

# Open Science e finanziamenti europei

## Modulo 1 – Introduzione e motivazioni

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Università di Torino

Istituto di Scienza e Tecnologie dell'Informazione  
Consiglio Nazionale delle Ricerche



# Iniziative collegate



**OpenAIRE** - *Open Access Infrastructure for Research in Europe*

è la grande infrastruttura per il monitoraggio e la verifica delle politiche sull'Open Access finanziata dalla Commissione Europea dal 2009. OpenAIRE collega i progetti ai risultati della ricerca (pubblicazioni, dati, software ecc). Ad oggi serve 16 enti finanziatori in Europa e nel mondo, offre supporto all'Open Science a 360 gradi attraverso la rete di National Open Access Desks (NOADs). Per saperne di più, [www.openaire.eu](http://www.openaire.eu)



**ICDI Competence Center**

ICDI (Italian Computing and Data Infrastructure) è un tavolo di lavoro creato dai rappresentanti di alcune tra le principali Infrastrutture di Ricerca e Infrastrutture Digitali italiane con l'obiettivo di promuovere sinergie a livello nazionale al fine di ottimizzare la partecipazione italiana alle attuali sfide europee in questo settore, tra cui la European Open Science Cloud (EOSC), la European Data Infrastructure (EDI) e HPC. La missione del Competence Center di ICDI (CC-ICDI) è creare una rete di esperti, iniziative e infrastrutture di ricerca con varie competenze funzionali al supporto della comunità nazionale per l'Open Science, principi FAIR e per la partecipazione italiana alla European Open Science Cloud (EOSC). <https://icdi.it/it/attivita/tf-cc>

# Chi siamo



**Emma Lazzeri**

Emma è ricercatrice al CNR. Si occupa di Open Science come NOAD di OpenAIRE e fa parte di vari gruppi di esperti a livello europeo per EOSC. Emma coordina la Task Force per la realizzazione del Competence Center italiano in ICDI.



**Elena Giglia**

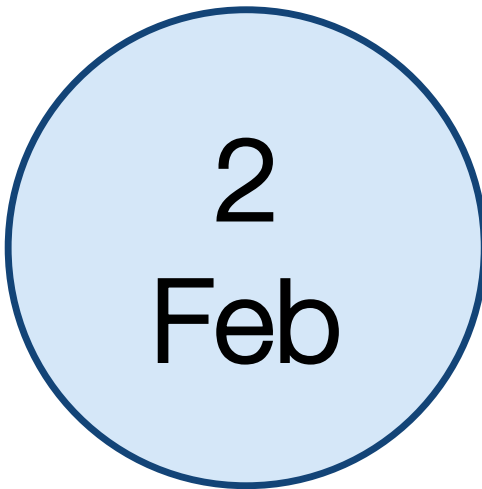
E' responsabile dell'Unità di progetto Open Access dell'Università di Torino. Elena fa parte della commissione che ha redatto il Piano Nazionale Open Science pubblicato recentemente dal MUR. Fa parte del team del NOAD di OpenAIRE e della Task Force del Competence Center ICDI.



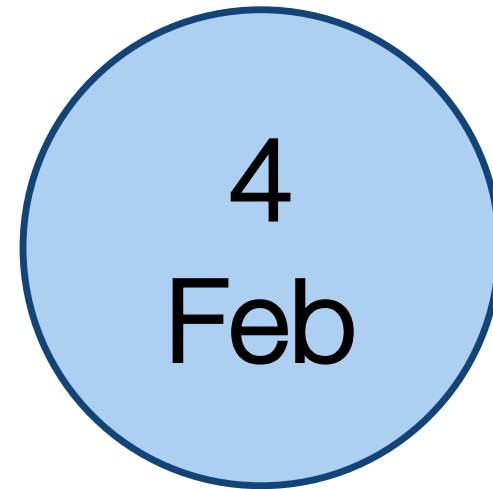
**Gina Pavone**

Gina è assegnista di ricerca presso l'Istituto di Scienza e Tecnologie dell'Informazione A. Faedo del Consiglio Nazionale delle Ricerche. Si occupa di Open Science e Open Access, dalla teoria alla pratica. Fa parte del team del NOAD di OpenAIRE.

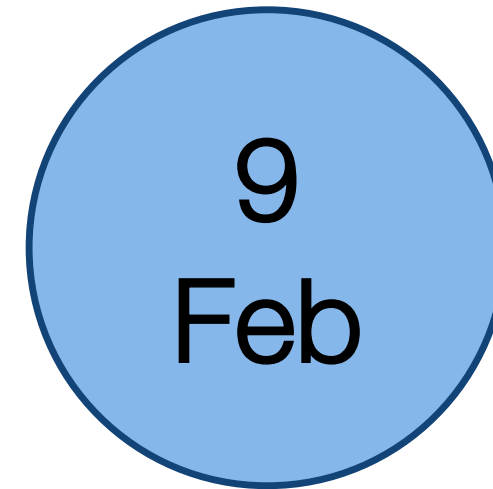
# Programma del corso



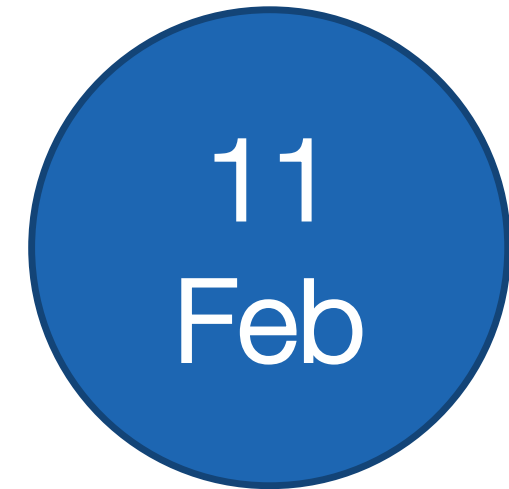
**Introduzione e  
motivazioni**



**Open Access e  
Open Data**



**Research Data  
Management e  
DPM**



**Sessione  
pratica**



# Alcune informazioni pratiche

Durante il corso useremo alcuni strumenti per

- Condividere
- Collaborare
- Interagire



# Pulsanti interattivi di Zoom



## **CHAT**

Usate la chat per problemi tecnici o informazioni. Nella chat verranno condivisi link utili durante il corso. Non usate la chat per le domande.



## **ALZA LA MANO**

Durante la sessione di domande e discussione alzate la mano se desiderate avere la possibilità di parlare.



## **D&R**

Usate questo tasto per porre domande durante le presentazioni.

# Virtual Research Environment

- Per il corso è stata predisposta una VRE, un ambiente per lo scambio di materiali e il contatto tra partecipanti e docenti.
- Si può accedere alla VRE attraverso la propria email istituzionale, l'account di Google o di LinkedIn, cliccando di seguito: <https://services.d4science.org/web/openscienceeumandate> oppure scansionando il QR code in allegato.
- All'interno della VRE trovate:
  - Un forum di discussione (alla sezione "social networking") in cui porre domande, discutere e condividere riflessioni o esperienze.
  - Un'area di lavoro ("Workspace") in cui verranno condivisi i materiali del corso o altra documentazione.
  - Una sezione "Tools" con i link alle risorse utili.
- Le registrazioni e le slide dei vari webinar saranno condivise nella cartella VRE folders > OpenScienceEUMandate



# Mentimeter

- Mentimeter è uno strumento che permette una rapida **interazione** con i partecipanti.
- Lo strumento consente un'interazione **anonima**
- Potrete **rispondere a domande o inviare commenti**
- I risultati e i commenti saranno visualizzati in diretta
- Potrete **accedere** a mentimeter da qualsiasi dispositivo (smartphone, pc, tablet...):
  - Collegatevi [www.menti.com](http://www.menti.com) e inserite il codice: **49 17 63 8**
  - Cliccate sul link diretto: <https://www.menti.com/5bb723kw47>
  - Scannerizzate il QR code





Iniziamo!

Open Science e finanziamenti europei  
Come ottemperare agli obblighi nei progetti H2020 e in Horizon Europe



Corso online in 4 moduli:  
2, 4, 9, 11 febbraio 2021 ore 14.00 - 16.30




# 1 - PERCHÉ SERVE LA OPEN SCIENCE



Elena Giglia  
Università di Torino

[elena.giglia@unito.it](mailto:elena.giglia@unito.it)

 @egiglia



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Fatevi sentire...



<https://www.menti.com/5bb723kw47>

codice mentimeter: **49 17 63 8**

# La strada davanti a noi

A float for the Regata di Venezia. At the top, a white cylindrical object has a red and white logo that says 'NOCCIA' in a stylized font. Below it, a large, cylindrical object is wrapped in white rope and has blue and yellow horizontal stripes. At the bottom, a white boat-shaped structure contains several colorful puppets with exaggerated features like large noses and rosy cheeks. One puppet is a man with a mustache, another is a woman in a colorful top, and there are others around them. The float is on a body of water, with a stone pier visible in the background.

1

Perché serve la Open Science

2

L'alternativa Open

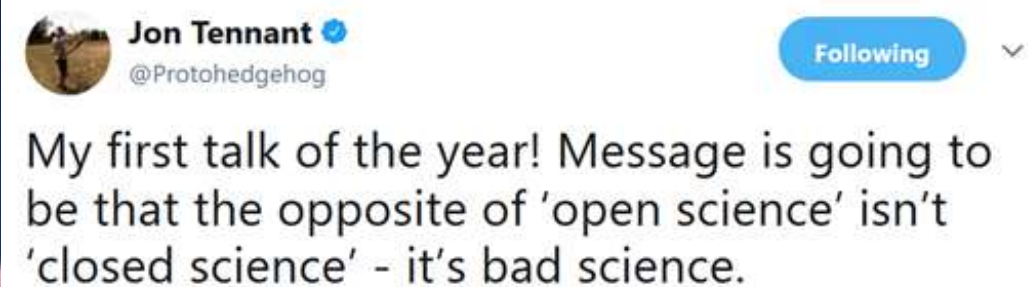
3

Cosa succede in Europa, EOSC, FAIR

# Qualcosa da portare via

Open Science: opportunità, non minaccia né noia burocratica

...il COVID l'ha dimostrato nei fatti...



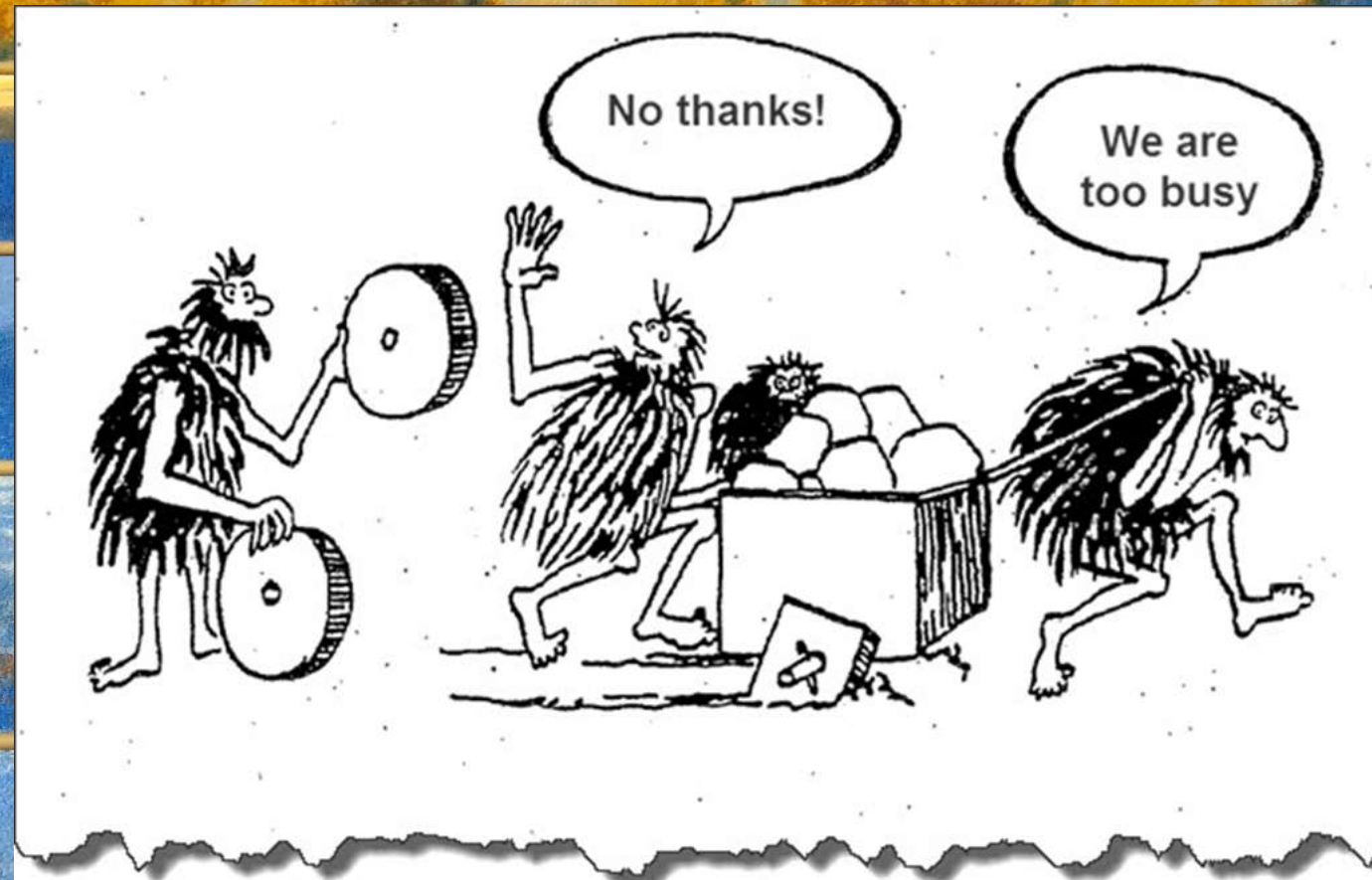
...il contrario di Open Science è «Bad Science», non «Closed»

...Open Science [diverso da Open Access] è un modo diverso di fare scienza, non una serie di regolette

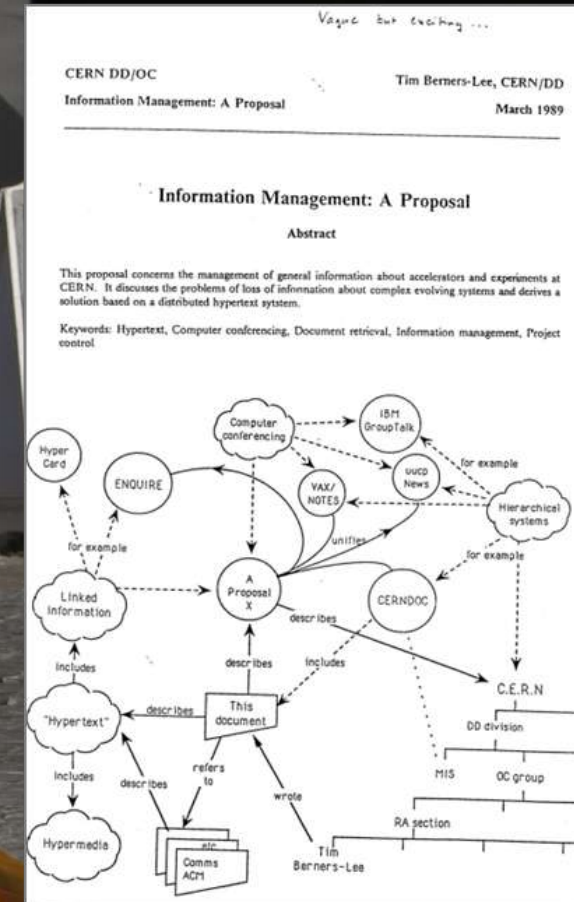
...si può fare Open Science a piccoli passi, non «tutto e subito»... però occorre iniziare!

Open Science, Open Innovation, EOSC, FAIR: esserci!

# Open Science?



SE NON SI RAGIONA SUL  
REALE VALORE E IL POTENZIALE TRASFORMATIVO  
DELLA OPEN SCIENCE, LA VEDRETE SOLO COME  
L'ENNESIMO FARDELLO AMMINISTRATIVO



...il migliore esempio di Open Science?



**Impareremo**

- 1. cosa non va nel sistema attuale di comunicazione scientifica**
- 2. quanti soldi e interessi girano intorno a un articolo**

**...PROVIAMO PER OGGI A VEDERE  
LA RICERCA E LA COMUNICAZIONE  
SCIENTIFICA IN MODO DIVERSO...**

## **MESSAGGI CHIAVE**

- oggi, pubblicare e leggere non è gratis**
- non credete ciecamente nella peer review, Impact Factor, citazioni...  
Siate critici e informati!**



1 DOMANDA

PERCHÉ FATE  
RICERCA?

# ...cosa ci ha insegnato il COVID?

**CORRIERE DELLA SERA / OPINIONI**

**Il coronavirus insegna:  
la scienza ha sempre  
bisogno di trasparenza**



di Massimo Sideri | 30 gennaio 2020

La grande rivoluzione nata in un piccolo centro veneto specializzato nel passaggio dei virus da animali a umani, allora diretto da Ilaria Capua. E a quel tempo fu osteggiata

Jan. 30, 2020

**SOLO COLLABORANDO SI TROVA  
UNA SOLUZIONE  
ALL'EMERGENZA**



**Now Is the Time for Open  
Access Policies—Here's Why**



Victoria Heath and Brigitte Vézina  
March 19, 2020

March 19, 2020

We find ourselves at a pivotal moment in history—we must cooperate effectively to respond to an unprecedented global health emergency. The mantra, “when we share, everyone wins” applies now more than ever.

