development Studies
Knowledge Equity Lab
University of Toronto Scarborough
@lesliekwchan @knowequitylab

Research must be communicated in multiple languages

Access to research and greater interaction between science and society can only be possible if research is communicated in multiple languages, including those actually used in speech and writing locally.

In the ongoing reform of the research assessment system, the call for multilingualism is the most notable omission.

INCLUSIONE SIGNIFICA ANCHE MULTILINGUISMO

Comité pour la science ouverte @ouvrirlascience

#OSEC2022 #PF Le multilinguisme, de la réforme de l'Évaluation de la Recherche (Mickiewicz University Poznań) - @ekulczewska @ScholarlyComm

Traduci il Tweet

10:26 AM · 5 feb 2022 · Twitter

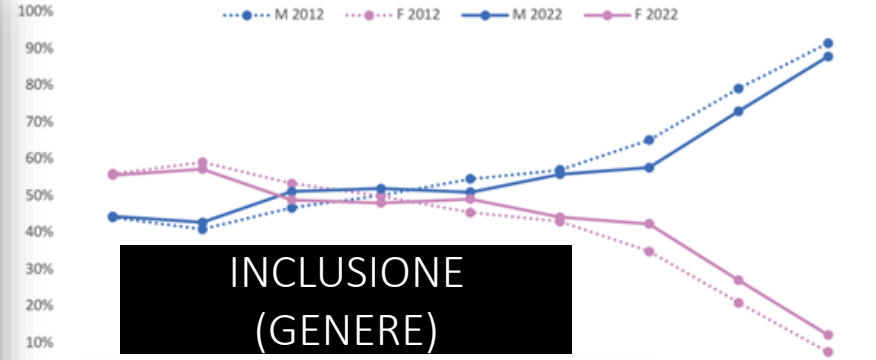
2 Retweet 1 Mi piace

Twitta la tua

2023

3. IL PERSONALE DOCENTE E TECNICO AMMINISTRATIVO DELLE UNIVERSITÀ

Fig. 3.4 – Componente maschile e femminile nei passaggi di carriera accademica. Anni 2012-2022 (quote percentuali sui totali)



Main points

- Contemporary inequity in knowledge production has deep historical roots – tracing back to colonialism and the spread of imperial science
- Addressing compositional diversity doesn't address the underlying problems of structural racism and systemic biases rooted in whiteness
- Structural racism is about the maintenance and reproduction of power

Uncritical acceptance of "openness" risks reproducing and amplifying existing inequities

Design principles based on epistemic justice and knowledge equity are possible – Centering Human Relations and Solidarity

**ACCETTAZIONE ACRITICA DI «OPENNESS»
RISCHIA DI RIPRODURRE E AMPLIFICARE LE
DISEGUAGLIANZE**

#WomenInScience

SCIENCE EUROPE

In 2018, women represented **32.8%** of the total population of researchers at the European level.¹

Women are **under-represented at the highest level in research.** They transition to Principal Investigators at a **20%** lower rate than men.²

In 2019, **11,1%** of women researchers in the EU worked part-time and under precarious working contracts compared to **7,2%** of men researchers.¹

In 2021, **66%** of women scientists experienced gender-based violence.³

8 marzo 2023

Sources:
1. Sci. Rep. 2021.
2. SCIENCE COE Report on the European Policy Response.
3. Sci. Rep. 2022.

[Opening, not patronizing]

The unique opportunity to advance
Science as a Global Public Good:
Open Science in a world of contrasts



Arianna Becerril García

Autonomous University of the State of Mexico

Arianna Becerril, Feb. 2023



On what data is the industry of prestige founded?

Which regions, countries, science fields, journals, institutions or authors are privileged by current strategies? Which ones are excluded?

Which inequalities the current system will continue to perpetuate?

Is openness structural and sustainable?

Who owns and control the knowledge? The research community interests prevail?

The future restrictions on knowledge generation depend on the ownership.

How to achieve systematic participation in science (not patronizing strategies) that enables a global conversation?

QUALI REGIONI
RESTANO ESCLUSE?
CHI DETIENE E CONTROLLA
LA CONOSCENZA?
IN CHE MODO OTTENERE
UNA PARTECIPAZIONE
SISTEMICA NELLA
CONVERSAZIONE
GLOBALE?

Equità, diversità, inclusione

Piv Gopalasingam, OLS6 2022

Equity, Diversity, Inclusion and Accessibility



DIVERSITY



Is the representation of various identities and differences

EQUITY



Focuses on fair treatment, equal opportunity and equal access to resources

INCLUSION



Is the active engagement of the contributions and participation of all people

DIVERSITY ASKS

WHO
— IS IN —
THE ROOM

EQUITY ASKS

WHO IS
— TRYING TO —
GET IN THE ROOM
BUT CAN'T

INCLUSION ASKS

— HAVE —
EVERYONE'S
IDEAS BEEN
HEARD

1) CHI È NELLA STANZA
2) CHI STA CERCANDO DI ENTRARE E NON RIESCE
3) ABBIAMO ASCOLTATO LA VOCE DI TUTTI?

source: <https://diversecitylabs.com/>

You can weave diversity and inclusion into your work

- There are many resources available - read and share!
 - [Wellcome's anti-racist toolkit](#)
- Find allies and collaborate - move the needle!
- Embed D&I into as many facets of your work - safe spaces
 - Add as a regular Agenda item in meetings, check if your work is inclusive
 - Ask "where are my/our blindspots, who are we leaving behind?" and work to counteract this



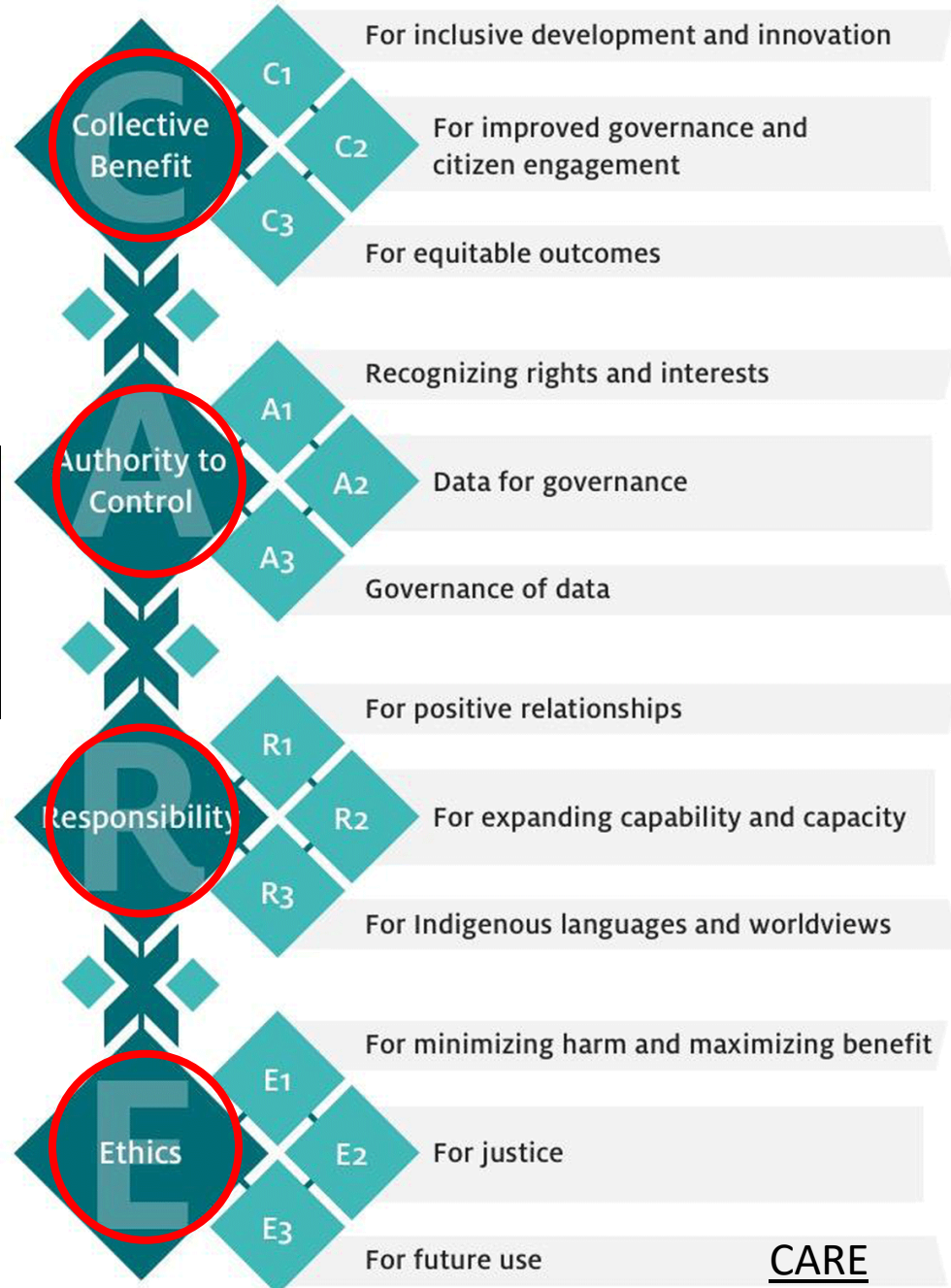
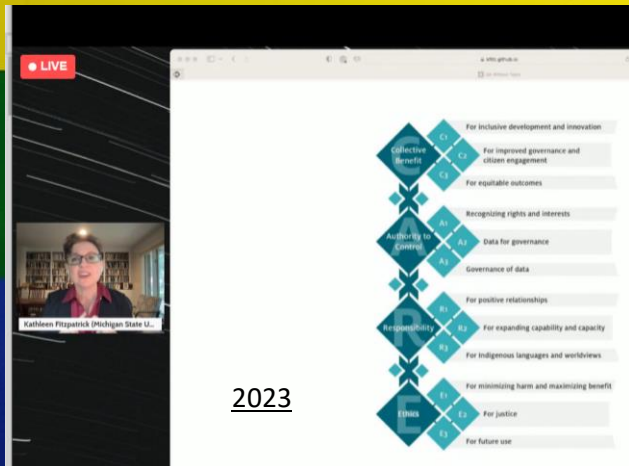
[Wellcome anti racist toolkit](#)

...e con i principi C

Andén

Sal

- COLLECTIVE BENEFIT
- AUTHORITY TO CONTROL
 - RESPONSIBILITY
 - ETHICS



CARE

Open Science

WEBINAR 19 OTTOBRE 2020



«PRODOTTO DELLA RICERCA»: NON SOLO LA SINTESI FINALE (ARTICOLO) MA TUTTO IL PROCESSO

RIDEFINIRE «ECCELLENZA»: NUOVI VALORI SONO INCLUSIONE, DIVERSITÀ

recognize that formal papers and manuscripts are not the only units of scientific knowledge



redefine research excellence towards values: leadership, diversity work, mental health support



RIPORTARE LA SCIENZA AL CENTRO DELLA SOCIETÀ

invest in tools, services, and community-driven initiatives to help make science better by engaging more people to participate in the process



tell it like it is: redefine failure, nurture slower, responsible science, shift the focus from the outputs to the practice



INVESTIRE IN STRUMENTI PARTECIPATIVI



@pcmasuzzo
Oct.5, 2020

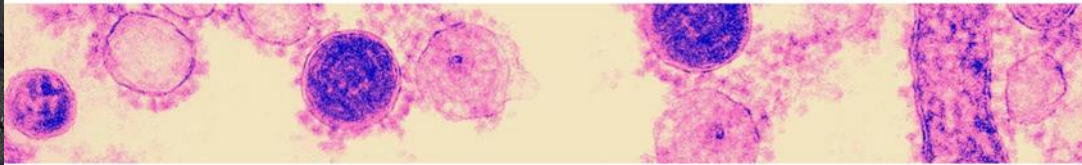
RACCONTATELA COM'È: SI FALLISCE. FOCUS DAL PRODOTTO AL PROCESSO

K-SA

Advocacy kit



ABOUT ▾ KERS NEWS RESOURCES ▾ NETWORK ▾ PARTICIPATE ▾



ADVOCACY KIT

The Skills4EOSC Advocacy Kit empowers users to promote Open Science skills to policymakers and funders, fostering steady policy support and funding for Competence Centres (CCs).

OPEN SCIENCE FOR AND WITH CITIZENS



OPEN SCIENCE: WHY DO WE NEED DATA STEWARDS?



OPEN SCIENCE - EQUITABLE ACCESS FOR EVERYONE



OPEN SCIENCE A BETTER RETURN ON INVESTMENTS



OPEN SCIENCE TO ENABLE COLLABORATION



OPEN SCIENCE: WHY DO WE NEED IT?