# «COMUNICAZIONE»?

raise questions about the way science-as-usual is practised.

Vincent Larivière is an information scientist and professor at the University of Montreal, who studies the way science is disseminated. He said the move to speed up publication and share research is a tacit admission that business-as-usual in research slows down science.

"[They say] we're opening everything because it's important that we advance things fast. Well, the flip side of this argument is that your normal behaviour is to put barriers to science."

"This virus is dangerous and deadly, but there's lots of other diseases that are dangerous and deadly, and for which opening could save lives. So if you really want to go in that direction, just open everything."



University of Montreal researcher Vincent Larivière said the current climate of open science suggests that science-as-usual creates barriers. (Amélie Philibert)

Health · Second Opinion

**'We're opening everything': Scientists share coronavirus data in unprecedented way to contain, treat disease**  
Feb.1, 2020

...GLI SCIENZIATI **ADESSO**  
STANNO APRENDO DATI E  
ARTICOLI SU COVID-19...  
**SIGNIFICA CHE IL  
COMPORTAMENTO  
«NORMALE» INVECE È  
QUELLO DI METTERE  
BARRIERE ALLA  
CONOSCENZA**

nature Feb 4, 2020

Subscribe

EDITORIAL · 04 FEBRUARY 2020

**Calling all coronavirus researchers: keep sharing, stay open**

As the new coronavirus continues its deadly spread, researchers must ensure that their work on this outbreak is shared rapidly and openly.

# ...accesso a tempo d

TECNICAMENTE, FACILE.  
DECISIONE DI  
«CHIUDERE» RICERCA  
VITALE È ECONOMICA

RICONOSCONO DI AVERE UN RUOLO  
CRUCIALE...

- HANNO ABBATTUTO QUALCHE MURO...
- MA CREATO ACCESSO DIFFICILE
- E SOLO PER LA DURATA DELLA CRISI



Jon Tennant @Protohedgehog · 7 apr

When a scientific publisher provides free access to life-saving research during a pandemic, they show us that this decision is technically simple. Flip a switch.

The decision to prevent access to similar life-saving research for literally EVERYTHING ELSE is purely financial.

1

23

73

response to the rapid worldwide spread of COVID-19

Sharing the worldwide concern about the spread and impact of COVID-19, publishers recognize the crucial role they can play in supporting the response to this crisis and advancing the research that will be critical in combating the virus.

In immediate response to the epidemic announcement by the World Health Organization (WHO), members of the International Association of Scientific, Technical and Medical Publishers (STM) moved to:

- Provide immediate free access to all relevant peer-reviewed publications to ensure that for the duration of the outbreak, research and data quickly reaches the widest possible audiences. More than 32,000 articles, chapters, and other re

NEWS RELEASE



...cosa hanno fatto gli e

IRREALE. SANNO CHE SALVANO  
VITE MA APRONO SOLO PER  
UNA MALATTIA E PER UN  
TEMPO LIMITATO



**Heather Joseph** @hjoseph ·

Unreal. Acknowledging that making these papers [#openaccess](#) will help speed speed progress and save lives but at the same time only doing it for limited time - and for a single disease.

SI RENDONO CONTO CHE L'ACCESSO  
IMMEDIATO SALVA VITE...

NEWS RELEASE

for Immediate Release


March 13, 2020



Speaking of the announcement, Ian Moss STM's CEO said "We are all gravely concerned about the significant threat that COVID-19 represents to public health. In order to aid the efforts to slow the spread of the virus and, fundamentally, to save lives, STM publishers are committed to work collectively to ensure that research findings are shared quickly to advance cutting-edge research. As a community, we hope that the provision of immediate access will aid the global response and make a difference."

...accesso è vitale per OGNI ricerca

SOLO CORONAVIRUS?  
ALZHEIMER, CANCRO,  
CAMBIAMENTO  
CLIMATICO, VIOLENZA  
SULLE DONNE SONO  
MENO IMPORTANTI?...

 SPARC  
@SPARC\_NA

Jan. 25, 2020

"Open" should be the default for science - not just in case of emergencies. When we "know" that their openness speeds discovery, why do we lock up articles and data? #OAintheUSA


Traduci il Tweet



Scientists are unraveling the Chinese core  
Scientists are racing to stop the new core  
time around the world. The effort shows  
[washingtonpost.com](https://www.washingtonpost.com)



Heather Joseph

10 h · 

It's time to make Open Access the default for ALL scientific research once and for goddamn all. Please.

È ORA DI RENDERE TUTTO  
OPEN ACCESS, UNA VOLTA E  
PER SEMPRE

# Perché serve l'Open



Roorick, June 2020

Why Plan S Principles and Implementation cOAlition S Apply for Transformative Journal status Contact



**Open Access lessons during Covid-19: No lockdown for research results!**

08/06/2020

The Covid-19 pandemic has changed the world as we know it, and research is no exception. Globally, scientists are working together at unprecedented speed, in a race against time to understand the virus and its treatment, sharing data and results as fast as they can. Journal editors are cooperating and becoming more flexible. Embargoes are lifted, paywalls abolished and preprint servers like MedRxiv and bioRxiv have accelerated research evaluation and discussion. Suddenly the demand for instant access to the relevant research literature has become self-evident. How could the argument for full and immediate Open Access still be ignored?

**BARRIERE ALL'ACCESSO RALLENTANO LA SCIENZA  
UNICO INTERESSE: IL PROFITTO**

## Temporary access is not Open Access

By opening up research in times of crisis, subscription publishers have implicitly admitted that their paywalls and embargoes were unjustified and inefficient to start with. They have proved that keeping knowledge behind barriers harms the advancement of science and serves little purpose other than generating profits which the research community hardly benefits from. The very fact that this request even had to be made is striking: most of the research results reported in these papers had already been paid for by public funds and should therefore have been openly available to everyone in the first place.

In addition, some publishers only agreed to making this research available on a temporary basis, narrowly focusing on access to Covid-19 related papers. This is hard to justify, as the fight against the disease requires perspectives from multiple scientific disciplines. Publishers temporarily releasing articles from paywalls does not represent Open Access. Full, immediate, and permanent Open Access research papers related to Covid-19. patients and patient organizations is no longer acceptable that 75% of the research literature is still behind a paywall. We don't know which research papers that today remain largely inaccessible could inspire solutions and bright ideas for tomorrow's challenges.

**ACCESSO TEMPORANEO E  
PARZIALE ≠ OPEN ACCESS**

**NON SAPPIAMO QUALE ARTICOLO CHIUSO  
OGGI POTREBBE ISPIRARE IDEE DOMANI**

## If not now, when?

publication venue. The time for full and immediate Open Access was yesterday, but the chance to learn from our mistakes and to act is now.

**IL TEMPO PER OPEN ACCESS IMMEDIATO ERA IERI. LA POSSIBILITÀ  
DI IMPARARE DAGLI ERRORI E AGIRE È ADESSO**

# Comunicazione scientifica.

## Qualche cifra

INDOVINATE COSA RAPPRESENTANO

4

2 milioni €

7.6 miliardi \$

38%

521%



# Comunicazione qualche cifra



7.6 miliardi \$

[SOTTOSTIMATO] CIFRA SPESA GLOBALMENTE PER ABBONAMENTI 2016

OGGI LEGGERE NON È GRATIS

IN REGIME DI ABBONAMENTO PAGHIAMO 3800/5000 € PER ARTICOLO

SOLO CHE PAGHIAMO PER CHIUDERE

Profit	Company	Industry
10%	BMW	automobiles
23%	Rio Tinto	mining
25%	Google	search
29%	Apple	premium computing
35%	Springer	scholarly publishing
37%	Elsevier	scholarly publishing

2018  
http://wp.me/p4jF-km CC-BY Alex Holcombe

38%

GUADAGNO NETTO ELSEVIER

Science

A new mandate highlights costs, benefits of making all scientific articles free to read

Jan 1, 2021

By Jeffrey Brainard | Jan. 1, 2021, 12:01 AM

Eloy Rodrigues  
20 h · 🌐

This is the publishers perspective (from the concluding paragraphs):

"The journal publishing industry's annual revenues of about \$10 billion represent less than 1% of total global spending on R&D—and, in this view, it's reasonable to divert more of the total to scholarly communications that are essential to making the entire enterprise run."

So it doesn't matter if there is growing evidence that we could have a much better scholarly communication system (more efficient, more innovative, more inclusive, more transparent and self-correcting) for a fraction of this \$10 billion. Let's focus on maintaining the current system, and especially the current big commercial companies that benefit from it, even if we (research institutions, governments and their taxpayers) need to use more resources to feed it. Right?

Wrong!

...E NE VORREBBERO ALTRI...

# Il meraviglioso mondo di Elsevier

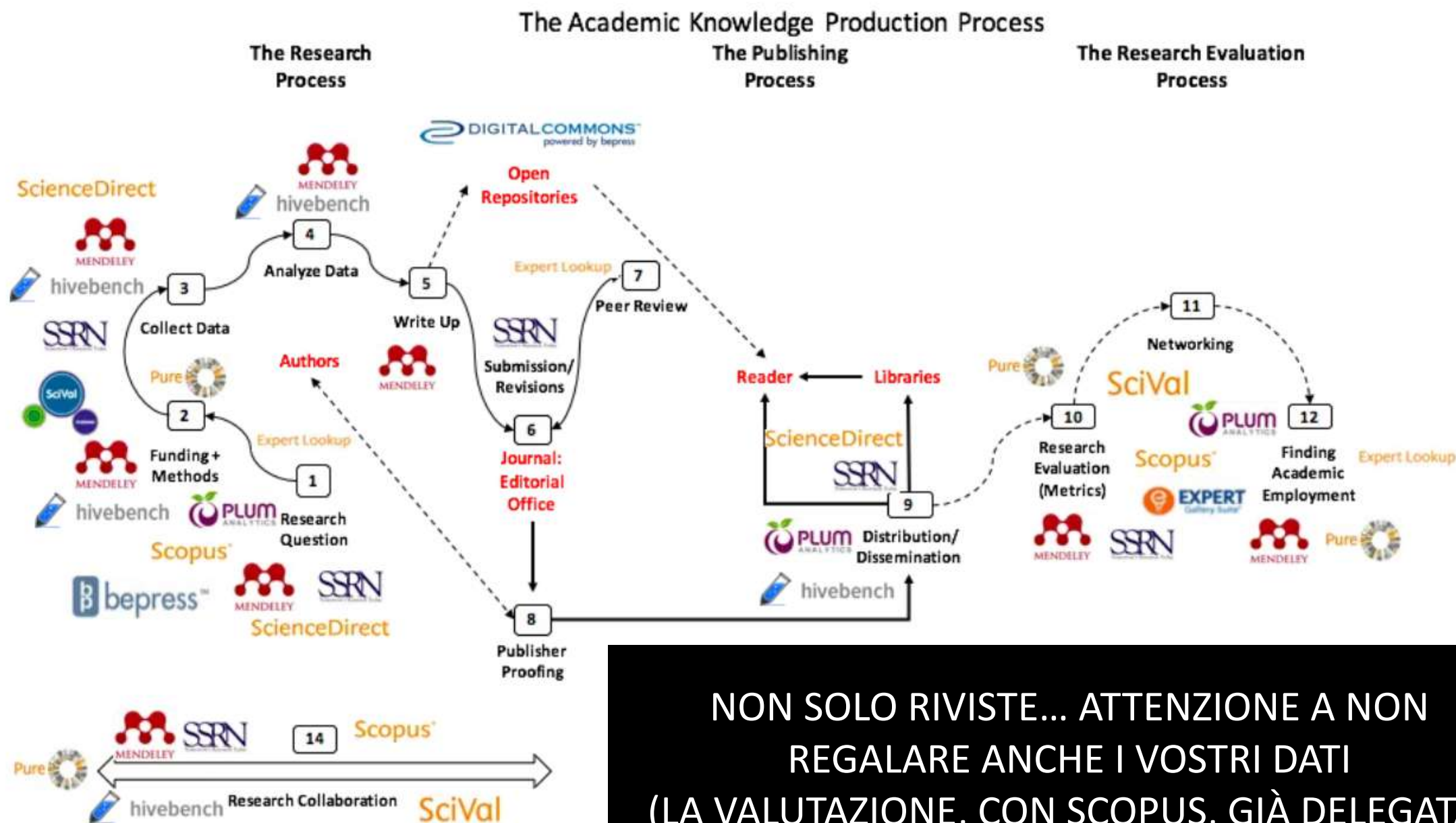


Publishers are increasingly in control of scholarly infrastructure and why we should care

A Case Study of Elsevier

Written by: Alejandro Posada and George Chen, University of Toronto Scarborough

2017



# Accesso?

## Who needs access? You need access!

Public access to scientific research makes all our lives better

Home About FAQ Contribute Bibliography Newest Stories

<https://whoneedsaccess.org/>

### Home

#### you have a problem

governments spend billions on funding research. But **most people don't have access to it** including the taxpayers who ultimately funded the research.

lars, mostly funded by government money or charities, do the research. They write up their is as papers, format the manuscripts, prepare figures, and send them to publishers. Other

Search

#### Recent Posts

- Martin Eve, humanities researcher, open access innovator and cerebral



**Joanne Kamens** ✓

@JKamens

Segui

In risposta a @jasonpriem e @unpaywall

and btw the "everyone who needs it has access" is completely wrong. I have worked in small biotechs for the last 10 years and hit frustrating paywalls EVERY DAY trying to do good science.

Traduci dalla lingua originale: inglese

15:14 - 4 gen 2018

permesso di accesso

Posta in arrivo x



**Niccolò** [redacted]@gmail.com >

a me

Buongiorno,  
sono uno studenti UNIMI e sto preparando la tesi, spesso nelle mie ricerche per il materiale, mi imbatto nel vostro sito IRIS ma non posso accedere all'articolo a cui sono interessato. Come posso ottenere il permesso?

PMI, START-UP, PROFESSIONISTI,  
STUDENTI NEOLAUREATI...

NESSUNO PUÒ LEGGERE I RISULTATI DELLE RICERCHE  
(FINANZIATE CON FONDI PUBBLICI)

CON LE BIBLIOTECHE  
CHIUSE IN LOCKDOWN I  
NOSTRI STUDENTI HANNO  
AVUTO ENORMI  
DIFFICOLTÀ CON IL  
MATERIALE DIDATTICO...  
POSSIBILE CHE UNA  
UNIVERSITÀ PUBBLICA NON  
POSSA GARANTIRE  
DISPENSE O TESTI  
PUBBLICI???

## What's "Open" During COVID-19? In Global Pandemic, OER and Open Access Matter More than Ever

Posted April 14, 2020

By Lindsey Gumb

Higher education

Jan. 29, 2021

### 'Price gouging from Covid': student ebooks costing up to 500% more than in print

Call for inquiry into academic publishers as locked-down unable to access study material online

In Italia è successo che certi editori, in maniera programmatica, hanno deciso di vendere l'elettronico solo ai singoli e non alle biblioteche. Altri, pur avendo praticamente solo testi e collane universitarie, non hanno nessuna versione elettronica: stampano le singole copie coi torchi???



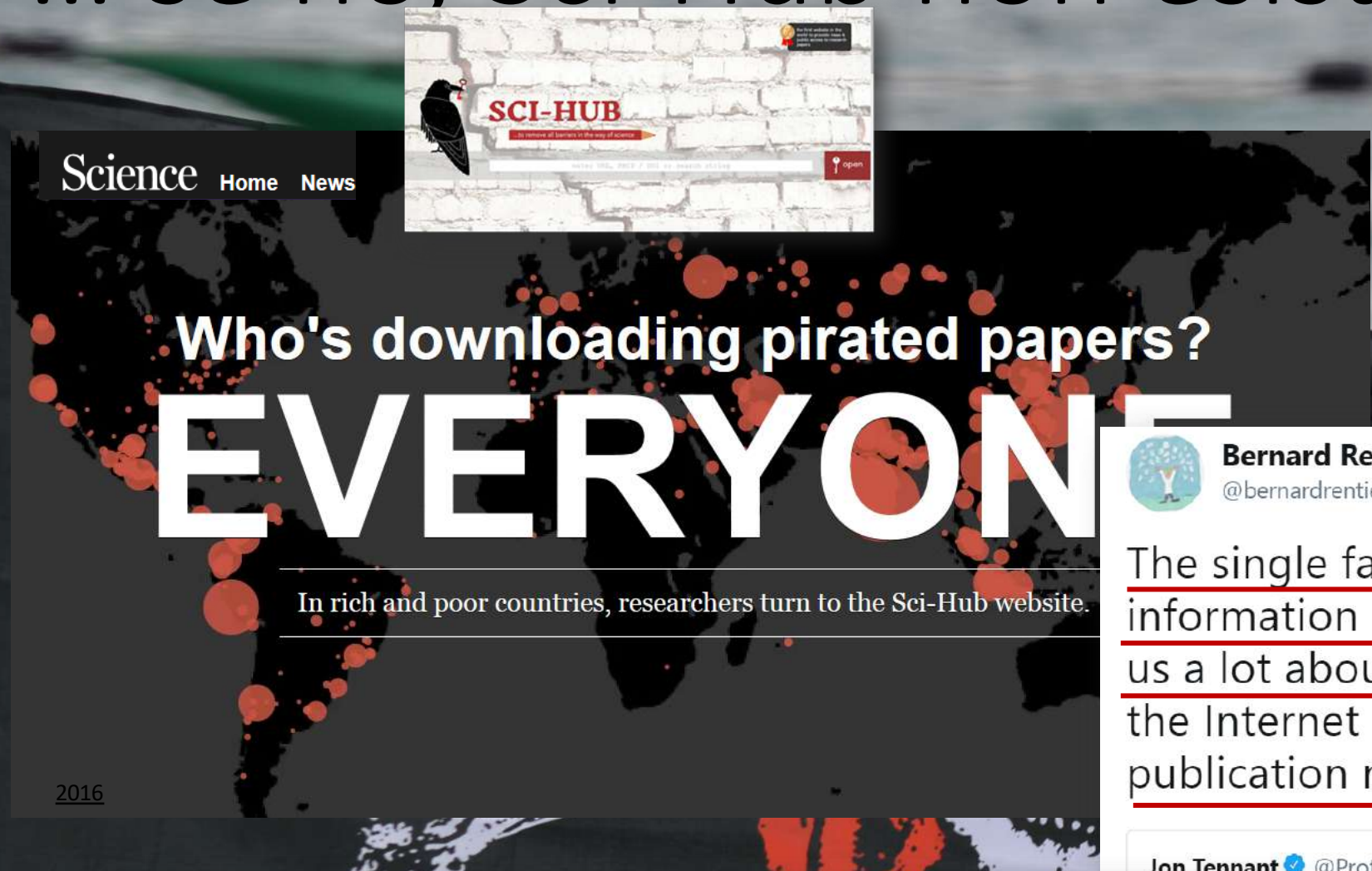
Examples librarians have given include an education textbook called An

Integrated Play-based Curriculum for Young Children, published by Routledge, offered to libraries for £36.99 in print but for £480 for an ebook that can only be read by one student at a time. The cost to libraries for one business studies book, Fundamentals of Corporate Business, published by McGraw Hill, was £65.99 in print and £528 as a single user ebook.

The university is so exasperated by what Ayris calls "the scandal of ebooks", that it has just decided it will begin publishing its own open-access textbooks. "This is a direct response to this crisis," he says. "We fed up with paying these prices when our academics are writing the textbooks. In the future, universities need to club together and take control of their own publishing."

The Guardian approached the Publishers' Association but it declined to comment.

... se no, Sci-Hub non esisterebbe



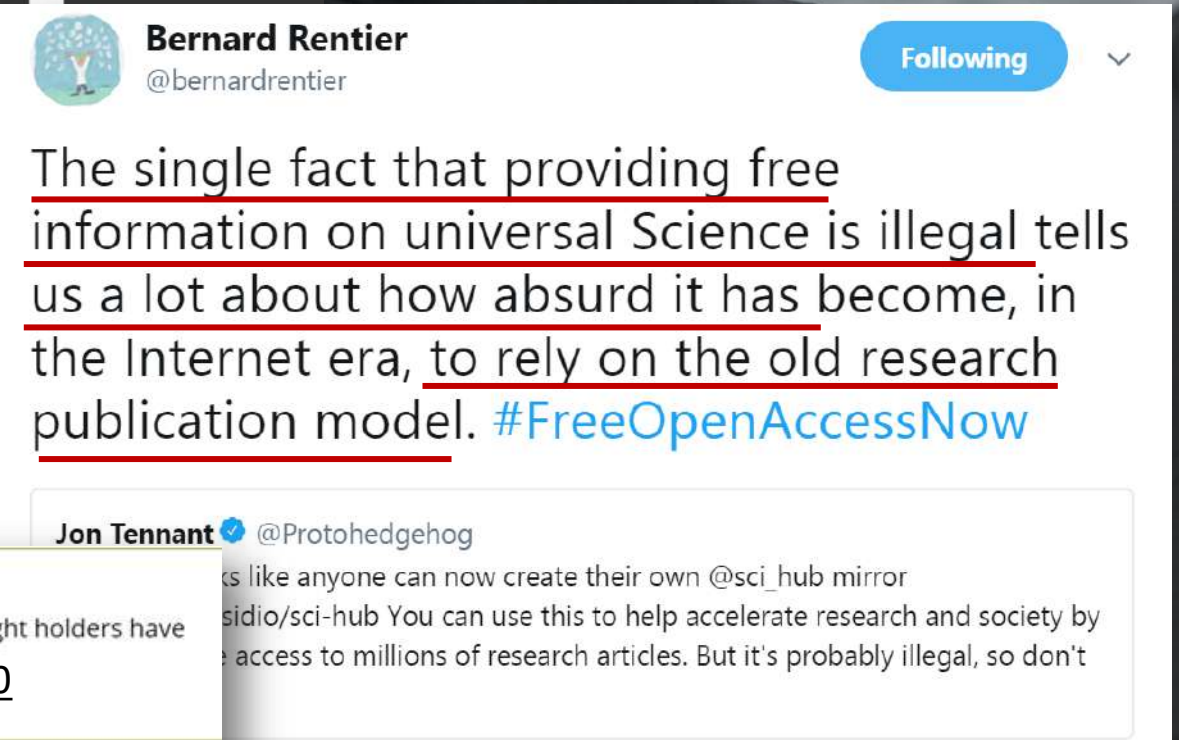
Science Home News

SCI-HUB  
...to remove all barriers in the way of science

# Who's downloading pirated papers? EVERYONE

In rich and poor countries, researchers turn to the Sci-Hub website.

2016



**Bernard Rentier** @bernardrentier Following

The single fact that providing free information on universal Science is illegal tells us a lot about how absurd it has become, in the Internet era, to rely on the old research publication model. #FreeOpenAccessNow

**Jon Tennant** @Protohedgehog

...s like anyone can now create their own @sci\_hub mirror ...sidio/sci-hub You can use this to help accelerate research and society by ...e access to millions of research articles. But it's probably illegal, so don't



### Elsevier and Wiley Declare War on Research Community in India

Without access to the journals available on websites like Sci-Hub and Libgen, against which the copyright holders have filed a case in the Delhi High Court, it is almost impossible to do quality research. Dec. 20, 2020

Prabir Purkayastha 26 Dec 2020



SCI-HUB  
...to remove all barriers in the way of science

RELATED STORIES

- India's Right to Education is a Failing in Reality
- The Impact of COVID-19 on Education
- Paraguayan Students and Peasants Demand Greater Budget for...
- Teachers' Unions Mount

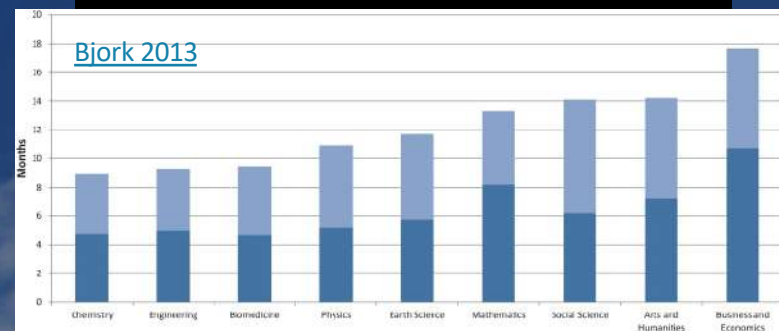
2018

2018

# Comunicazione scientifica: funziona?

ALTRI NUMERI... INDOVINATE COSA RAPPRESENTANO...

## TEMPI MEDI DI PUBBLICAZIONE



9-18 MESI

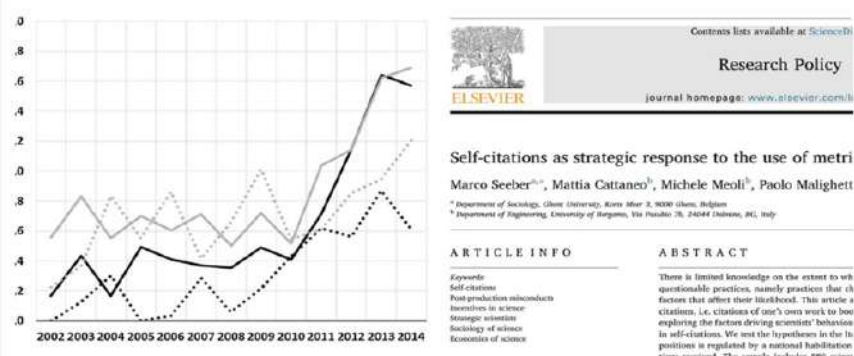


Paola Masuzzo @pcmasuzzo  
Today I witnessed the celebration of a research article published in a (famous & glam) journal after 2 and a half years of revisions. I do feel happy for the authors, of course, but I cannot help wondering what's there to celebrate in such a slow scientific dissemination process.

Traduci il Tweet  
6:58 PM · 9 mag 2019 · Twitter for Android P.Masuzzo, Sept. 2019

## AUMENTO DELLE AUTOCITAZIONI IN ITALIA

Tweet March 2018  
Jelte Wicherts @JelteWicherts  
Gaming the system: When in 2010 Italian universities incorporated citations in promotion decisions, self-citation rates among social scientists went up by 81-179%  
[sciencedirect.com/science/articl...](http://sciencedirect.com/science/articl...)



179%

70%

43%

Home + Research + Research projects [The Turing way, 2019](#)  
**'The Turing Way' - A handbook for reproducible data science**  
Developing a handbook for best practice in academic data science

## RICERCHE NON RIPRODUCIBILI

nature  
Home | News & Comment | Research | Careers & Jobs | Current Issue | Archive | Audio & Video  
Archive > Volume 533 > Issue 7604 > News Feature > Article  
[Nature 2016](#)  
NATURE | NEWS FEATURE  
**1,500 scientists lift the lid on reproducibility**  
Survey sheds light on the 'crisis' rocking research.

# [Houston, abbiamo un problema]

## No academic post for fraudster Diederik Stapel, after all

Recently, we reported that social psychologist and renowned data faker Diederik Stapel had found himself a [new gig supporting research at a vocational university in the Netherlands](#) — but it appears that was short-lived.



Diederik Stapel

According to multiple news reports, NHTV Breda will not be employing Stapel, after all.

Here's our Google translate of a portion from [De Telegraaf](#): [Continue reading](#) →

## Does scientific misconduct cause patient harm? The case of Joachim Boldt 2013

## The Retraction Watch Leaderboard

<https://retractionwatch.com/>

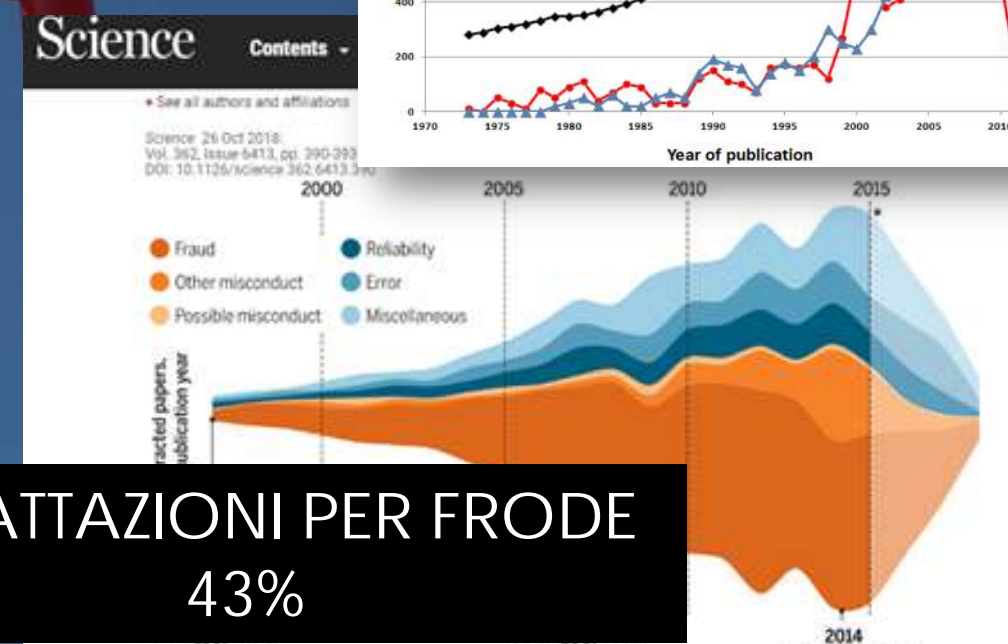
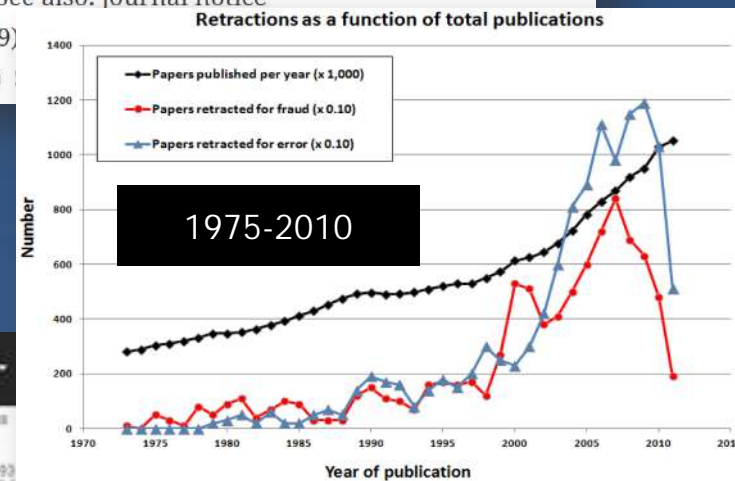
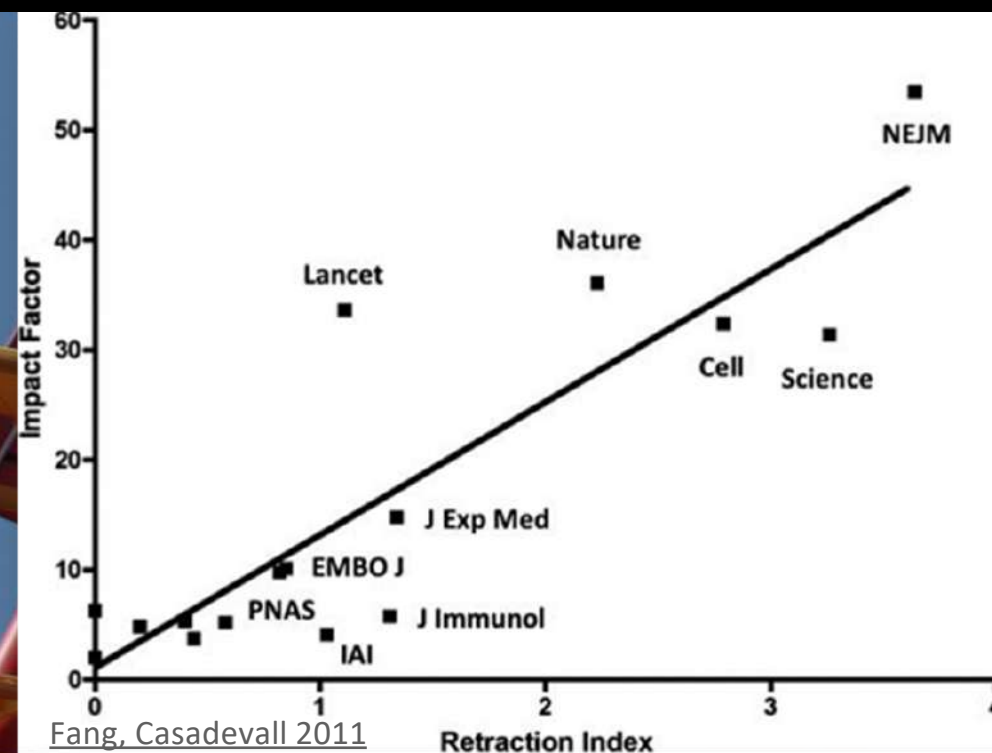
## Retraction Watch

Tracking retractions as a window into the scientific process

Who has the most retractions? Here's our unofficial list (see notes on methodology), which we'll update as more information comes to light:

1. [Yoshitaka Fujii](#) (total retractions: 183) See also: [Final report of investigating committee](#), [our reporting](#), [additional coverage](#)
2. [Joachim Boldt](#) (96) See also: [Editors-in-chief statement](#), [our coverage](#)
3. [Diederik Stapel](#) (58) See also: [our coverage](#)
4. [Adrian Maxim](#) (48) See also: [our coverage](#)
5. [Chen-Yuan \(Peter\) Chen](#) (43) See also: [SAGE](#), [our coverage](#)
6. [Hua Zhong](#) (41) See also: [journal notice](#)
7. [Shigeaki Kato](#) (39)
8. [Yuhji Saitoh](#) (37)

## CORRELAZIONE DIRETTA #RITRAZZIONI/IMPACT FACTOR



## RITRAZZIONI PER FRODE 43%

J. Brainard, [Rethinking retractions](#), Science 2018

ROYAL SOCIETY OPEN SCIENCE [rsos.royalsocietypublishing.org](http://rsos.royalsocietypublishing.org)

The natural selection of bad science [P. Smaldino, 2016](#)

All retractions: 62 Fraud: 29

All retractions: 419 Fraud: 252

All retractions: 946 Fraud: 411

THE LANCET

ew: funziona??

Retracted coronavirus (COVID-19) papers  
Retraction watch

Retraction—Hydroxychloroquine or chloroquine with or without macrolide for treatment of COVID-19: a multinational registry a

Mandeep R Mehra · Frank Ruschitzka · Amit N Patel

Published: June 05, 2020 · DOI: [https://doi.org/10.1016/S0140-6736\(20\)31324-6](https://doi.org/10.1016/S0140-6736(20)31324-6) · Check for updates



60 RITRATTAZIONI  
19 PREPRINT  
41 ARTICOLI SU RIVISTE  
PEER REVIEWED

After publication of our *Lancet* Article,<sup>1</sup> several concerns were raised with respect to the veracity of the data and analyses conducted by Surgisphere Corporation and its founder and our co-author, Sapan Desai. We launched an independent third-party audit of Surgisphere with the consent of Sapan Desai to



The NEW ENGLAND  
JOURNAL of MEDICINE

Retraction: Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19. *N Engl J Med*. DOI: 10.1056/NEJMoa2007621.