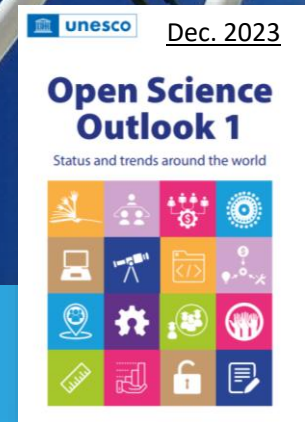


<https://www.skills4eosc.eu/resources/advocacy-kit>

Open Science Key messages / 1

KEY MESSAGES

OPPORTUNITÀ PER L'INNOVAZIONE
PARTICIPAZIONE NELLA CREAZIONE
DI CONOSCENZA
INCLUSIONE
FIDUCIA, CONFIDENZA
RIPRODUCIBILITÀ



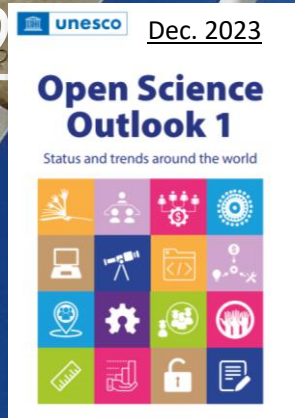
The Key Messages presented below summarize the findings of this first edition of the UNESCO Open Science Outlook, which was developed with inputs from open science experts and actors representing different scientific disciplines across all the regions of the world.

Open science, as defined in the 2021 UNESCO Recommendation on Open Science, should serve to widen access to scientific knowledge for the benefit of science and society. It should strive to promote opportunities for innovation and participation in the creation of scientific knowledge and the sharing of its benefits.

- Open science has multiple potential benefits. These benefits range from improvements in the scientific process and its outputs to cultural advancements, such as enhanced inclusion and trust in science, and practical gains, such as streamlined creation and reproducibility of scientific findings.
- Adopting open science practices can positively influence the investments in and outputs from science as well as the process and the impacts of science.

Open Science Key messages / 2

LA TRANSIZIONE ALLA OPEN SCIENCE HA
BISOGNO DI UN CAMBIAMENTO CULTURALE E
DEVE ESSERE MONITORATA CONTRO EFFETTI
INDESIDERATI



The transition to open science requires a shift in the culture of science.

- Transformation to an open scientific system that better engages with society requires both practical actions and systemic, cultural shifts grounded in mutual respect. Equitable collaboration and expanded access to technologies that facilitate this transformation are essential.
- Enacting such cultural change towards open science requires accessible infrastructures, strengthened capacities, aligned funding and incentives as well as operational and aligned policies and policy instruments.
- At present, there is a need for systematic and coherent approaches to open science that align with and operationalize values and principles of open science, taking into account the specific conditions, governing structures and constitutional provisions and science, technology and innovation capacities in different countries.
- The cultural shift to open science will only be possible with adequate monitoring of its impacts, including its possible unintended consequences for science and/or society (e.g. shift of costs from readers to authors; lack of clarity over ownership and intellectual property management in an open science context and others). If not addressed proactively, such unintended consequences may increase inequities in science and in the sharing of its benefits.

Open and equitable global science system	Open access to scientific knowledge	Open science infrastructures	Open engagement of societal actors	Open dialogue with other knowledge systems
An open science culture in an enabling policy environment with sustained resource commitments increases collaboration for the benefit of science and global society.	All scholarly outputs are published in a fully open access outlet or posted in an open repository, with free, immediate readership/usership rights.	Sustainable community-led open infrastructures, both physical and digital, are available to all, regardless of location, language or ability.	Multiple entry points permit engagement. External actors contribute/initiate design, creation and application of scientific knowledge.	Diverse knowledge bases spark innovation and equitable decision-making.
A culture of open science is fostered with effort to align incentives for open science. Investments are made in human resources, training, education, digital literacy and capacity building for open science.	Data, software and other outputs are FAIR* and openly shared, linked with publication outputs.	Platforms permit usership for all. Digital architectures begin to facilitate use in different languages and accessibility needs.	Capacity for societal engagement is integrated into project design and institutional plans.	Capacity for ethical, open dialogue is integrated into planning and implementation at project and institutional levels.
Innovative approaches for open science are promoted at different stages of the scientific process.	All scholarly outputs are made freely available to read, in a journal or an open repository, after an embargo of no more than six months.	Open infrastructures are available to those who have existing access or commit to specified partnerships.	Societal actors have a few, defined, points of contact with scientific processes.	Dialogue is built into policies, creating time, opportunities and incentives for dialogue.
International and multi-stakeholder cooperation is initiated without a view to reducing digital, technological and knowledge gaps.	Scholarly outputs are shared without clear licensing or copyright.	Infrastructure sharing is opportunistic.	Stakeholder engagement is opportunistic.	Dialogue is facilitated in one-off events, with uneven expertise.
There is no common understanding of open science and its benefits.	Scholarly outputs are not published or are published under restrictive copyright.	Digital gaps and subscription costs hinder the use of scientific infrastructures.	Science is separate from "outreach". Science communication is one-way, outwards.	Science is separate from "outreach". Other topics or communities are research subjects.

unesco

Open Science Outlook 1
 Status and trends around the world

**IL PERCORSO DA «CHIUSO»
AD «APERTO»**

'Closed' Conventional Science

Come misurare?

Ismael Rafols

Ingeborg Meijer

Jordi Molas-Gallart

August 14th, 2023

2023

The benefits of Open science are not inevitable: monitoring its development should be value-led

9 shares

ing time: 7 minutes

we shouldn't monitor whether there is more or less open science, but what types of OS are developed and adopted, by whom, and with what consequences.

monitoring the 'colours' of open access aids understanding of both OA development and who benefits from it, it is essential to understand the trajectory of both OS in practice and whether it is making, or not making, science more equitable and responsive to global needs. For example the way in which some open access investments in rich countries, such as transformative publishing agreements, may result in less equitable outcomes in access to publishing services for other countries. More open science does not always lead to better outcomes.

- NON SOLO QUESTIONE DI «QUANTA» OPEN SCIENCE
- HA CAMBIATO IL SISTEMA IN MEGLIO?
- LO HA RESO PIÙ EQUO?
- PENSATE ALLE APCs ESOSE: ABBIAMO PIÙ OPEN ACCESS, MA A QUALE COSTO? E CHI PUÒ PERMETTERSELO?

If open science is understood as not just an optimisation by improving information flows, but as part of a wider transformation, comparable to how scientific journals changed the social and technological basis of science in the 17th century, then it would be wise to adopt a monitoring framework that captures various aspects of the change. Monitoring should therefore include the effects and broader social implications, especially those relevant to the values and principles as expressed in the UNESCO OS Recommendation (Fig.2).



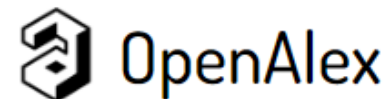
[con metriche aperte]

BARCELONA DECLARATION ON OPEN RESEARCH INFORMATION

<https://barcelona-declaration.org/>

1

We will make openness the default for the research information we use and produce



<https://openalex.org/>

2

We will work with services and systems that support and enable open research information



<https://opencitations.net/>

Welcome to the [OpenCitations](https://opencitations.net/) homepage!