June 25, 2020

RITRATTATI DOPO CHE I LETTORI HANNO ESPRESSO DUBBI.  
GLI ARTICOLI AVEVANO PASSATO LA PEER REVIEW  
TRADIZIONALE (SENZA AVER VISTO I DATI GREZZI)

Because all the authors were not granted access to the raw data and the raw data could not be made available to a third-party auditor, we are unable to validate the primary data sources underlying our article, "Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19."<sup>1</sup> We therefore request that the article be retracted. We apologize to the editors and to readers of the *Journal* for the difficulties that this has caused.

Related Articles

ORIGINAL ARTICLE JUN 18, 2020

Cardiovascular Disease, Drug Therapy, and

Peer

Dec. 2020

## Elsevier looking into “very serious concerns” after student calls out journal for fleet of Star Trek articles, other issues

An undergraduate student in the United Kingdom has taken to task the editors of a purportedly scholarly journal for having

Grech is a pediatric cardiologist, and, evidently a huge Star Trek fan. He’s also a prolific author, and seems to have turned *EHD* into something of a personal fanzine. As Gaddy notes in his letter, Grech has written at least 113 papers in *EHD*, an Elsevier title, 57 as sole author:

19 of these 113 ar

Star Trek. 1

that are rel

of this stop

l practices,

Many of t


category of

### Early Human Development

An international journal concerned with the continuity of fetal and postnatal life

Editor-in-Chief: [E. F. Maalouf](#)

> [View Editorial Board](#)

> [CiteScore: 3.1](#)  [Impact Factor: 1.969](#) 

Established as an authoritative, highly cited voice on early human

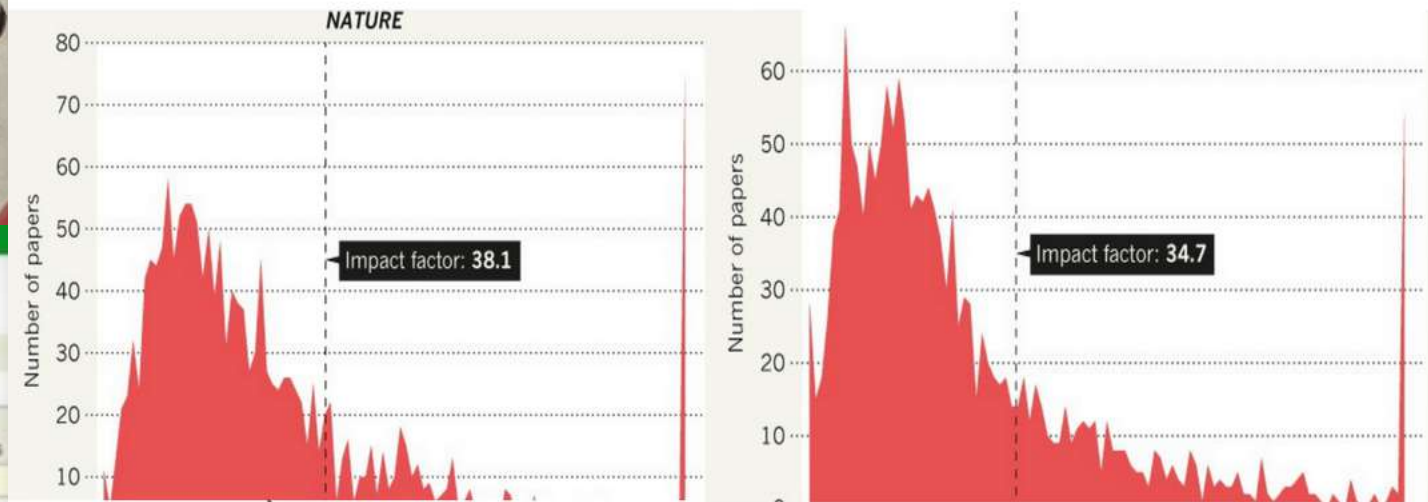
development, *Early Human Development* provides a unique opportunity for researchers and clinicians to bridge the communication gap between disciplines. Creating a forum for the productive exchange of ideas concerning early human growth...

EARLY HUMAN  
DEVELOPMENT  
PUBBLICATO DA  
ELSEVIER  
«AUTOREVOLE,  
MOLTO CITATO»

# [Impact Factor?]

The Impact Factor is a bullshit statistic

J.Tennant 2017



is imposed by a very small number of highly cited papers

ISI Web of Knowledge™  
Journal Citation Reports®

Journal: **CURRENT BIOLOGY**

Mark	Journal Title	ISSN	Total Cites
<input type="checkbox"/>	CURR_BIOL	0960-9822	20020

Journal Impact Factor

Cites in 2002 to items published in: 2001 = 3314  
2000 = 3917  
Sum: 7231

Number of items published in: 2001 = 528  
2000 = 504  
Sum: 1032

Calculation: Cites to recent items / Number of recent items = 7231 / 1032 = **7.007**

ISI Web of Knowledge™  
Journal Citation Reports®

Journal: **CURRENT BIOLOGY**

Mark	Journal Title	ISSN	Total Cites	Impact Factor	Immediacy Index	Citable Items	Cited Half-life	Citing Half-life
<input type="checkbox"/>	CURR_BIOL	0960-9822	22589	11.910	2.683	331	3.8	4.0

Journal Impact Factor

Cites in 2003 to items published in: 2002 = 3628  
2001 = 3923  
Sum: 7551

Number of items published in: 2002 = 334  
2001 = 300  
Sum: 634

Calculation: Cites to recent items / Number of recent items = 7551 / 634 = **11.910**

ni nell'anno X  
usciti anni X-1 X-2

ricoli «citabili»  
ati in X-1 X-2

# ...citazioni? Cosa misurano?



LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE LSE Imp

Home About Latest Our books Series Resources LSE comment Popula

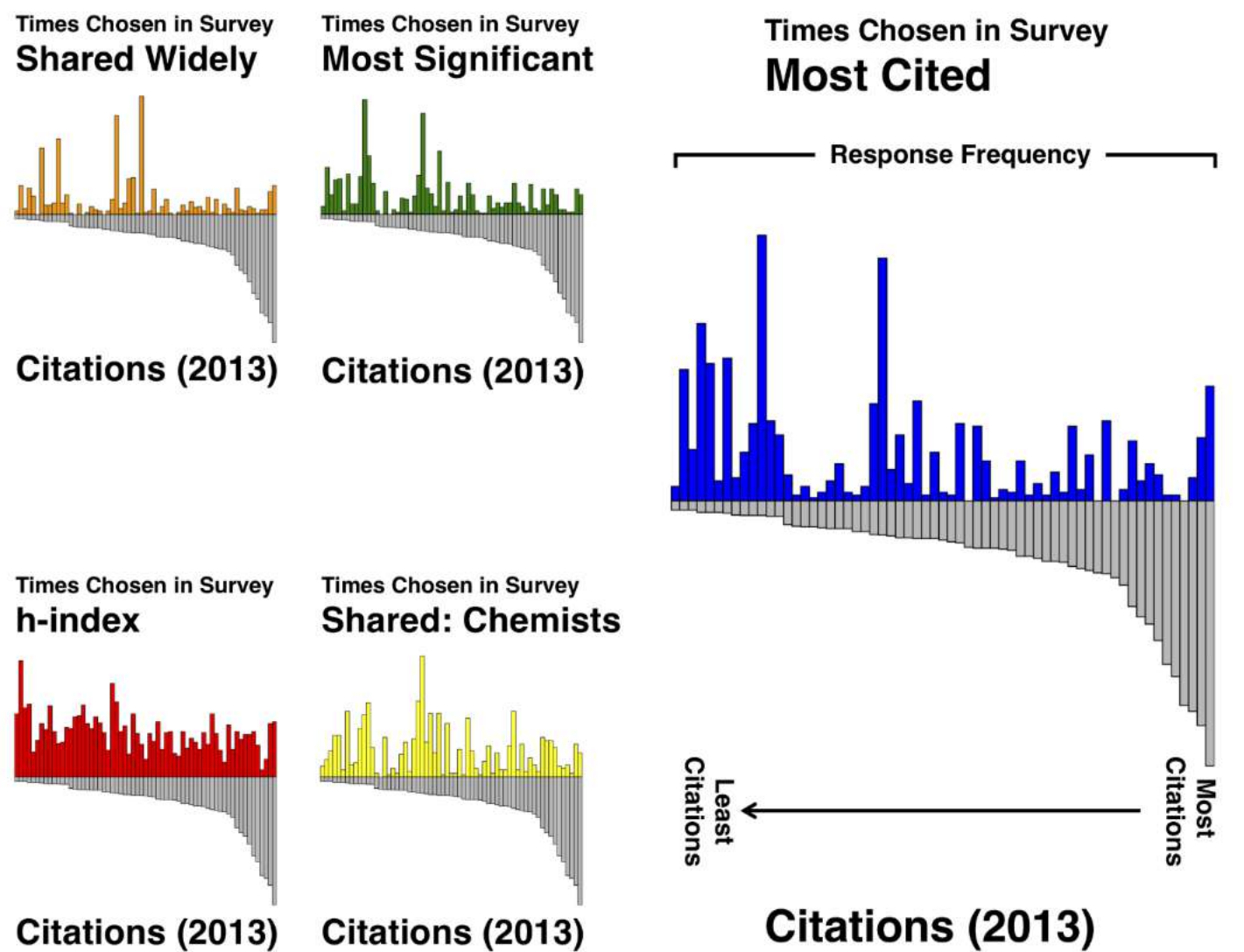
2018

The academic papers researchers regard as significant are not those that are highly cited

So what now? We think this work clearly highlights a major issue with metrics – they aren't measuring what everyone commonly assumes we are measuring, or at least, are not accurately representing the more abstract perceptions of impact and importance that we measured in our survey.

As hinted earlier, we think our research shows that impact goes beyond citation count, and beyond scholarly impact. Recent articles, such as that in *PLoS Biology* and *Nature*, also call out current

what can we do to change current practice?



# ... perché valutazione = ossessione

I was told impact metrics could make or break careers. Instead, they broke my faith in scientific research [2018](#)



Performance-driven culture is ruining scientific research [The Guardian Opinion](#)

COBRA EFFECT: QUANDO DURANTE UNA INVASIONE DI COBRA GLI INGLESII PAGAVANO PER UN COBRA MORTO, GLI INDIANI INIZIARONO AD ALLEVARLI

THE ROYAL SOCIETY

The future of scholarly scientific communication [2015](#)  
Conference 2015

LA VALUTAZIONE È DIVENTATA UN'OSSESSIONE

- «not only are we failing to provide the right incentives, we are providing perverse ones»
- Goodhart's law: «when a measure becomes a target, it ceases to be a good measure»
- «people game the system at every level»



**VALUTAZIONE DISTORCE LE SCELTE**

- PERPETUA IL SISTEMA PER CUI SI PAGA IL PRESTIGIO DELLE RIVISTE
- CREA COMPETIZIONE E NON COLLABORAZIONE
- IMPEDISCE DI RICONOSCERE DATI, SOFTWARE, SOFTWARE, CODE, BLOGS, WIKIS AND FORUMS. **COME «PRODOTTI»...**

metrics designed to assess the importance and impact of research as an aid to evaluation, with publication outputs in traditional scientific journals being the major focus. These metrics in turn affect the behaviour of researchers, such as their choice of journals, as they seek to maximize their performance as measured by the metrics used. They can contribute to the maintenance of high journal prices, promote intense competition rather than openness and sharing, and fail to recognize research contributions such as the production of datasets, software, code, blogs, wikis and forums.

ICSU 2014

We recognise that researchers need to be given a maximum of freedom to choose the proper venue for publishing their results and that in some jurisdictions this freedom may be covered by a legal or constitutional protection. However, our collective duty of care is for the science system as a whole, and researchers must realise that they are doing a gross disservice to the institution of science if they continue to report their outcomes in publications that will be locked behind paywalls.

We also understand that researchers may be driven to do so by a misdirected reward system which puts emphasis on the wrong indicators (e.g. journal impact factor). We therefore commit to fundamentally revise the incentive and reward system of science, using the San Francisco Declaration on Research Assessment (DORA)<sup>4</sup> as a starting point.

PlanS Preamble

- **PAYWALLS SONO UN DISSERVIZIO ALLA SCIENZA E ALLE ISTITUZIONI**
- **I RICERCATORI POSSO ESSERE MOSSI DA UN SISTEMA DI INCENTIVI FUORVIANTE**

...no

The scientific communication system has hardly been modernised in recent decades and has even become archaic in view of the modern developments in communication. Delays between submission and publication of articles and monographs are excessively long : by the time they appear, some research is already out of date. In addition, publication costs are far too high in relation to the real cost of electronic dissemination.

The pitfall also lies in the way researchers are evaluated. Based on the number of their publications and the prestige of the journals that publish them, assessment urges scientists to focus on writing articles as if it were a goal in itself. This type of evaluation does not do justice to the merits of the researcher and its effects on science are perverse: a plethora of publications and a decline in their quality (1). In the humanities and social sciences, it depreciates the use of vernacular languages, which is important in research related to a more local context.

It is therefore urgent, for the general interest, to learn the lessons of this dramatic episode and to take steps to ensure a completely free flow of information from public research, whatever its nature. We must begin now to reallocate our resources into open community infrastructures and services that are in line with current research and societal concerns (5). Let's not go back to the way things were after the pandemic disappears eventually. The challenges facing our society will never again tolerate locked-up knowledge.

SISTEMA ARCAICO  
RITARDI INSOSTENIBILI  
COSTI INSOSTENIBILI

LA VALUTAZIONE HA CREATO  
EFFETTI PERVERSI

NON POSSIAMO TORNARE  
INDIETRO, DOPO LA PANDEMIA  
LE SFIDE GLOBALI NON  
SOPPORTANO PIÙ UNA  
CONOSCENZA RINCHIUSA

07  
samedi  
Nov 2020

*The need for Open Science, in times of  
pandemic and far beyond*

B. Rentier, Nov. 7, 2020

POSTED BY BERNARDRENTIER01 IN CORONAVIRUS/COVID19

≈ 1

# Il sistema è rotto

## RESEARCH CULTURE IS BROKEN, OPEN SCIENCE CAN FIX IT

YouTube

June 2019



Research Culture is Broken; Open Science can Fix It | Rachael Ainsworth | TEDxMacclesfield

HOME / ALMADL / OPEN ACCESS E OPEN SCIENCE /

UniBO video

### L'Università di Bologna per l'Open Access e l'Open Science

Rassegna di video su principi, policy, infrastrutture e servizi di supporto per l'Open Access e l'Open Science

Video 2: [I colori dell'Open Access](#) (durata min. 4:15)

Open Access è accesso libero e senza barriere al sapere scientifico. Ci sono molti modi per pubblicare in Open Access: green, gold, red, bronze... Il video ti aiuta a scegliere le strategie migliori per pubblicare in Open Access e aumentare l'impatto della tua ricerca.

Video 3: [Obblighi e opportunità per la ricerca finanziata](#) (durata min. 5:00)

Numerosi enti di finanziamento della ricerca promuovono l'Open Science e richiedono una disseminazione in Open Access delle pubblicazioni e dei dati di progetto; la legge italiana, seguendo le raccomandazioni della Commissione Europea, riconosce l'Open Access come modalità di pubblicazione dei risultati delle ricerche finanziate in modo prevalente dai fondi pubblici. L'Open Access non è solo un obbligo ma un'opportunità per la ricerca aumentandone l'impatto e la visibilità. Occorre seguire attentamente le clausole previste dai bandi di finanziamento per usufruire delle agevolazioni e dei vantaggi dell'Open Access e non incorrere in sanzioni.

Video 4: [Diritti d'autore e licenze aperte](#) (durata min. 5:09)

Non è necessario cedere in via esclusiva tutti i diritti d'autore per pubblicare i propri lavori di ricerca. I diritti d'autore di natura patrimoniale possono essere trasferiti singolarmente, in modo non esclusivo e per un tempo determinato. È fondamentale scegliere editori che consentano ai ricercatori di mantenere la titolarità sui propri lavori di ricerca e ne consentano la distribuzione con licenze aperte che ne permettano il riuso etico come le Creative Commons.

Video 5: [Dati della ricerca: la European Open Science Cloud e i principi FAIR](#) (durata min. 4:08)

I dati della ricerca sono tutte le evidenze alla base dei risultati della ricerca stessa. La conservazione e la condivisione in forma aperta dei dati della ricerca sono fra i pilastri della strategia europea a favore dell'Open Science.

# ...un abbraccio mortale



But let's not ignore the facts: the science system is in landslide transition from data-sparse to data-saturated. Meanwhile, scholarly communication, data management methodologies, reward systems and training curricula do not adapt quickly enough if at all to this revolution. **Researchers, funders and publishers (I always thought that meant making things public) keep each other hostage in a deadly embrace by continuing to conduct, publish, fund and judge science in the same way as in the past century.**

**So far, no-one seems to be able to break this deadlock.** Open Access articles are solve only a fraction of the problem. Neither 'open research data' alone will do. W



# Lo scopo della comunicazione scientifica

WONKHE ABOUT US EVENTS LATEST JOBS SUBSCRIPTION <sup>SUS-169</sup> Apr. 22, 2020

**The purpose of publications in a pandemic and beyond**

The virus is reminding us that the purpose of scholarly communication is not to allocate credit for career advancement, and neither is it to keep publishers afloat. Scholarly communication is about, well, scholars communicating with each other, to share insights for the benefit of humanity. And whilst we've heard all this before, in a time of crisis we realise afresh that this isn't just rhetoric, this is reality.

the coffin will be closed?!" If we've created a generation of scholars who are just in it for the glory of papers in glamorous journals, and not to do good research that changes the world a little bit, then we really are in trouble.