3

We will support the sustainability of infrastructures for open research information

4

We will support collective action to accelerate the transition to openness of research information

SERVE «OPEN
RESEARCH
INFORMATION»

Open Science Key messages / 3

SERVE AZIONE COLLETTIVA,
COLLABORATIVA E COORDINATA +
INVESTIMENTI



Collective, collaborative and coordinated action and investment are needed to accelerate the transition to a truly global, equitable open science.

- Open science requires investment to thrive. Significant gains may be made through reallocation of existing resources.
- Incentive systems to promote open science urgently require alignment of the values and priorities used to assess scholars and institutions with the values and principles of open science.
- Changes in the ways in which international partnerships and co-funding for open science operate will be key for a meaningful equitable global transition to open science.

[From EOSC Symposium Prague 2022]

Final reports – Engaging policy makers

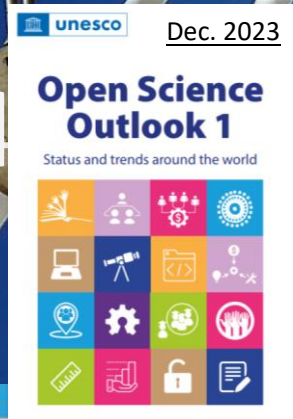
- Recommendations place responsibility clearly with different stakeholders
- Describing tangible benefits + way forward
- Importance of investing in knowledge and people!
- Consequences of investing too little = All the cost, none of the benefits

Katrine Weisteen Bjerd, Norway

INVESTIRE TROPPO POCO:
SOLO COSTI, NESUN
BENEFICIO

Open Science Key messages / 4

PERCHÉ L'OPEN SCIENCE RAGGIUNGA IL SUO PIENO POTENZIALE, DEVE ESSERE UN FENOMENO GLOBALE ED EQUO



For open science to reach its full potential, it must be a truly global equitable phenomenon.

- Open science has the transformative power to reduce the recognized existing inequalities in science, technology and innovation, thereby also accelerating the progress towards the achievement of the Sustainable Development Goals and the fulfilment of the human right to participate in and benefit from science and its advancements.
- To ensure that open science actors from all countries have access to, participate in and benefit from open science, due consideration must be given to the gaps that exist in research and development investment, capacities to transform knowledge into innovation, regulatory environments and overall maturity of science, technology and innovation systems across the world.
- Existing differences in scientific, technological and innovation capacity implicitly shape the experience and prioritization of open science practices. Taking these complexities into account will be critical to ensure that open science reaches its potential and reduces digital, technological and knowledge divides.
- The disciplinary and regional differences in open science perspectives also need to be considered, taking into account the specific challenges of scientists and other open science actors in varied contexts and in particular in developing countries.
- The existing lack of equity in access to digital tools and infrastructures and physical equipment as well as in the skills needed to use, manage and maintain them is one of the key barriers for accessing, sharing and storing information and for collaborating at multiple and varied levels in line with the principles of open science.

Open Science Key messages / 5

MONITORARE TUTTI I GLI ASPETTI DELLA OPEN SCIENCE – GLI INDICATORI BIBLIOMETRICI TRADIZIONALI NON SONO SUFFICIENTI



Growing evidence demonstrates the rapidly increasing adoption of open science practices around the world and across multiple disciplines. However, the existing approaches used to assess open science must be strengthened to address all aspects and values of open science.

- Existing efforts to assess the status and trends of open science have shown that standard approaches and existing indicators and bibliometrics are insufficient to clearly understand and monitor the degree of openness across all the stages of the scientific cycle and across all the pillars of open science as defined in the 2021 UNESCO Recommendation on Open Science.
- A combination of open qualitative and quantitative assessments, as well as innovations in the understanding of and response to change, will be needed for a representative monitoring system for open science that itself adheres to the values and principles of open science.
- There is a need to shift from monitoring only scientific outputs, such as publications, towards assessing the values and impacts of science and with a focus on the people who are doing, engaging with and/or benefiting from science.

BUILDING BLOCKS FOR IMPACT

Capturing scholarly "impact" through these indicators are narrow, considering a wider breadth

2023

Collaborations, mentoring, demonstrations of eminence that allow scholars to shape the direction of fields demonstrate increasing scales of impact

Scale of influence

Expanded definitions for "impact" can help individuals identify and embrace different goals.

While some scholars may naturally be more oriented toward disciplinary work, seeing a broader set of "impact" characteristics allows academics to define, plan for, and pursue more personally meaningful career aspirations.



Pursuing a traditional path of deep specialization within a discipline will continue to provide credibility of expertise and a significant base of influence within one's field.



Applied research, perspectives, and project work provide new forms of visibility and societal value through scholarly activities that directly contribute to real-life challenges.



Emphasizing how expertise can enrich other individuals, collaborations, or entire fields rewards scholarly activities that value interdisciplinarity and fostering new capabilities.



The explicit recognition of efforts that support open research or diversity, equity, and inclusion (DEI) can enhance their status as critical components of academic values.

Scaled magnitude resulting in significant reach, scope, or stature

FOR EXAMPLE
Leadership roles in disciplinary societies or editorial boards
Transformative methodological advances

FOR EXAMPLE
Policy advisory roles
Contributions to institutional policy (e.g. diversity, equity, and inclusion (DEI))

FOR EXAMPLE
Real-world societal (e.g., cultural, patient, community, environmental, or economic) impact

Researcher Katalin Karikó's work on mRNA immunogenicity was repeatedly dismissed by elite journals and funders, yet became key to the development of Covid-19 vaccines.

Collaborative and advisory roles through partnerships and shepherding others' work

FOR EXAMPLE
Teaching
Mentoring, advising, and career guidance

FOR EXAMPLE
Team research or interdisciplinary collaborations
Peer review and conference roles

FOR EXAMPLE
Industry collaborations and commercialization

While non-academic works and social media lack the rigor of peer review, communicating the value and importance of scientific advances to wider audiences makes scholarly knowledge more approachable and meaningful.

Direct contributions through deep disciplinary expertise

FOR EXAMPLE
Journal articles and conference publications
Datasets, software, or products

FOR EXAMPLE
Open science/data and open access
Preprints
Asynchronous education

FOR EXAMPLE
Popular press books and publications
Social media or altmetric profile

New audiences

Reaching audiences outside of disciplinary or academic peers can broaden the societal value derived from scholarly work.

Recognizing the impact created by cultivating future generations of scholars also rewards contributions of women and minoritized individuals who tend to bear heavier expectations and loads for mentoring.

Open datasets and open science are increasingly valued for their contributions to replication and research transparency. This broadens access and rewards a mindset of collaboration over competition.

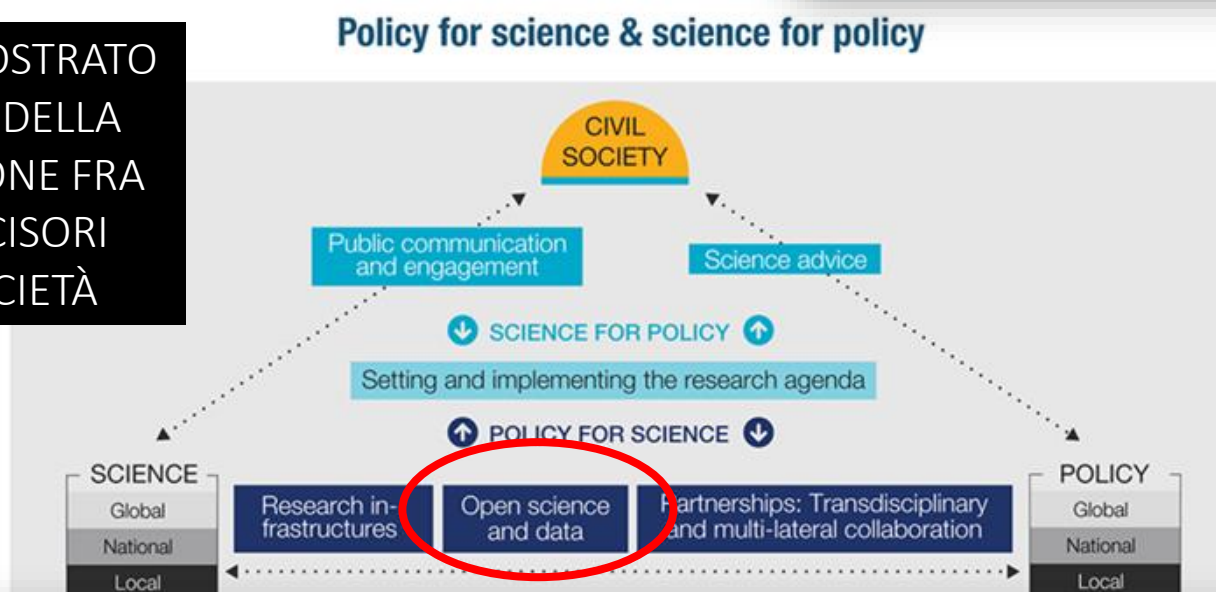
MOLTE DIMENSIONI DELL'IMPATTO – RICOMBINABILI FRA LORO

OCDE e Open Science

Lessons learned from COVID-19



COVID HA DIMOSTRATO
IMPORTANZA DELLA
COLLABORAZIONE FRA
SCIENZA, DECISORI
POLITICI, SOCIETÀ



The COVID-19 crisis demonstrated the importance of science in developing solutions for global challenges. To prepare for future crises such as climate change or pandemics, collaboration between scientists, policymakers, and the public is key to success, but this requires changes to academic culture and incentives. Many of the required changes – including in research performance assessment, public engagement, and transdisciplinary research – are already underway but have not yet been adopted at the necessary scale and speed because of inertia in science systems. More radical change is necessary to spur science to engage with other societal stakeholders to produce the broader range of outputs and solutions that are urgently required to deal with complex global challenges and crises.



RACCOMANDAZIONE 12 DIC 2023 SUL COINVOLGIMENTO DEI CITTADINI

European Union	
<u>2023</u>	Brussels, 8 December 2023 (OR. en)
	16450/23
	RECH 543 COH 96 COMPET 1235
OUTCOME OF PROCEEDINGS	
From:	General Secretariat of the Council
On:	8 December 2023
To:	Delegations
No. prev. doc.:	15118/23
Subject:	Strengthening the role and impact of research and innovation in the policymaking process in the Union - Council conclusions (approved on 8 December 2023)

Recommendation on the participation of citizens and civil society organisations in public policy-making

I. Science in the public policy process to improve the lives of citizens and strengthen democracy

1. RECALLS that the Union has a long-standing tradition of relying on science and the best available evidence-based knowledge in all disciplines to support and improve decision-making, as well as the quality, effectiveness, efficiency and impact of public policies (the ‘Science for Policy’ concept). The design, monitoring and evaluation of evidence-informed policies have relied, among other types of knowledge, on processes of direct involvement of the scientific communities and/or mechanisms of scientific advice for political authorities to support them in the exercise of their responsibilities.

EVIDENCE-INFORMED
[non evidence-based!]
POLICY MAKING E IL RUOLO DELLA OPEN SCIENCE

5. **HIGHLIGHTS** that open science is also key for policymakers and society at large for accessing and using free scientific knowledge of the highest quality. This enhances resilience to disinformation, prevents knowledge resistance and promotes public trust in science and evidence-informed policy making.

...Open Science in sintesi...

It was really helpful to have in mind there is an alternative way [Open Science] that gives us the chance of being treated with dignity and truly focus on the essence of our work

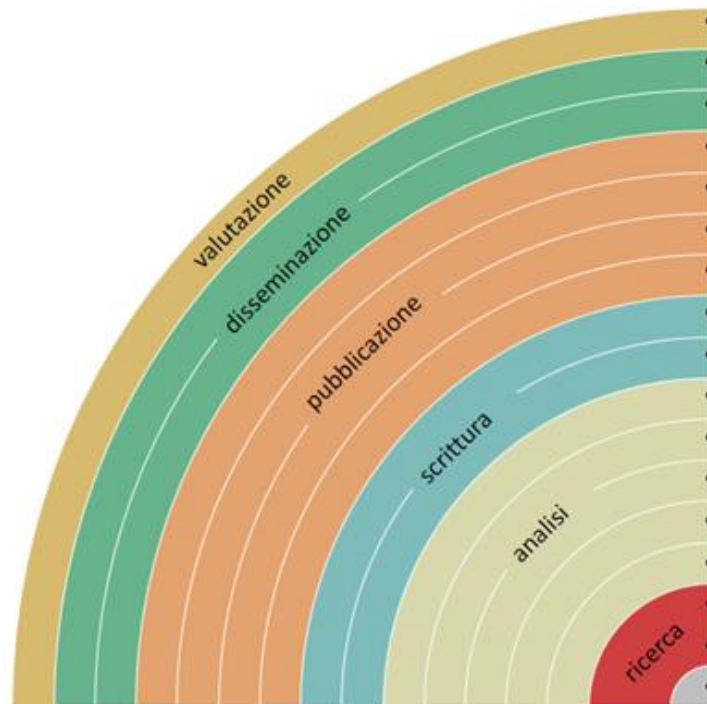
[Petra, PhD, May 2020]

An aerial photograph of a tropical coastline. The water is exceptionally clear, showing a gradient from light turquoise near the shore to deep blue further out. Several small white motorboats are scattered across the water. In the background, there are several rocky, low-lying islands or peninsulas with sparse vegetation under a clear sky.

Verso l'Open Science

Come rendere Open ogni passo della ricerca...

UN PASSO PER VOLTA... MA FACCIAMO IL PRIMO PASSO!