So please UKRI, when you come to make your difficult policy decisions about open access, please put front and centre at every stage a very simple question: "Will this help scholars communicate more effectively and do better research?". Everything else is a distraction. Progress has been impeded by two buts for twenty years. It's time to focus.

No buts.

COMUNICAZIONE  
SCIENTIFICA=CONDIVIDERE LE SCOPERTE  
PER IL BENE DELL'UMANITÀ

SE ABBIAMO CREATO UNA GENERAZIONE DI  
RICERCATORI CHE PENSANO SOLO ALLA  
GLORIA DI UN ARTICOLO IN RIVISTE  
PRESTIGIOSE E NON A FARE BUONA RICERCA  
CHE CAMBI IL MONDO, SIAMO NEI GUAI

UNICA DOMANDA: «QUESTI FONDI  
AIUTERANNO A COMUNICARE MEGLIO E  
FARE UNA RICERCA MIGLIORE»? IL  
RESTO SONO DISTRAZIONI



PAUSA?

# COVID e brevetti

## Covid-19, pandemia, proprietà intellettuale e open science

Caso, Blog



Roberto Caso – Frammenti di un discorso pubblico

"È solo il mio modo di vedere le cose..."



Roberto Caso

Una sitografia in costruzione

H. Miller, S. Decker, [Vaccinating Billions Means Finding Ways Around a Patent Impasse](#), Bloomberg, 16 Dec. 2020

Medici Senza Frontiere, [I governi raggiungano un accordo sulla sospensione dei brevetti durante la pandemia](#), 16 dicembre 2020

multinazionali farmaceutiche. L'accesso alla conoscenza, in questa prospettiva, diviene una condizione necessaria per impedire che la salute sia governata esclusivamente da chi la considera una merce da comprare sul mercato, e non un diritto fondamentale della persona.

La questione capitale è rappresentata, dunque, da una possibile metamorfosi di un sapere tutto risolto nella logica proprietaria, com'è per la produzione farmaceutica. Il risultato di questo processo, che peraltro investe la conoscenza nel suo complesso, è la sua trasformazione, parziale o totale, in un bene comune. Non siamo, allora, di fronte a una semplice associazione tra diritti fondamentali e beni comuni, bensì alla produzione di beni comuni attraverso i diritti fondamentali".

### Make the pledge to share your intellectual property in the fight against COVID-19.

<https://opencovidpledge.org/>

OPEN COVID PLEDGE

The Pledge Licenses

About



**ProBuccal – Covinhood™ oral bioaerosol shield for dental applications**

Covinhood , dental shield , ProBuccal

The Covinhood™ (U.S Patent Pending) is a protective device against oral bioaerosols for use by dental

**Intel – Touchless password for authentication of people**

Intel , security , touchless password

There are a number of software applications that require authentication. For example, many

**Facebook – Combating the spread of COVID-19 related misinformation**

Facebook , information credibility , social media

Due to the current pandemic it has become extremely important to ensure that everyone has access to...



# 2 – L'ALTERNATIVA OPEN

Open Science e finanziamenti europei  
Come ottemperare agli obblighi nei progetti H2020 e in Horizon Europe



Corso online in 4 moduli:  
2, 4, 9, 11 febbraio 2021 ore 14.00 - 16.30



Elena Giglia  
Università di Torino  
elena.giglia@unito.it  
 @egiglia



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Impareremo:

1. Open Science è solo la scienza, fatta bene

2. come potete aprire tutti i passi del ciclo della ricerca

### MESSAGGI CHIAVE

- Open Science è riconosciuta non solo in Europa come via a una scienza migliore
- c'è una comunità lì fuori che vi sostiene
- potete fare un passo alla volta...

...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.**

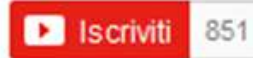


# Open Science

## Open Science Depends on Open Minds



Neelie Kroes



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

'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.

Qeios

Open Access | Lic. Info | Cite

<https://doi.org/10.32388/838962>

Open Science

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.accelerateopenscience.nl/what-is-open-science/>



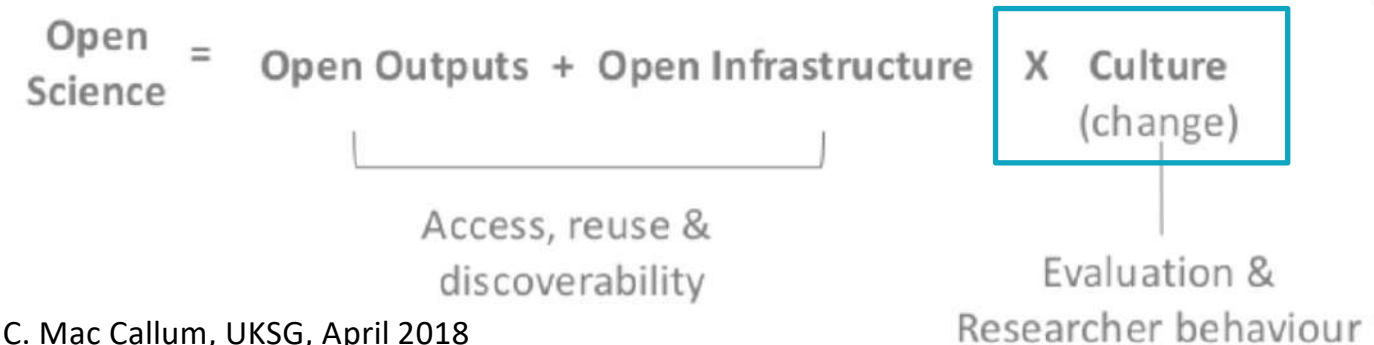
Open Science @openscience · 5 h

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

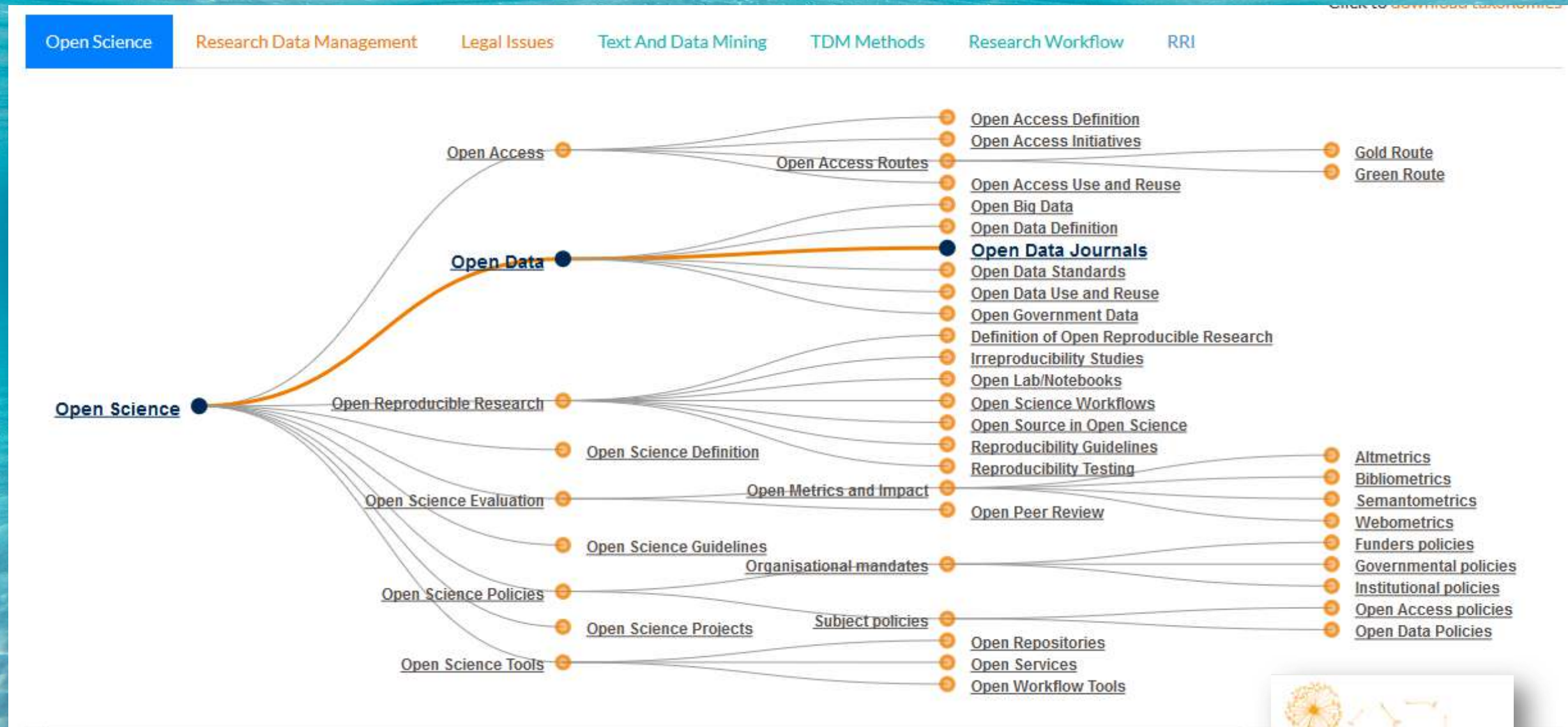


13

8



# ...Open Science è



FOSTER taxonomy



Open Science

**OPEN SCIENCE:  
JUST  
SCIENCE  
DONE RIGHT**

Principles of Open Science

Transparency	Accountability	Inclusivity
Responsibility	Community & Collaboration	Visibility
Rigour	Equality	Public good

scholarship

Clip st



**Jon Tennant** ✓  
@Protohedgehog

Following

What is the difference between open science and good science? If research papers are inaccessible, with no code or data, cherry picked results, inability to even attempt to reproduce, is that really even science? Science without openness is more anecdote and faith than science.

Tennant Sept.2018

Tony Ross-Hellauer, 2017

# Open Science

WEBINAR 19 OTTOBRE 2020



NON SOLO ARTICOLI MA  
DATI, SOFTWARE...

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



VALORI: DIVERSITÀ,  
INCLUSIONE...

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

RISULTATI NEGATIVI,  
«FAR CRESCERE»,  
«RESPONSABILE»

BY-SA

# 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

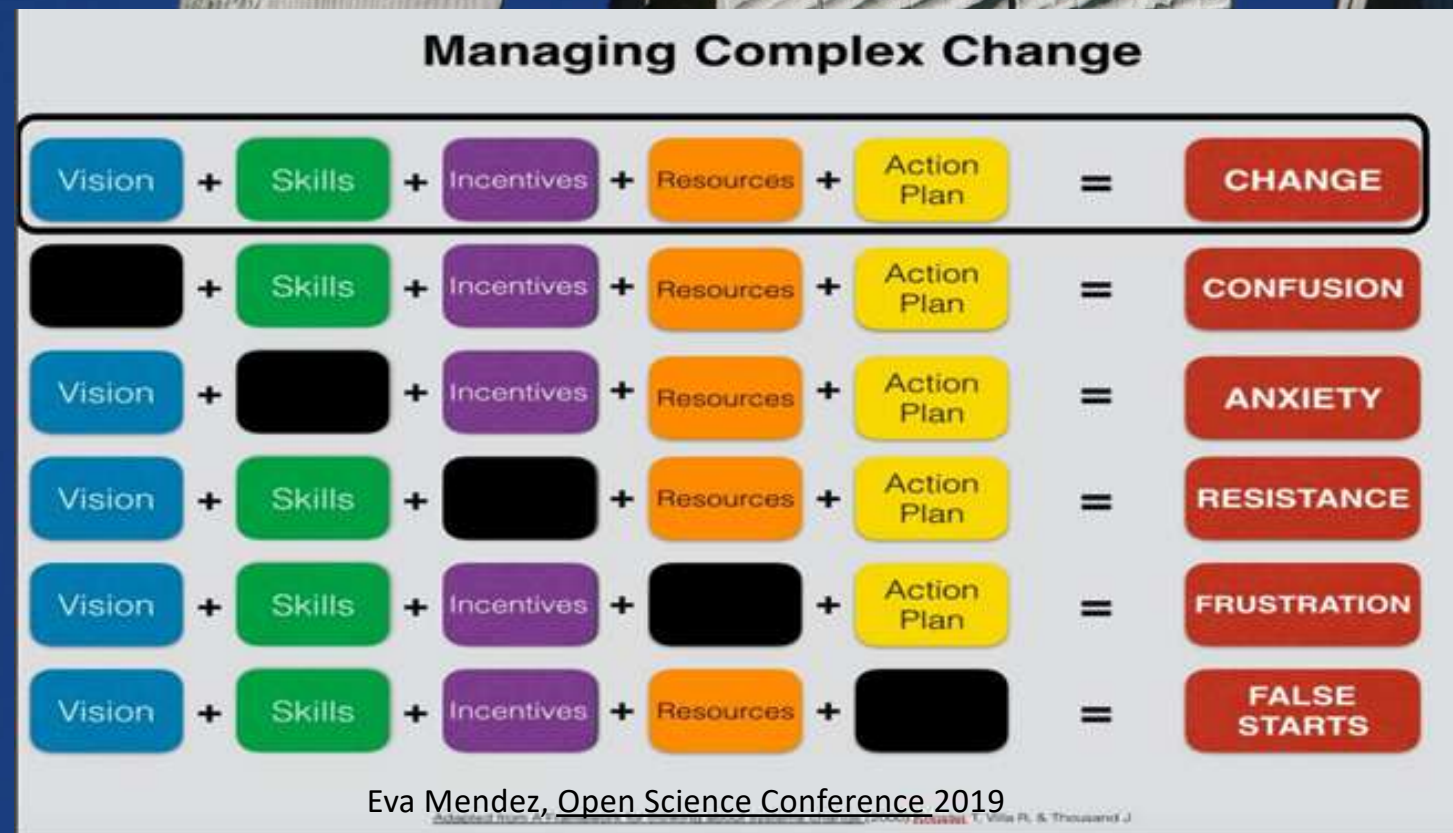
Jean-Claude Burgelman<sup>1\*</sup>,  Corina Pascu<sup>2\*</sup>, Katarzyna Szkuta<sup>1</sup>, Rene Von Schomberg<sup>1</sup>, Athanasios Karalopoulos<sup>1</sup>, Konstantinos Repanas<sup>1</sup> and Michel Schoupe<sup>1</sup>

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

# [Transizione: è un processo]

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



SERVE UNA  
VISIONE  
ORGANICA E  
COERENTE

national plan open science  
Home Open science National Plan Open science in Nederland Open science internasjonaaal

<https://www.openscience.nl/>

<https://zenodo.org/record/34079#.W00wY2fOPIU>

OPEN ACCESS

Recommendati Open A

Working Group "National Strateg

Open science and research leads to sur creative insights: Open science and res

Julkaisun pysyvä osoite on <http://urn.fi/URN:ISBN:978-952-263->  
<http://julkaisut.valtioneuvosto.fi/>

Francia - National Plan, July 2018

NATIONAL PLAN FOR OPEN SCIENCE

4TH JULY 2018

E POLITICHE NAZIONALI

PER PASSARE DA «RACCOMANDAZIONI» A «IMPEGNI PER L'IMPLEMENTAZIONE»

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

# Open Science: chi la sostiene / 1

The participants reached a consensus on the following views

- I. Open Science is an accelerator of the Sustainable Development Goals (SDGs).
- II. Publicly funded science should be Open Science.
- III. We are not on track to achieve the SDGs. We must work collaboratively toward the goals of humanity laid out in the SDGs.
- IV. The importance of Open Access (OA) is key takeaway from the 2019 Global Sustainable Development Report.
- V. Open Science must be inclusive. Important relevant research is not the same as popular highly-cited research.
- VI. Incentives for research should be aligned with openness in service of the SDGs and for the good of humanity.
- VII. Open Science requires the opening of barriers to a set of inter-related scientific research processes. Libraries are natural information/data brokers and curators in the Open Science suite of processes, and their role is essential.



UNITED NATIONS

Roundtable Discussion on a Global Science Commons

Outcome Document

United Nations Headquarters, Monday, 18 November 2019  
Nov. 18, 2019



SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD



# Open Science: chi la sostiene / 2



 **OECD Innovation**  
@OECDInnovation

Access to publicly funded data has become more important than ever during the COVID-19 crisis.

We look at what countries can do to encourage #DataAccess in our report [oe.cd/2ZO](https://oe.cd/2ZO)

#researchdata #opendata


[Traduci il Tweet](#)




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

 OECD



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

 7 main challenges addressed

- 1/ Data governance for trust
- 2/ Discoverability/findability, machine readability and data standards.
- 3/ Recognition and reward system for data authors.
- 4/ Definition of responsibility and ownership.
- 5/ Business models for open data provision.
- 6/ Building human and institutional capabilities.
- 7/ Exchange of sensitive data across borders.