- aggiungendo misure di impatto alternative, es. [altmetrics](#)
- comunicando sui social media, es. [Twitter](#)
- condividendo poster e presentazioni, es. su [FigShare](#)
- utilizzando licenze aperte, es. [Creative Commons BY](#)
- depositando in [archivi](#) o pubblicando su [riviste Open](#)
- provando la open peer review, es. [PubPeer](#) o [F1000](#)
- condividendo preprints, su [OSFpreprint](#), [arXiv](#) o [biorXiv](#)
- con formati leggibili dalle macchine, es. [Jupyter](#) o [CoCalc](#)
- con la scrittura collaborativa, es. [Overleaf](#) o [Authorea](#)
- condividendo protocolli e workflow, es. su [Protocols.io](#)
- condividendo note di laboratorio, es. [OpenLabNotebook](#)
- condividendo software, es. su [GitHub](#) con licenza [GNU/MIT](#)
- condividendo i dati, es. su [Dryad](#), [Zenodo](#) o [Dataverse](#)
- pre-registrando esperimenti, es. [OSFregistry](#) o [AsPredicted](#)
- commentando pagine web, es. su [Hypothes.is](#) o [Pund.it](#)
- usando bibliografie condivise, es. su [Zotero](#)
- condividendo progetti di ricerca, es. su [RIO Journal](#)



DUE MESSAGGI:

1. **SI PUÒ FARE ORA**, NONOSTANTE LE REGOLE ATTUALI DI VALUTAZIONE (SONO COMPLEMENTARI, NON ALTERNATIVE): NESSUNO VE LO IMPEDISCE, TECNICAMENTE GLI STRUMENTI CI SONO...
...**E LA VALUTAZIONE STA CAMBIANDO**...
2. IN HORIZON EUROPE LO **DOVETE** FARE, PERCHÉ SIETE VALUTATI ANCHE SU COME FATE OPEN SCIENCE

Open Science «as open as possible»

«AS OPEN AS POSSIBLE, AS CLOSED AS NECESSARY»



Carlos Moedas ✓
@Moedas

2/4 "Open as possible, as closed as necessary"
is the new principle for all [#data](#) from publicly
funded [#research](#) in Europe [#openaccess](#)

RETWEET
76

MI PIACE
32



«AS EARLY AS POSSIBLE»

«AS FAIR AS POSSIBLE»



Coalition for Advancing Research Assessment

Our vision is that the assessment of research, researchers and research organisations recognises the diverse outputs, practices and activities that maximise the quality and impact of research. This requires basing assessment primarily on qualitative judgement, for which peer review is central, supported by responsible use of quantitative indicators.

NON PER MOLTO!!!

- LA RIFORMA DELLA VALUTAZIONE È INIZIATA
- COARA LANCIATA NEL 2022, 644 FIRMATARI
- ATTIVO IL CAPITOLO ITALIANO
- IMPEGNO: NON USARE IMPACT FACTOR O RANKING



Italy National Chapter

The main aims of the Italian National Chapter are to (i) enable mutual learning, share best practices, and raise awareness of best responsible assessment practices and indicators in the national community on the ongoing research assessment reform (CoARA commitments 7-8), and (ii) foster the discussion about the reviewing and development of assessment criteria, tools and processes for assessing research institutions, individual researchers and projects (CoARA commitment 6). This outreach effort will support the implementation of the reform at the national level and will contribute to attract more institutions and stakeholders to sign the agreement.

The main activities will be focused on:
1) creating an active network among Italian institutions, promoting the alignment of the



Signatories



Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR)

I believe in a research culture that recognises a diversity of contributions to science and society; that celebrates high quality and impactful research; and that values sharing, collaboration, integrity and engagement with society, transmitting knowledge from generation to generation.

Mariya Gabriel

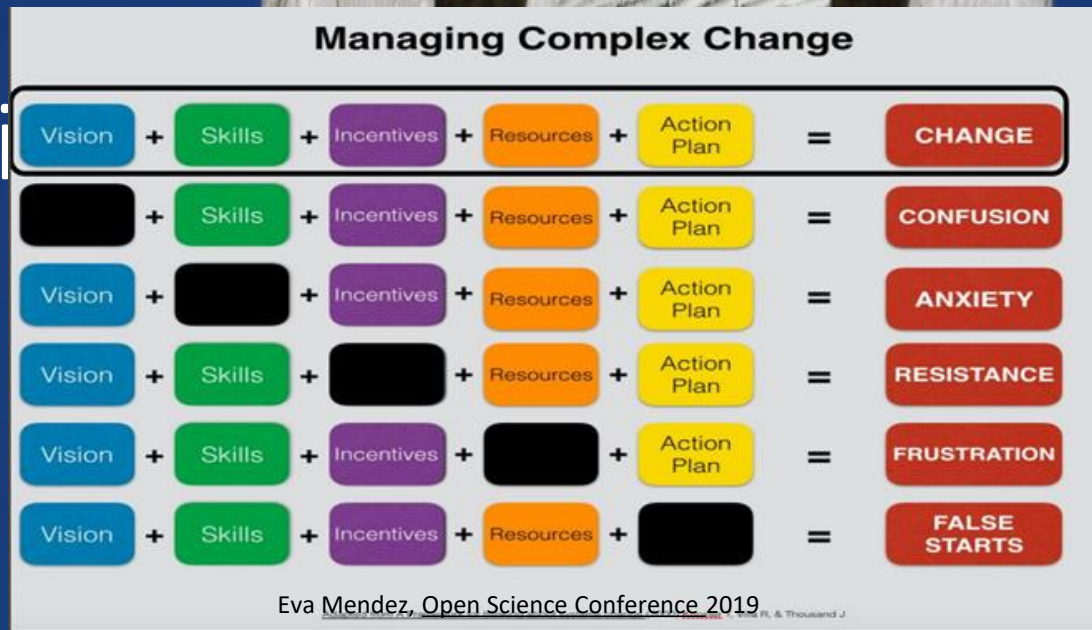
Commissioner for Innovation, Research, Culture, Education and Youth

SÌ, MA... SIAMO VALUTATI CON L'IMPACT FACTOR

An aerial photograph of a vibrant turquoise sea. The water transitions from a deep blue in the distance to a bright, clear turquoise in the foreground. Several small white motorboats are scattered across the water. In the background, there are several rocky islands with sparse vegetation under a clear blue sky.