## APPELLO CONGIUNTO PER LA OPEN SCIENCE

Joint Appeal for Open Science UNESCO, WHO, HCHR,  
CERN

We, the Directors-General of UNESCO, WHO and CERN, and the United Nations High Commissioner for Human Rights, reaffirm the fundamental right to enjoy the benefits of scientific progress and its applications and advocate for open, inclusive and collaborative science

APERTA, INCLUSIVA, COLLABORATIVA

Considering that Open Science can reduce inequalities, help respond to the immediate challenges of Covid-19 and accelerate progress towards the implementation of the 2030 Agenda for Sustainable Development, we therefore:

- (i) Call on every Member State to ensure the fundamental right to access scientific research and its applications, with a view to creating a global knowledge commons and closing existing gaps in science, technology and innovation, especially in developing countries and with respect to women;
- (ii) Commit to supporting the international scientific community by fostering a culture of collaboration and solidarity, rather than competition, and by sharing research outcomes and knowledge wherever possible in order to make science v

CONOSCENZA COME BENE COMUNE

COLLABORAZIONE vs COMPETIZIONE

The core idea behind Open Science is to allow scientific information, data and outputs to be more widely accessible (Open Access) and more reliably harnessed (Open Data) with the active engagement of all stakeholders (Open to Society). The Open Science movement has emerged from the scientific community and has rapidly spread across nations, calling for the opening of the gates of knowledge. In a fragmented scientific and policy environment, a stronger global understanding of the opportunities and challenges of Open Science is needed.

ACCESSO, TRASPARENZA, COINVOLGIMENTO – APRIRE LE PORTE

# Open Science: chi la sostiene /



## UNESCO Recommendation on Open Science

At the 40th session of UNESCO's General Conference, 193 Member States tasked the Organization with the development of an international standard-setting instrument on Open Science in the form of a UNESCO Recommendation on Open Science to be adopted by Member States in 2021. **Nov. 2020**

8. The term 'Open Science' refers to an umbrella concept that combines various movements and practices aiming to make scientific knowledge, methods, data and evidence freely available and accessible for everyone, increase scientific collaborations and sharing of information for the benefits of science and society, and open the process of scientific knowledge creation and circulation to societal actors beyond the institutionalized scientific community.

- INCLUSIONE  
- RIDUZIONE  
DELLE  
DISEGUAGLIANZE  
- POTENZIALE  
TRASFORMATIVO

*Considering that Open Science should not only foster enhanced sharing of scientific knowledge but also promote inclusion of scholarly knowledge from marginalized groups (such as women, minorities, Indigenous scholars, non-Anglophone scholars, scholars from less-advantaged countries) and contribute to reducing inequalities in access to scientific development, infrastructures and capabilities among different countries and regions;*

*Recognizing that Open Science respects the diversity of cultures and knowledge systems around the world as foundations for sustainable development, fostering open and robust dialogue with indigenous peoples and local communities and diverse knowledge holders for contemporary problem-solving and emergent strategies towards transformative change;*

*Acknowledging the transformative potential of Open Science for reducing the existing inequalities in science, technology and innovation and accelerating progress towards the implementation of the Agenda 2030 and the achievement of the Sustainable Development Goals and beyond;*

# Open Science: chi la costa

## RACCOMANDAZIONE ERAC

EUROPEAN UNION  
EUROPEAN RESEARCH AREA  
AND INNOVATION COMMITTEE  
– ERAC –  
Secretariat

Brussels, 14 December 2020  
(OR. en)

ERAC, Dec. 14, 2020

ERAC 1211/20

### Executive summary

The current COVID-19 pandemic presents unique opportunities for Open Science and Open Innovation. Preprints have shown their potential for fastened discussion of research results between peers and a certain ability to auto-correct, while the benefits of opening the access to research outputs in all disciplines - including the social sciences and the humanities -, investing in FAIR data infrastructures and services as well as promoting training in data stewardship have been made obvious.

### RICONOSCE IL VALORE E INSISTE SULLA VALUTAZIONE!

Hence the ERA recommends that open access to publications resulting from publicly funded research activities be generalized in all disciplines. Proper data standards should be agreed early on, taking into account the disciplinary specificities, while interoperable and federated ecosystems of FAIR data have to be implemented, as well as distributed analytics and machine learning. Furthermore we recommend that research assessment and research integrity policies take more into account, and in a more systematic way, the requirements connected to Open Science and Open Innovation, in order to foster researchers' engagement in these areas, as well as the trustworthiness of scientific knowledge.

# Open Science: chi la sostiene



LINDAU  
NOBEL LAUREATE  
MEETINGS

[Lindau declaration](#)

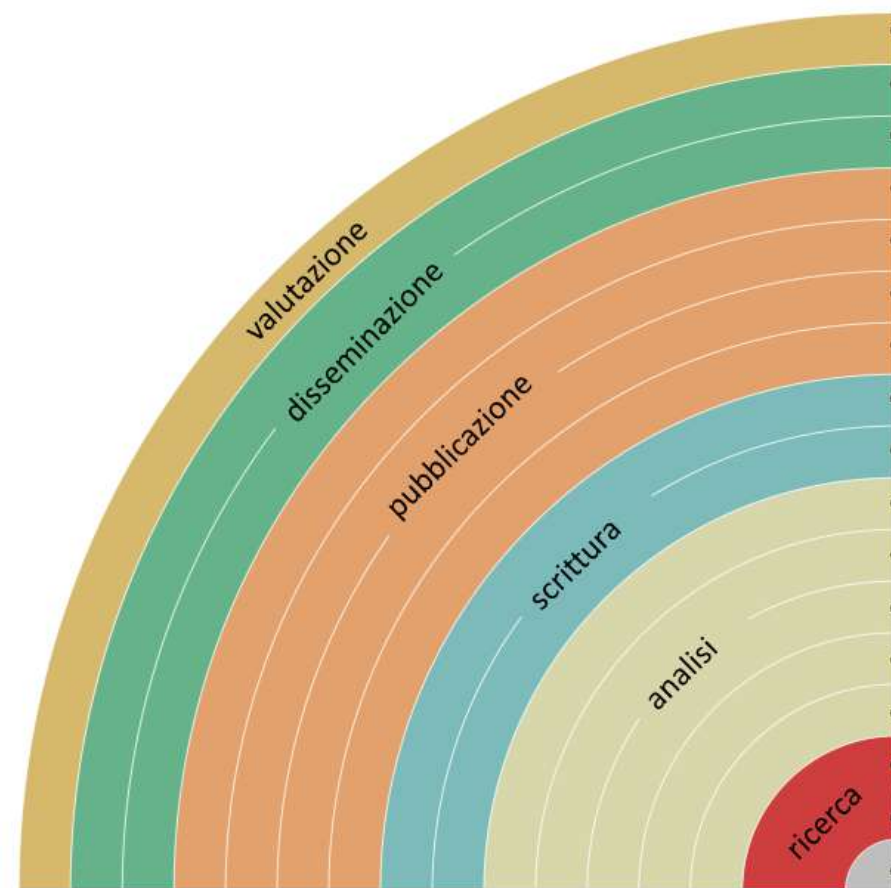
## Welcome Overview

The Lindau Declaration 2020 on Sustainable Cooperative Open Science is an initiative first presented and suggested by Elizabeth Blackburn during the 68th Lindau Nobel Laureate Meeting held in June 2018 in

<p><b>GOAL 01</b></p> <p><b>Cooperate Globally on Global Problems</b></p> <p>The vast majority of the most pressing problems of the 21st century are global. They affect the entire population, and they cannot be solved by any one country. Therefore, scientists and politicians must increase efficiency and effectiveness of differing approaches.</p>	<p><b>GOAL 02</b></p> <p><b>Share Knowledge</b></p> <p>Knowledge becomes most powerful when it is shared.</p>	<p><b>GOAL 03</b></p> <p><b>Publish Results Open Access</b></p> <p>Scientific results shall be published in an open access format.</p>	
<p><b>GOAL 04</b></p> <p><b>Publish Data to Repositories</b></p> <p>Publishing is not limited to scientific findings. Any kind of data found, generated or used shall also be archived in appropriate data repositories. This means storing vast amounts of data in secure, accessible, technological and administrative infrastructure must be improved and adapted.</p>	<p><b>GOAL 05</b></p> <p><b>Work Transparent and Truthful</b></p> <p>Research must be transparent and truthful: First, in methodology, data and findings, meaning that these have to be performed and reported honestly.</p>	<p><b>GOAL 06</b></p> <p><b>Change Reward Systems</b></p> <p>Currently, working along the outlined standards and investing in transparency, openness, accessibility etc. is not rewarded.</p>	
<p><b>GOAL 07</b></p> <p><b>Support Talent Worldwide</b></p> <p>Scientific talent exists in all parts of the world and all parts of society. All work and research environments as well as all structures related to that shall support and nurture this talent.</p>	<p><b>GOAL 08</b></p> <p><b>Communicate to Society</b></p> <p>Science has a distinct responsibility to communicate its procedures and results to society. Not only is most basic research funded by tax-payers money. Research and</p>	<p><b>GOAL 09</b></p> <p><b>Engage in Education</b></p> <p>While research is at the core of the scientific discovery process, engaging education of the next generation is equally crucial.</p>	<p><b>GOAL 10</b></p> <p><b>Ensure Global Funding</b></p> <p>Basic research requires reliable funding, even more so than other forms of science, such as industry research. In almost all cases, insights from basic research, or even blue-sky research, lay the ground for inventions and products that directly benefit people.</p>

# Open science un passo per volta...

Come puoi rendere Open ogni passo della ricerca...



- 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, es. su OSF, 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. OpenNotebookScience
- condividendo software, es. su GitHub con licenza GNU/MIT
- condividendo i dati, es. su Dryad, Zenodo o Dataverse
- pre-registrando esperimenti, es. su OSF 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



Bianca Kramer & Jeroen Bosman <https://101innovations.wordpress.com> DOI: [10.5281/zenodo.1147025](https://doi.org/10.5281/zenodo.1147025)

Traduzione: Elena Giglia DOI: [10.5281/zenodo.1195648](https://doi.org/10.5281/zenodo.1195648)



Report, marzo 2018

SI PUÒ FARE SEMPRE! **NONOSTANTE** I CRITERI ATTUALI DI VALUTAZIONE. NESSUNO VE LO VIETA! E NON RICHIEDE TANTO TEMPO (ANCHE PERCHÉ, QUANTI ARTICOLI/ANNO???)  
10? PER 10 VOLTE SU 365 GIORNI...)

...in altre parole...

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]

# ...un modo nuovo di fare ricerca

## Box 1. Some Research Practices that May Help Increase the Proportion of True Research Findings

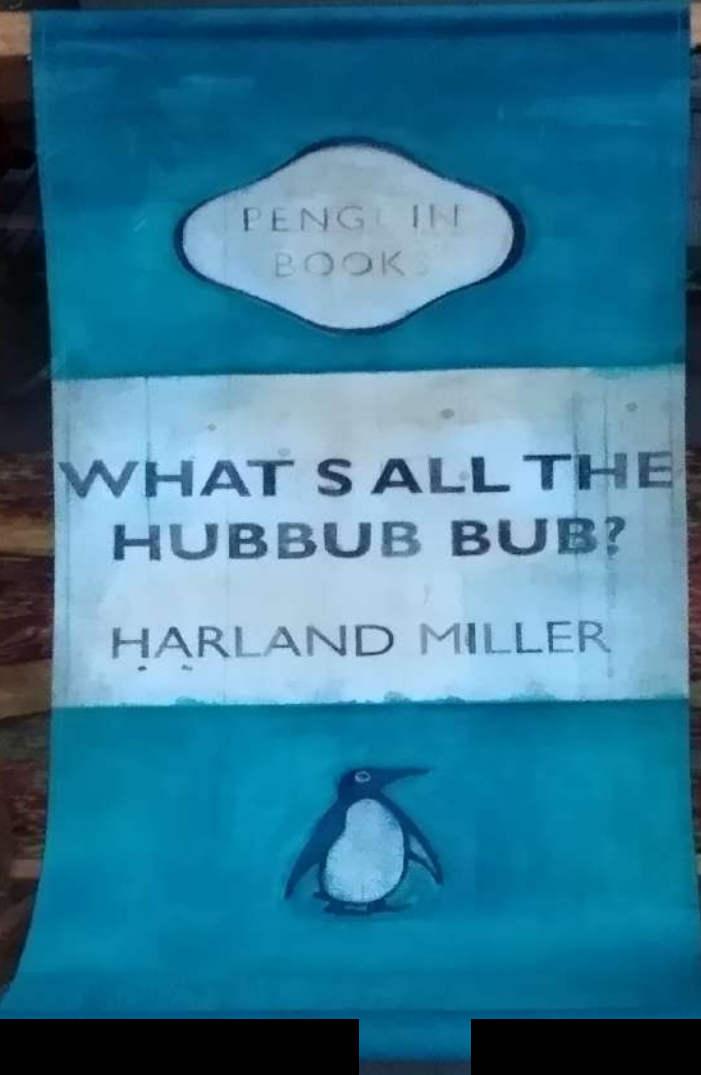
- › Large-scale collaborative research
- › Adoption of replication culture
- › Registration (of studies, protocols, analysis codes, datasets, raw data, and results)
- › Sharing (of data, protocols, materials, software, and other tools)
- › Reproducibility practices
- › Containment of conflicted sponsors and authors
- › More appropriate statistical methods
- › Standardization of definitions and analyses
- › More stringent thresholds for claiming discoveries or “successes”
- › Improvement of study design standards
- › Improvements in peer review, reporting, and dissemination of research
- › Better training of scientific workforce in methods and statistical literacy



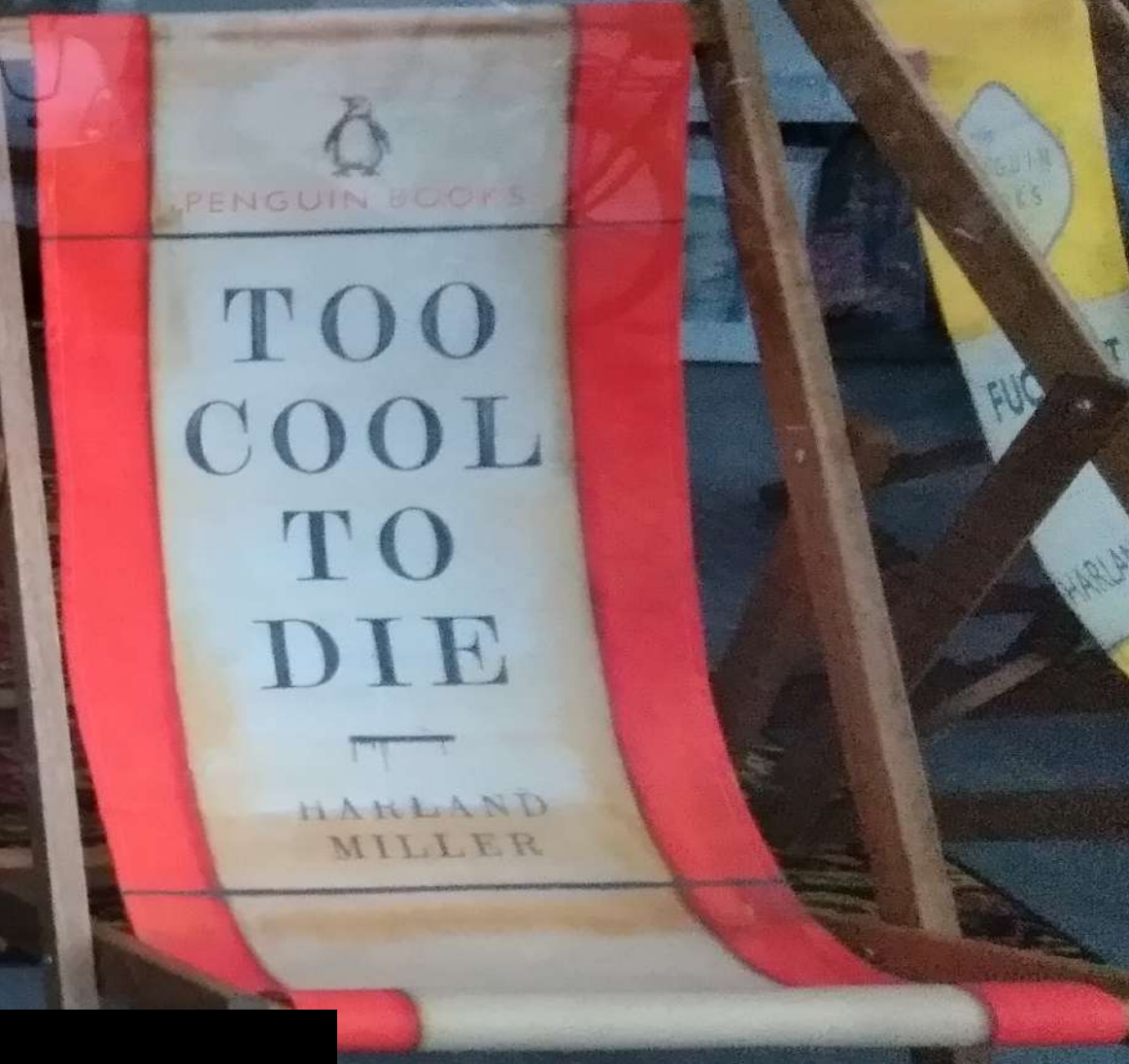
...con Open Access ai testi



DEPOSITO

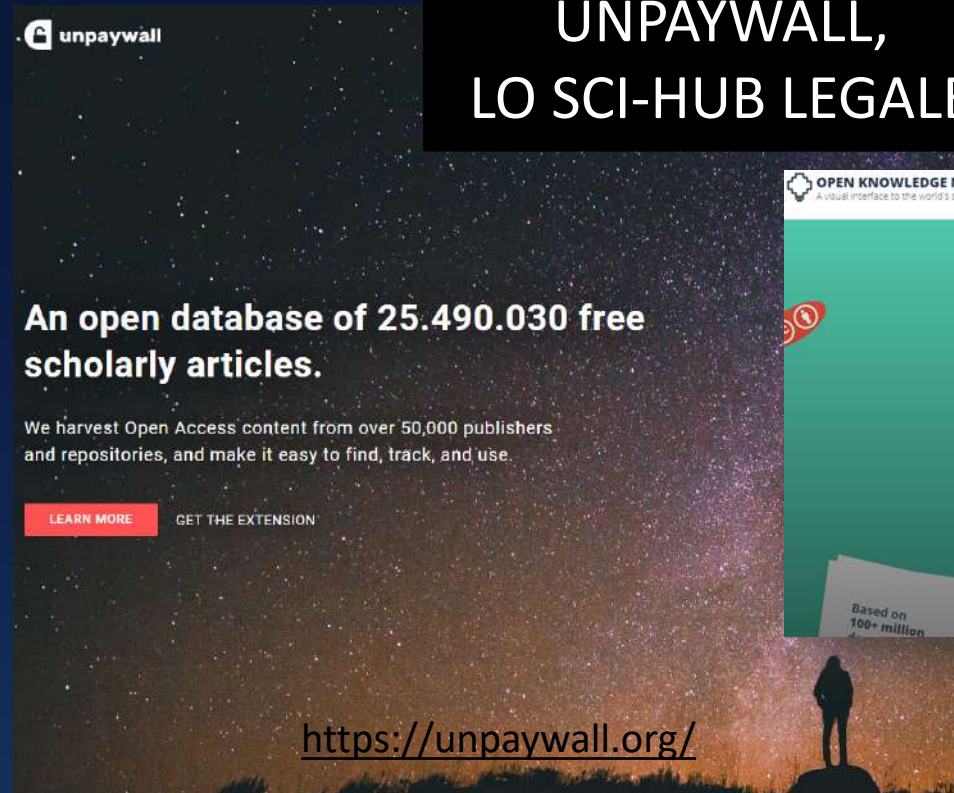


PUBBLICAZIONE



# ...abbattendo muri e abilitando servizi

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BASE (all disciplines)