Verso l'Open Science
Un po' di politica

[Transi



SERVE UNA
VISIONE
ORGANICA E
COERENTE

CON ROADMAP DI
ATENEO

Open Science and
its role in universities:
A roadmap for cultural change
2018



Implementing Open Science

Dec.20, 2020

PER PASSARE DA
«RACCOMANDAZIONI»
A «IMPEGNI PER
L'IMPLEMENTAZIONE»
PER SINGOLI ED ENTI

OpenAIRE Services Support Open Science In Europe About Us Q Sign In

Checklists

Open Science Policy Checklist for Research Funding Organisations

Open Science Policy Checklist for Research Performing Organisations

The 2019 PSI - Open Data Directive
A checklist for IP, Research Data and Open Science

[OpenAIRE toolkit](#)

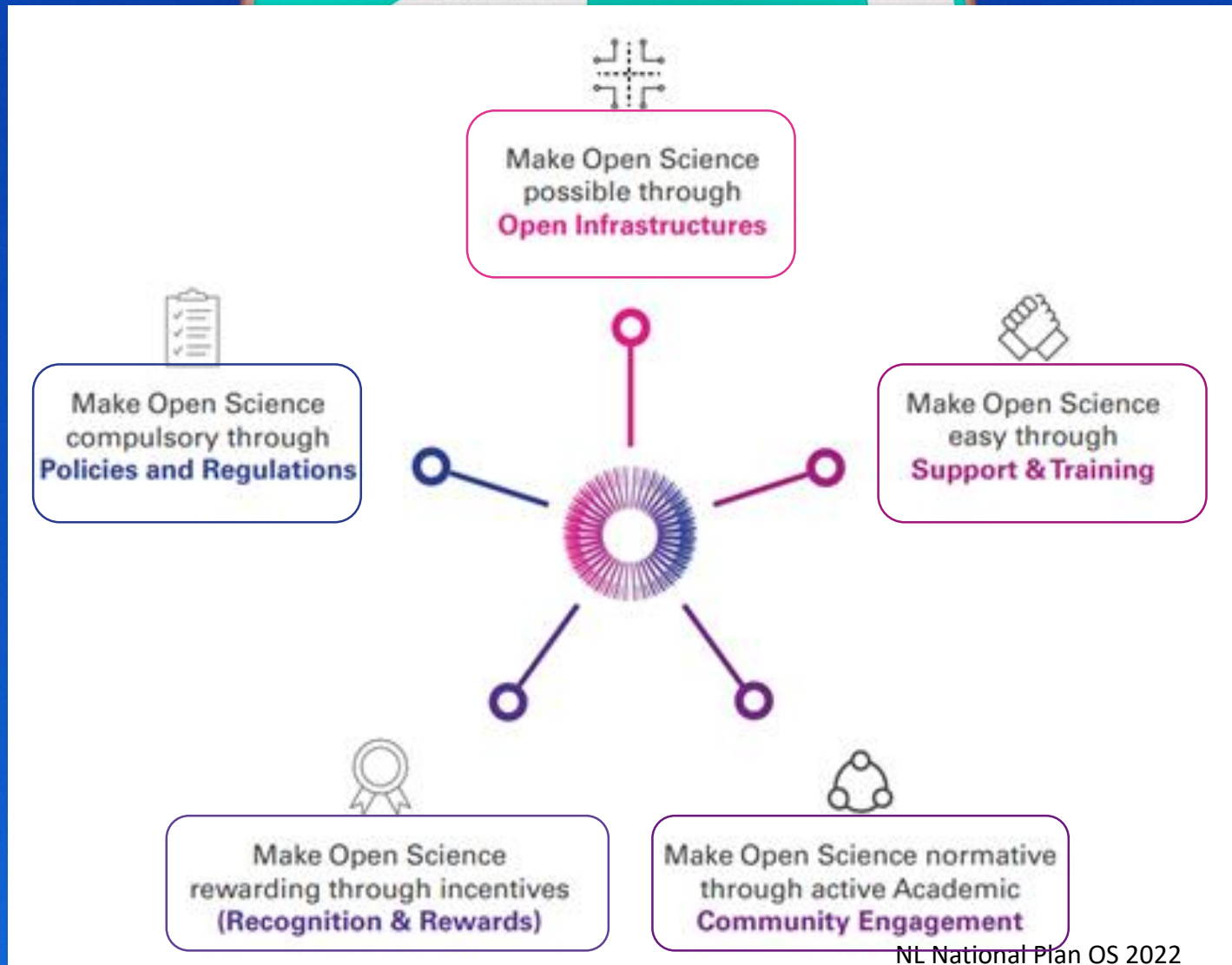
June 4, 2020

Progress on Open Science:
Towards a Shared Research
Knowledge System

Final Report of the Open Science Policy Platform

This specific mandate implied a shift from 'Recommendation Mode' to 'Implementation Mode', through PCIs: Practical Commitments for Implementation at stakeholder level. A PCI is a

Cosa serve per rendere Open Science «the new normal»



Open Science: solo in Europa?


OPEN SCIENCE SIGNIFICA PORTARE LA
SCIENZA NEL 21° SECOLO

PERSPECTIVE ARTICLE [Provisionally accepted](#) [The full-text will be published soon.](#) [Notify me](#)

[Nov.2019]

Front. Big Data | doi: 10.3389/fdata.2019.00043

Open science, open data and open scholarship: European policies to make science fit for the 21st century

Jean-Claude Burgelman^{1*},  Corina Pascu^{1*}, Katarzyna Szkuta¹, Rene Von Schomberg¹, Athanasios Karalopoulos¹, Konstantinos Repanas¹ and Michel Schouppe¹

Transition to open science is a multidimensional and multistage process. There is value and risk of being a first mover, but there is higher risk of being a follower. The European Commission has taken

RISCHI A ESSERE I PRIMI, RISCHI
MAGGIORI A ESSERE GLI ULTIMI



SUSTAINABLE GOALS

17 GOALS TO TRANSFORM OUR WORLD



alla Open Science è

Enhanced Access to Publicly Funded Data for Science, Technology and Innovation

Feb. 4, 2021 EUROPEAN UNIVERSITY ASSOCIATION

Universities without walls
A vision for 2030



OECD data



Appeal for Open Science UNESCO, WHO, HCHR, CERN

Acknowledging that Open Science should not only foster enhanced sharing of scientific knowledge solely among scientific communities but also promote inclusion of scholarly knowledge from traditionally underrepresented or excluded groups (such as women, minorities, Indigenous scholars, scholars from less-advantaged countries and low-resource languages) and contribute to reducing inequalities in access to scientific development, infrastructures and capabilities among different countries and regions, ¶



Business-as-usual approaches to science and science funding are incommensurate with the timeline for achieving the SDGs or that of addressing our current planetary crises in a humane, dignified and equitable manner. A major qualitative and quantitative step-change is needed in science to support critical societal transformations towards a more sustainable, equitable and resilient future.



OSTP Issues Guidance to Make Federally Funded Research Freely Available Without Delay

AUGUST 25, 2022 • PRESS RELEASES

RICERCA CON FONDI FEDERALI USA TUTTA OPEN BY DEFAULT

Today, the White House Office of Science and Technology Policy (OSTP) updated U.S. policy guidance to make the results of taxpayer-supported



<https://zenodo.org/record/34079#.W00wY2fOPIU>
OPEN ACCESS
VALTO
Valtioneuvoston julkaisuarkki



«Making open science practices sustainable requires changes in the evaluation system.»