Refine your search

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Finding KNOWLEDGE about

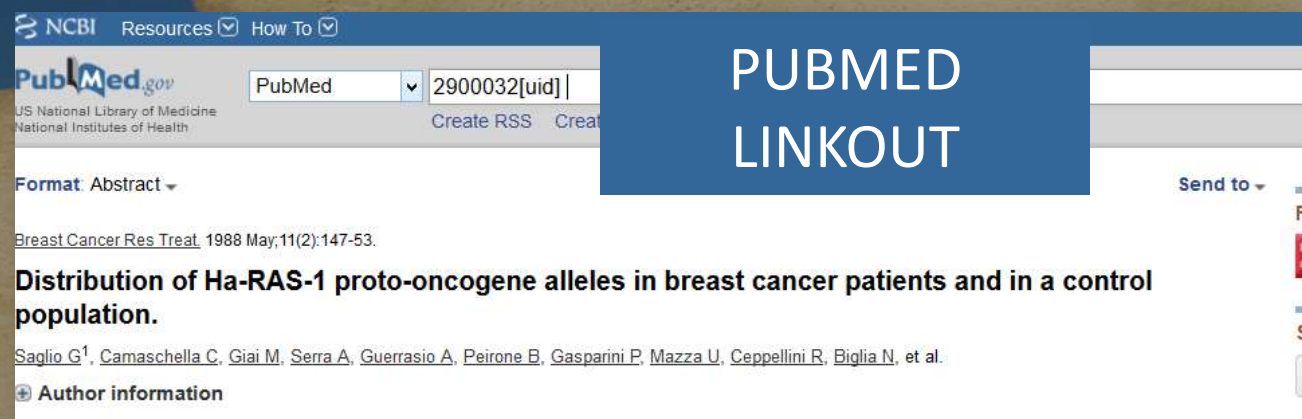
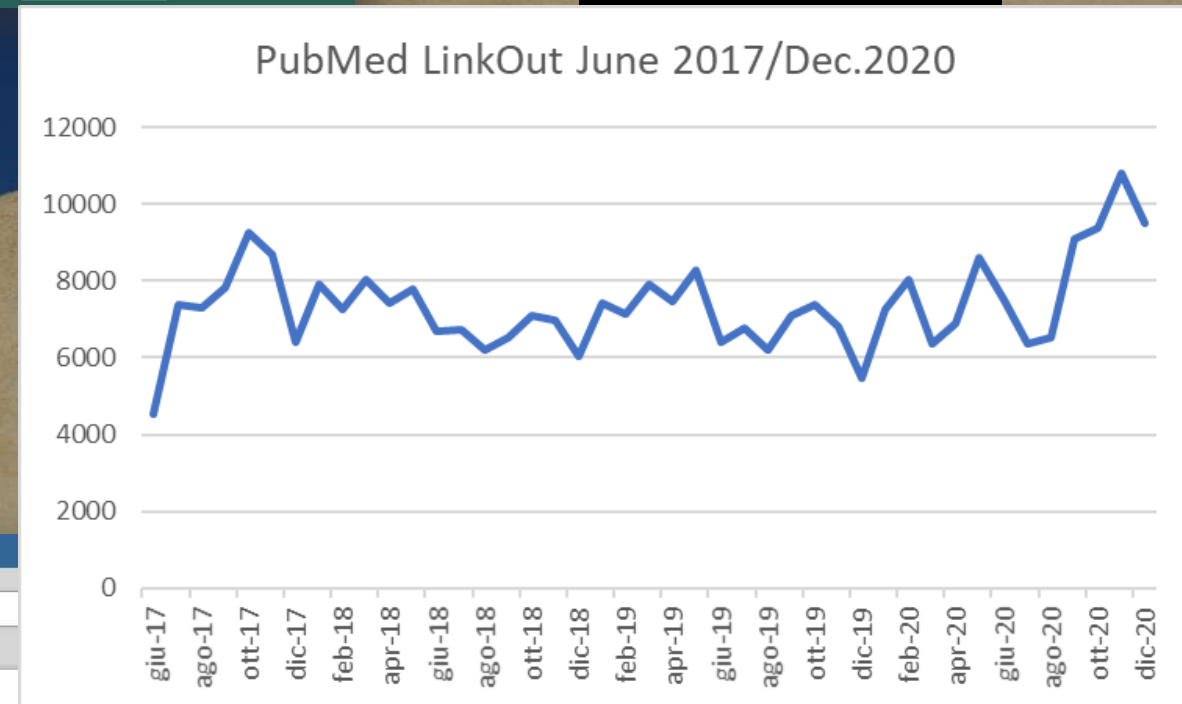
ZIKA

<https://www.youtube.com/watch?v=5IYzOZ2CvI>

Literature

TEXT AND  
DATA MINING

POSSIBILI SOLO SE IN PARTENZA GLI  
AUTORI HANNO DEPOSITATO



NCBI Resources How To

PubMed.gov

2900032[uid]

Format: Abstract

Distribution of Ha-RAS-1 proto-oncogene alleles in breast cancer patients and in a control population.

Saglio G<sup>1</sup>, Camaschella C, Giai M, Serra A, Guerrasio A, Peirone B, Gasparini P, Mazza U, Ceppellini R, Biglia N, et al.

Author information

PUBMED  
LINKOUT

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[7.362 media]

...collegando ricerca e industria...

FRANCO TOSI

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BANCA DATI OPEN CHE RACCOGLIE BREVETTI INSIEME A LETTERATURA SCIENTIFICA, DATI, SEQUENZE BIOLOGICHE

# ...scrivendo in modo diverso



## Write Research Together.

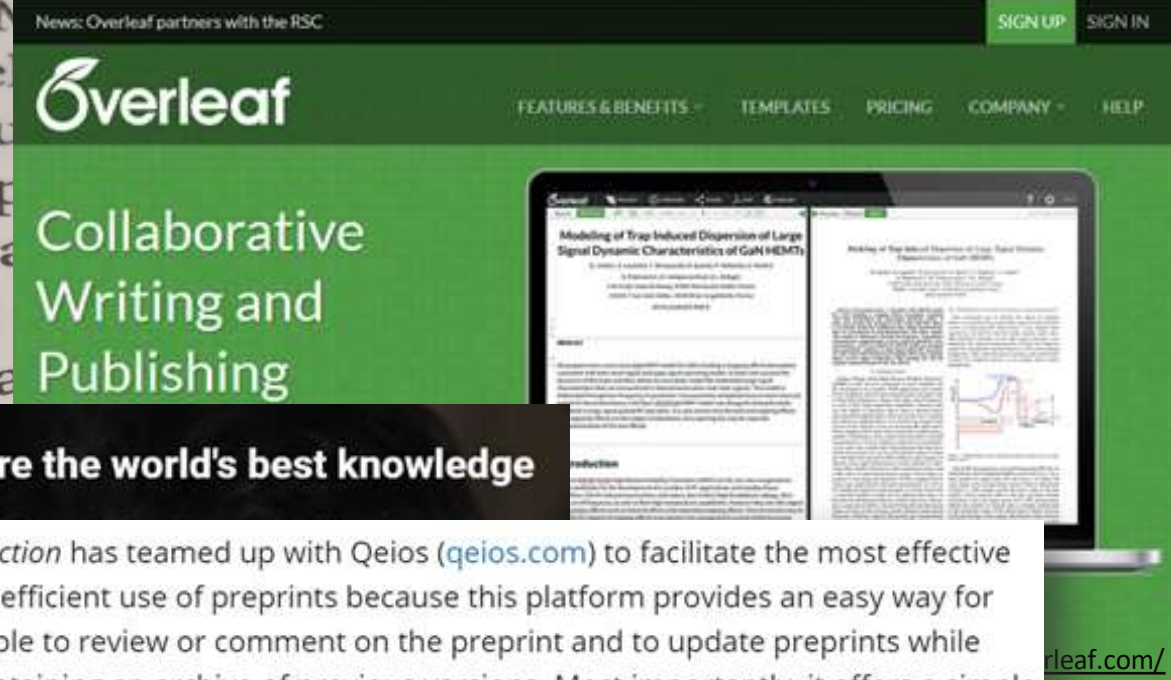
Authorea is the collaborative editor for research. Write and manage your documents in one place, for free.

Name:  Email:  Password:

Start Writing

A new way to read, write, publish, and interact with scientific content.

Write.



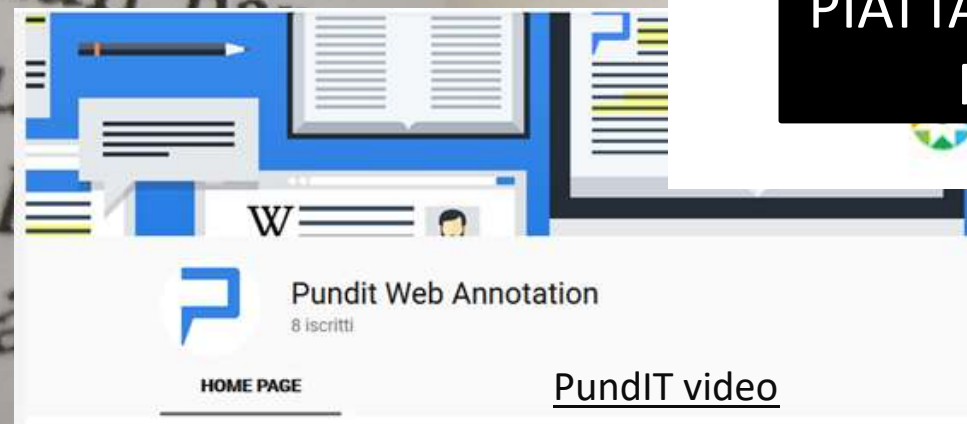
## Produce, publish and share the world's best knowledge

Welcome to the Open Science



*Addiction* has teamed up with Qeios ([qeios.com](https://www.qeios.com)) to facilitate the most effective and efficient use of preprints because this platform provides an easy way for people to review or comment on the preprint and to update preprints while maintaining an archive of previous versions. Most importantly, it offers a simple way of ensuring that terms used in the article are linked to definitions, which aligns with *Addiction*'s drive to improving the clarity of scientific writing [1, 2]. Authors are advised not to use pre-print servers for specific journals because of the complications that arise if the journal rejects the article.

## PIATTAFORMA AUTONOMA O GESTIONE PREPRINT PER ALTRE RIVISTE



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<https://hypothes.is/>

# ... con Open peer review

F1000Research Open for Science <https://f1000research.com/articles/6-588/v1>  SUBMIT YOUR RESEARCH

BROWSE GATEWAYS HOW TO PUBLISH ABOUT BLOG MY RESEARCH SIGN IN

SYSTEMATIC REVIEW

## What is open peer review? A systematic review [version 1; referees: 1 approved, 3 approved with reservations]

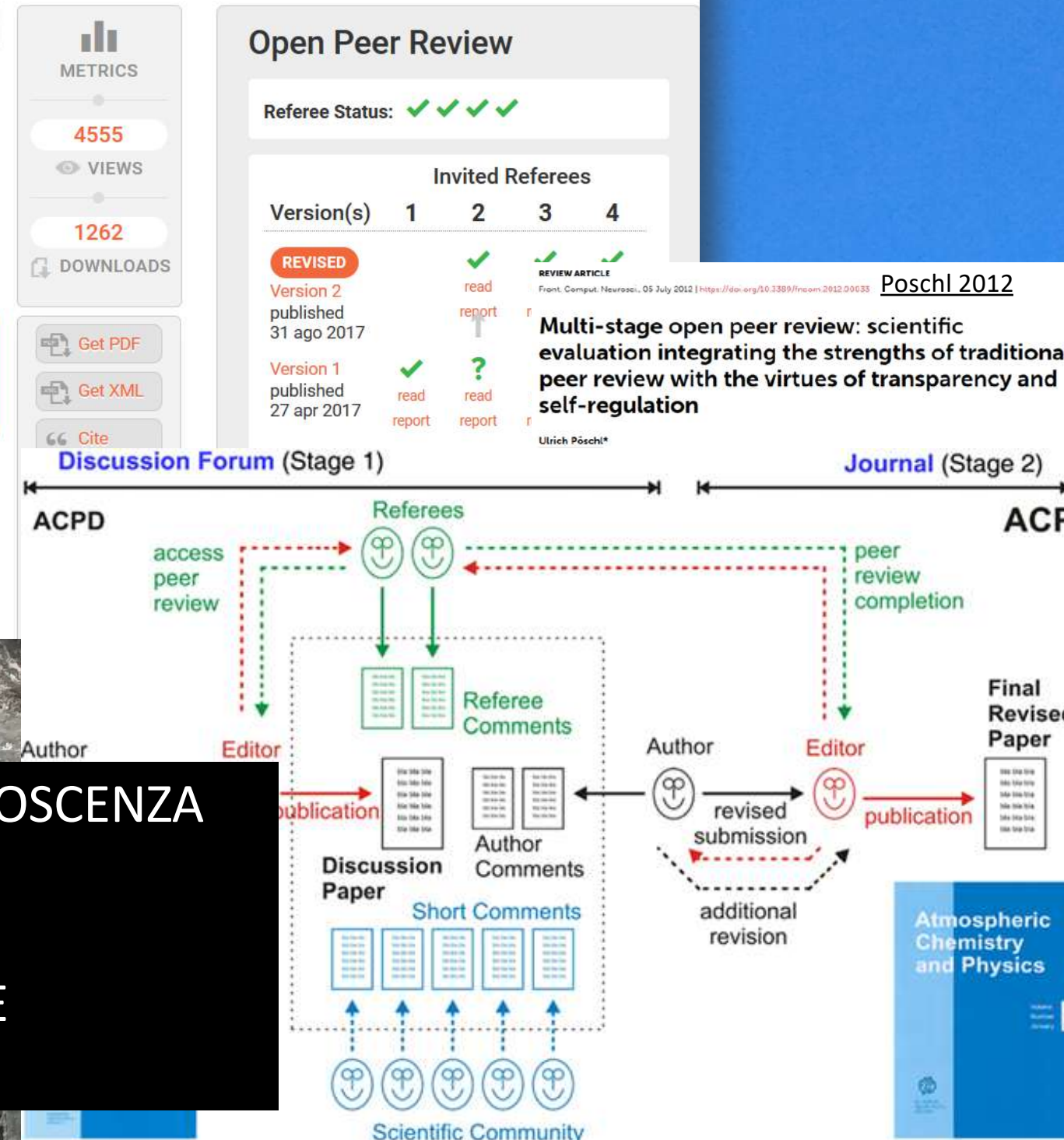
Tony Ross-Hellauer

- Author details
- Grant information

This article is included in the [The Future of Scholarly Publishing](#) collection .