**OLANDA E FRANCIA SONO ALLA
SECONDA VERSIONE**



<https://conosc.org/>

CoNOSC
The Council for National Open Science Coordination (CoNOSC) is a network of national Open Science coordinators in the UN-European region.

Our mission
CoNOSC brings together national OS leaders to engage in an international dialogue and to share good practice for a stronger and more unified, workable Open Science policy framework.

**COORDINAMENTO
DEI COORDINATORI**

**OUVRIRE
LA SCIENCE**



PUBLIC POLICIES
Open science refers to the unfiltered dissemination of results, methods, and data from scientific research. It draws on the opportunity provided by recent technological developments to develop open access to publications as much as possible - data, source code, and research methods.

Theme 3

Opening up and promoting source code produced by research

Software plays a key role in scientific research, and it can be a tool, a research object. Making software source code available, with the option of modifying, reusing and disseminating them, is a major requirement to ensure the reproducibility of scientific findings and to support the creation and sharing knowledge, in keeping with the open science principle.

Theme 1

Generalising open access to publications

The practice of providing open access to scientific publications should now be inescapable, whether this is done by initially publishing the text as open access or by placing it in a public domain. The Research Programme will be implemented by 2030.

Theme 2

Structuring, sharing and opening up research data

Our aim is to ensure that the data produced by French public research be progressively structured to conform to the FAIR data principles (Findable, Accessible, Interoperable, Reusable), be safely preserved and, wherever possible, open to all.

Theme 4

Transforming practices to make open science the default principle

Open science should become the default principle for researchers and it should constitute a criteria of excellence in research, as is now the case in the Horizon Europe Programme. For this, the higher education and research ecosystem must be transformed to align the incentives, strengthen capacity and increase recognition of the efforts made.

key lines of action

2022

FAIR DATA

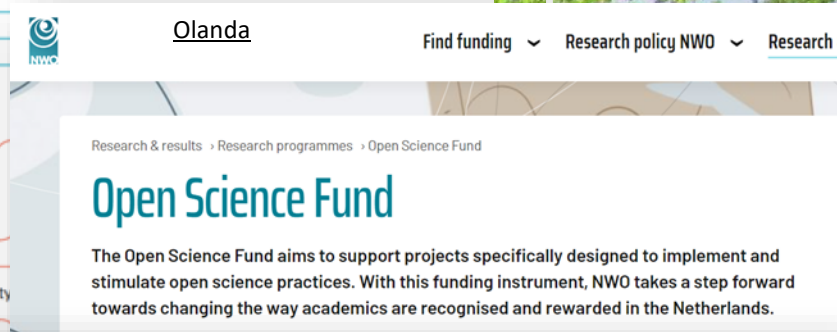
- Build a professional community of data stewards
- Incentivise FAIR digital research outputs and metadata
- Enable sustainable interoperable networks of FAIR data services
- Develop a national FAIR data trust framework with societal stakeholders

OPEN ACCESS

- Make all scholarly output Open Access
- Enable full Open Access without additional costs
- Maintain high quality and research integrity
- Get control over ownership, public values, academic and digital sovereignty
- Enable novel ways of recognition & rewards
- Grow towards less dependency on publishers

CITIZEN SCIENCE

- Raise awareness
- Consolidate and further develop best practice
- Build capacity
- Enhance transdisciplinary collaboration
- Develop Supporting infrastructures



Purpose and objectives

Budget and lead time

The Open Science Fund was launched in 2020, originally with a budget of 500.000 euros per year. Since 2022 NWO is making 1.500.000 euros per year available for this programme.

The available budgets for 2022 and 2023 were added together for the Open Science Fund 2023 call. There are two deadlines in 2023, each with a budget of 1.500,000 euros. A maximum of 50,000 euros is available per project.

vision

2030

OPEN SCIENCE

Better science
Connection science
and society

- 1
- 2 Strong link with societal challenges and sustainable development goals
- 3 Transparent, diverse and transdisciplinary scientific knowledge-sharing
- 4 Distinction between data and publications is fluid
- 5 Novel digital services based on academic sovereignty
- 6 Protected sharing according to FAIR principles with enriched meta data



... [nuovi giocatori: MUR] [???

**BIG NEWS AL CNR!
AVETE UNA SEZIONE
OPEN SCIENCE PRESSO
LA Direzione Centrale
Servizi per la Ricerca!
Emma Lazzeri**

**TAVOLO
TECNICO AL
LAVORO**

Collaborazione con il MUR

Coinvolgere i responsabili dei progetti PNRR per i dati FAIR nelle attività del Centro di Competenza sostenute da [Skills4EOSC](#) offrendo:

- Community building e condivisione di buone pratiche, aggiornamento e allineamento attraverso la **community dei data steward**
- **Corsi di formazione** dedicati
- Partecipazione alle attività del **centro di competenza**

PIANO NAZIONALE OPEN SCIENCE [20 giugno 2022]

5 ASSI:

1. OPEN ACCESS AI TESTI
2. DATI FAIR
3. VALUTAZIONE
4. COMMUNITY ENGAGEMENT
5. DATI COVID



Ministero dell'Università e della
PNR 2021-2027

Home Ministero Aree tematiche Atti e normativa

Home Aree tematiche Ricerca Programmazione Programma nazionale

Programma nazionale per la ricerca



Ministero
dell'Università
e della Ricerca



UNIVERSITÀ

RICERCA

Home | Stampa | Notizie e comunicati stampa | Pubblicato il Piano nazionale della scienza aperta

Pubblicato il Piano nazionale della scienza aperta

Lunedì, 20/06/2022 2022

Individuati 5 assi di intervento: pubblicazioni scientifiche, dati, valutazione della ricerca, partecipazione e apertura dei dati della ricerca su SARS-COV-2 e Covid-19

Il Ministero ha pubblicato il [Piano nazionale della Scienza Aperta](#) (PNSA), in attuazione al Decreto Ministeriale n. 268 del 28 febbraio 2022. Il PNSA, insieme al Piano per le Infrastrutture di ricerca (PNIR), completa l'insieme dei Piani nazionali richiamati dal [Programma Nazionale per la Ricerca 2021-2027](#),

PIANO NAZIONALE OPEN SCIENCE REDATTO NEL 2019-PUBBLICATO 2022

...e voi da che parte state?...

DOVEVANO
Le **NUVOLE**
REGIA MASSIMO FERRARI

Quando soffia il VENTO del **CAMBIAMENTO**

c'è chi costruisce **MURI**

e chi **MULINI A VENTO**



...grazie!