### Abstract

Background: "Open peer review" (OPR), despite being a major pillar of Open Science, has neither a standardized definition nor an agreed schema of its features and implementations. The literature reflects this, with a myriad of overlapping and often contradictory definitions. While the term is used



- REVISIONI COME «PEZZI» DI CONOSCENZA
- HANNO UN DOI
- SONO CITABILI
- DEVONO ESSERE VALUTATE COME «PRODOTTI» DELLA RICERCA

... e non solo

PREPRINT



- PUBBLICAZIONE IMMEDIATA DEI RISULTATI
- PRIORITÀ SCIENTIFICA
- ELIMINA IL «LIMBO» DI ATTESA POST SUBMISSION
- FOCUS SUL CONTENUTO E NON SUL CONTENITORE

OPEN SCIENCE «PARZIALE» PUÒ ESSERE DANNOSA  
 [PREPRINT SENZA DATI NON È VERIFICABILE]  
 VA APERTO TUTTO IL CICLO DELLA RICERCA: DATI, TESTI, CODICE, PREREGISTRANDO GLI ESPERIMENTI

CULTURA E SCIENZA / APPROFONDIMENTO 30 sett 2020  
**Scienza aperta e Covid-19: che cosa non ha funzionato. Ma la condivisione è la strada giusta**  
 di Giovanna Borrelli e Francesco Sparano — 30 Settembre 2020

How Science Beat the Virus  
 And what it lost in the process

Story by Ed Yong Dec.14, 2020

papers, or “preprints,” to freely accessible websites, allowing others to immediately dissect and build upon their results. This practice had been slowly gaining popularity before 2020, but proved so vital for sharing information about COVID-19 that it will likely become a mainstay of modern biomedical research.  
Preprints accelerate science, and the pandemic accelerated the use of preprints. At

- Rule 1: Preprints speed up dissemination
- Rule 2: Preprints should be licensed and formatted to facilitate reuse
- Rule 3: Preprints provide a record of priority
- Rule 4: Preprints do not lead to being scooped
- Rule 5: Preprints provide access to scholarly content that would otherwise be lost
- Rule 6: Preprints do not imply low quality
- Rule 7: Preprints support the rapid evaluation of controversial results
- Rule 8: Preprints do not typically preclude publication
- Rule 9: Preprints can further inform grant review and academic advancement
- Rule 10: Preprints—one shoe does not fit all

The top part of the image shows the openlabnotebooks.org website. The URL is <https://openlabnotebooks.org/>. The site features a navigation menu with options like 'HOME', 'Browse notebooks by LABORATORIES', 'PEOPLE', 'DISEASES', 'PROJECTS', and 'THE TEAM'. Below the menu is a large image of a laboratory setting with a pipette and a gloved hand. To the right, a Wikipedia article titled 'Open-notebook science' is visible, defining the practice as making the entire primary record of a research project publicly available online.

## What is an Open Notebook?

Open Notebooks are documents that contain equations, visualisations, narrative text and live code that can be executed independently and interactively, with output visible immediately beneath the input.

They bring together analysis descriptions and results, which can be executed to perform the data analysis in real time.

RStudio  
Open source and enterprise professional software for R

Jupyter Lorenz Differential Equations

Exploring the Lorenz System

In this Notebook we explore the Lorenz system of differential equations:

$$\begin{aligned} \dot{x} &= \sigma(y - x) \\ \dot{y} &= \rho x - y - xz \\ \dot{z} &= -\beta z + xy \end{aligned}$$

This is one of the classic systems in non-linear differential equations. It exhibits a range of complex behaviors as the parameters  $(\sigma, \beta, \rho)$  are varied, including what are known as chaotic solutions. The system was originally developed as a simplified mathematical model for atmospheric convection in 1963.

```
In [7]: Lorenz(Lorenz, N=1000, sig=10, rho=28, beta=8, x0=0, y0=0, z0=0)
```

angle: 208.2  
max\_time: 12  
 $\sigma$ : 10  
 $\rho$ : 28  
 $\beta$ : 8

OPEN LAB NOTEBOOK CONTENGONO TUTTO:  
TESTO, METODO, DATI, SOFTWARE, CODICE  
ESEGUIBILE... SERVONO ANCORA LE RIVISTE CHE  
PUBBLICANO SOLO LA SINTESI DELLA RICERCA?

# ...e non più riviste...

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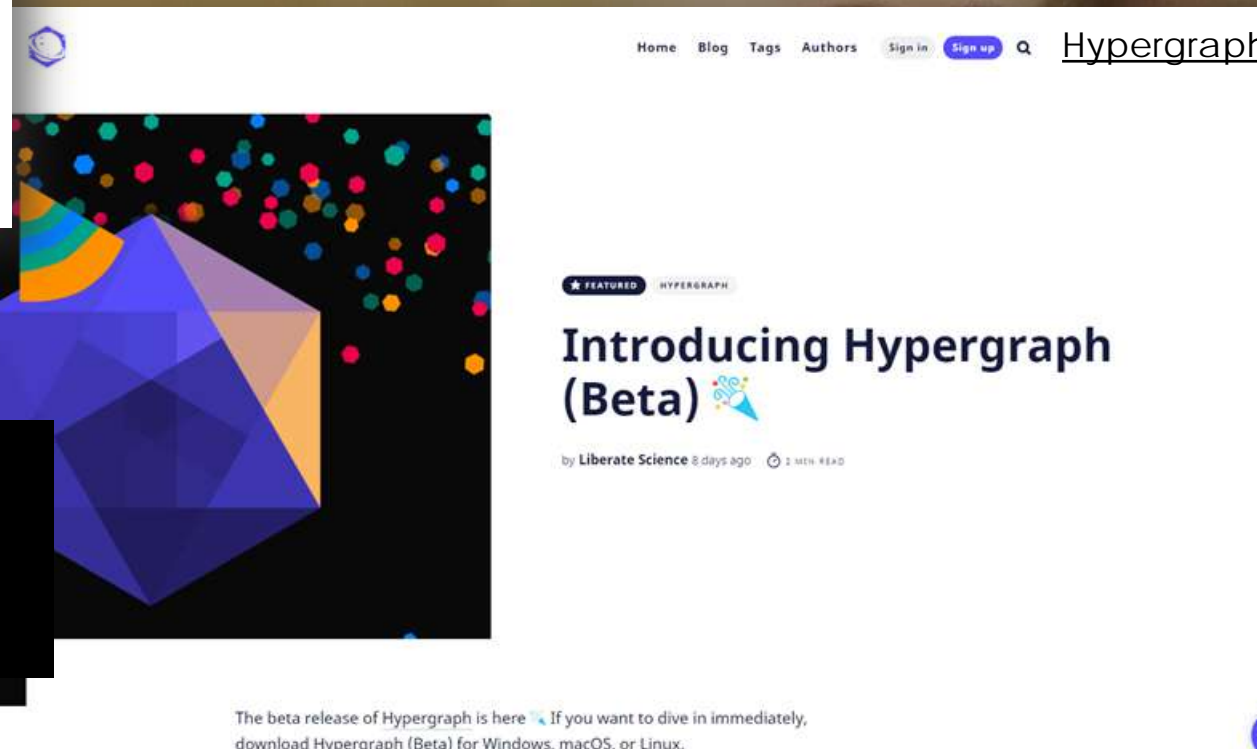
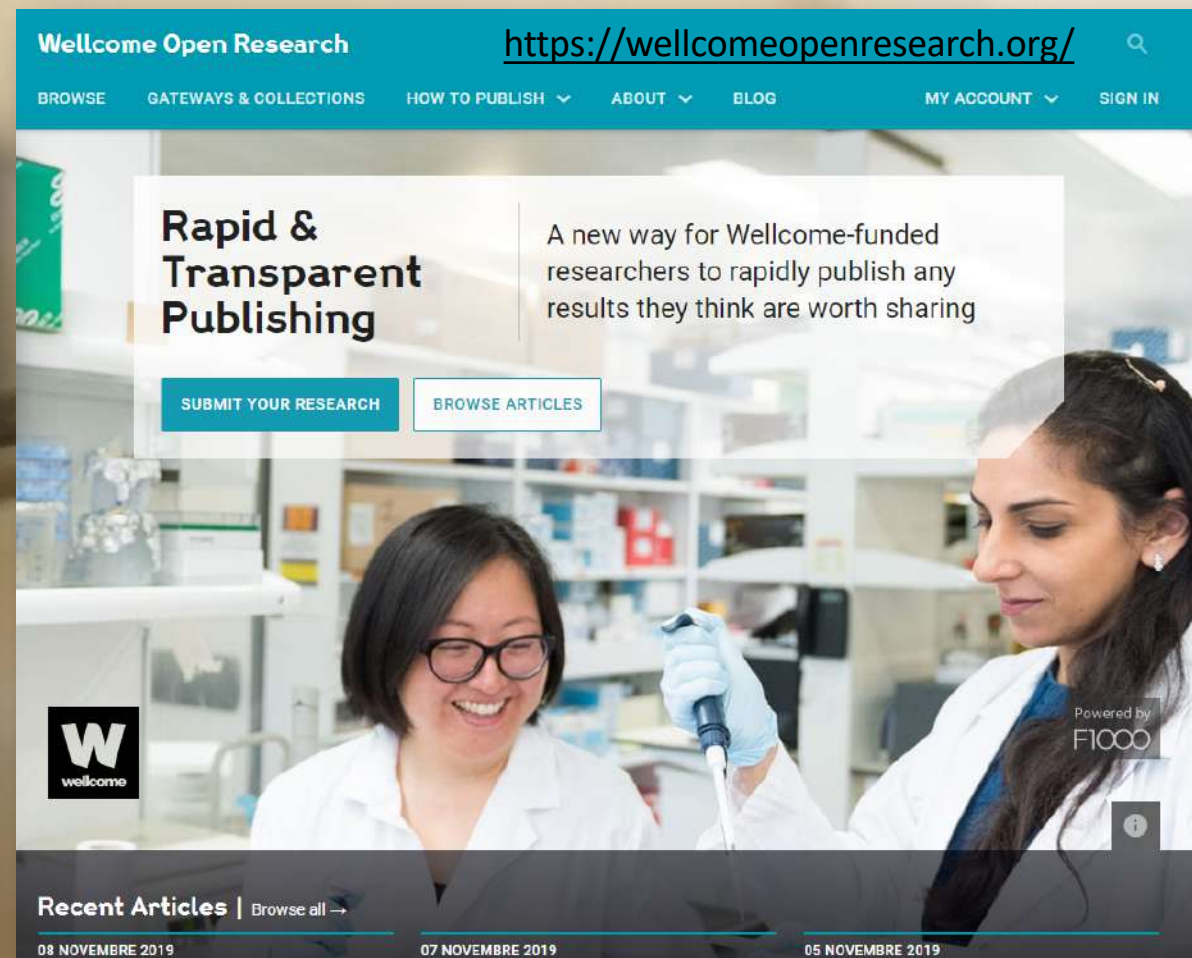
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# ...aprendo l'intero ciclo

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- The .pdf contains a unique URL that allows for one-click verification. That URL can be included in the paper.
- The .pdf is automatically stored in the web-archive. ([See sample](#))
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- "Unexpectedly, we also found that..."
- "In addition to the analyses we pre-registered we also ran..."
- "We encountered an unexpected situation, and followed our Standard Operating Procedure" (.pdf)

PREREGISTRAZIONE  
OSF Registries o  
AsPredicted  
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- DIFFICILE FALSIFICARE  
- RISULTATI NEGATIVI

...valutando il



# Reimagining academic assessment: stories of innovation and change

Case studies of universities and national consortia highlight key elements of institutional change to improve academic career assessment.

Produced in collaboration with:



2017

« MATRIX, NOT METRICS »

## OS-CAM, the Career Assessment Matrix

	R1	R2	R3	R4
Research output	+	++	+++	++++
Research Process	+	+++	++++	++++
Service & Leadership		+	+++	++++
Research Impact	+	++	+++	++++
Teaching and supervision	(++)	+	++	++++
Professional Experience		+	+++	++++

Open Science will never prevail without a thorough revisiting of the way evaluations of researchers are conducted

Bernard Rentier

# ...non solo testi

zenodo <https://zenodo.org/> Research. Shared.

15 September 2015 Dataset Open access

## Data set 1 for CARBON AND GENE FLOW MEDIATED BY VIRUS LIFE

Wilson, Willie ; Martínez Martínez, Joaquin ; Archer, Steve ; Fields, David ; Gilg, Ilana ; Flöge, Sheri (show affiliations)

Experimental data sets used for manuscripts associated with coccolithovirus infection of *Emiliania huxleyi*. Flow cytometry data; expression data of genes associated with photophysiology, fatty acid metabolism and sulphur cycling. Please contact Willie Wilson (wilwil@sahfos.ac.uk) for further information.

Name	Date	Size	Download
Dddd_Diff_Expression_Rep_1.xlsx	15 Sep 2015	99.8 kB	Download
Ehux_Probe_and_Primer_list.xlsx	15 Sep 2015	20.1 kB	Download
Multiplex_3_photophys_and_Dddd4443_Expression_Rep_1.xlsx	15 Sep 2015	141.2 kB	Download

Publication date: 15 September 2015  
DOI: [10.5281/zenodo.31006](https://doi.org/10.5281/zenodo.31006)  
Keyword(s): Virus, *Emiliania huxleyi*, photophysiology, sulphur cycling, fatty acid metabolism  
Collections: Communities, Datasets, Open Access  
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## zimeon / signposting

Signposting for the scholarly web

18 commits 2 branches 0 releases 1 contributor

Branch: master signposting / +

- zimeon Adjust layout Latest commit 4cb45b6 on 8 Mar
- css Basic simulator with HTML, turtle, PDF, PNG and SVGs 3 months ago
- examples Basic simulator with HTML, turtle, PDF, PNG and SVGs 3 months ago
- graphsaver Add sig in a page per graph/scenario 3 months ago
- notes Notes from meeting 3 months ago
- gitignore Editor and gyc files 3 months ago
- Makefile Add PNG images for use on github pages because github doesn't support... 3 months ago
- README.md Links 3 months ago
- TO\_DO.md Add sig in a page per graph/scenario 3 months ago
- arxiv\_no\_item.dot Models... 3 months ago
- arxiv\_no\_item.png Add PNG images for use on github pages because github doesn't support... 3 months ago
- arxiv\_no\_item.svg Models... 3 months ago

Code Issues Pull requests Pulse Graphs

HTTPS clone URL <https://github.com/zimeon/signposting>

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protocols.io <https://www.protocols.io/>

## Editing Fixation of yeast cells

DESCRIPTION GUIDELINES & WARNINGS MATERIALS STEPS

new step paste from text paste from buffer

5 NEW SECTION (optional)  
Fixation

Add 5ml of Formaldehyde, invert a few times, set at benchtop for 45min.

TIMER 45 sec timer label

NOTES  
Optional: Transfer to gentle rocking overnight at 4C for 18-24 hours. (This is NOT recommended per Anne Dodson, Marc Sherman, Lenny Teytelman.)  
Reply Delete

INSERT BLANK DELETE PASTE FROM TEXT

EDITING STEP 5  
Search components

- AMOUNT
- COMMAND
- CONCENTRATION
- DATASET
- DURATION / TIMER
- EXPECTED RESULT
- EXTERNAL LINK
- GO TO
- NOTE
- PROTOCOL
- REAGENTS
- SAFETY INFORMATION
- SOFTWARE PACKAGE
- STEPS CASE
- TEMPERATURE

SI POSSONO DEPOSITARE DATI,  
SOFTWARE, IMMAGINI, POSTER,  
INTERI PROTOCOLLI... DIVENTANO  
«BLOCCHI» DI CONOSCENZA CHE  
POSSONO ESSERE RICHIAMATI E RIUSATI



Take

...con dati FAIR

**A** [NON = OPEN]  
REPOSITORIES,  
FORMATI

**R** LICENZE E  
DOCUMENTAZIONE

**F** METADATI,  
IDENTIFICATIVI  
PERSISTENTI...

**I** ONTOLOGIE,  
STANDARDS

## PRINCIPI FAIR

Comment | [OPEN](#)

The FAIR Guiding Principles for scientific data management and stewardship

Mark D. Wilkinson, Michel Dumontier [...] [FAIR guide](#), Nature, March 2016

## IN BREVE



**Reference:** Vlachos, E., Larsen, A.V., Zürcher, S., Hansen, A.F. (2019) 'Introduction'. In: Holmstrand, K.F., den Boer, S.P.A., Vlachos, E., Martínez-Lavanchy, P.M., Hansen, K.K. (Eds.), Research Data Management (eLearning course). doi: 10.11581/itu.00000048

[Video](#)

**Reference:** Martínez-Lavanchy, P.M., Hüser, F.J., Buss, M.C.H., Andersen, J.J., Begtrup, J.W. (2019) 'FAIR Principles'. In: Holmstrand, K.F., den Boer, S.P.A., Vlachos, E., Martínez-Lavanchy, P.M., Hansen, K.K. (Eds.), Research Data Management (eLearning course). doi: 10.11581/itu.00000049

**Reference:** den Boer, S.P.A., Buss, M.C.H., Hüser, F.J., Smed, U. (2019) 'Data Management Plans'. In: Holmstrand, K.F., den Boer, S.P.A., Vlachos, E., Martínez-Lavanchy, P.M., Hansen, K.K. (Eds.), Research Data Management (eLearning course). doi: 10.11581/itu.00000050



# ... con un Data Management Plan

DMP È

- UN MODO STRUTTURATO DI PENSARE AI PROPRI DATI: raccolta, conservazione, descrizione, condivisione
- DICHIARAZIONE DI COME SI TRATTERANNO I DATI
  - living document: va aggiornato
  - ...E SOPRATTUTTO VA MESSO IN PRATICA...

The screenshot shows the DMPonline website. At the top, there is a navigation bar with 'DMP ONLINE' and links for 'Home', 'About', 'Future plans', 'Help', and 'Change language'. Below the navigation bar, there is a 'Welcome' section with a brief description of the service. A 'Sign in' section contains fields for 'Email address' and 'Password', along with a 'Remember me' checkbox and a 'Sign in' button. Below the sign-in section is a 'Create account' section with a 'Create a new plan' button. A video player is visible, showing a 'Screenshot on how to use DMPonline' with a play button and a progress bar at the bottom. The text 'DMPonline' is visible at the bottom right of the screenshot.

The screenshot shows the Data Stewardship Wizard website. At the top, there is a navigation bar with 'DSW' and the URL 'https://ds-wizard.org/'. Below the navigation bar, there is a 'Data Stewardship Wizard' section with the text 'Create Smart Data Management Plans for FAIR Open Science'. A 'Get started' button is visible at the bottom right of the screenshot.

VI GUIDANO NELLA  
REDAZIONE DI UN DMP

[perché c'è EOSC!]

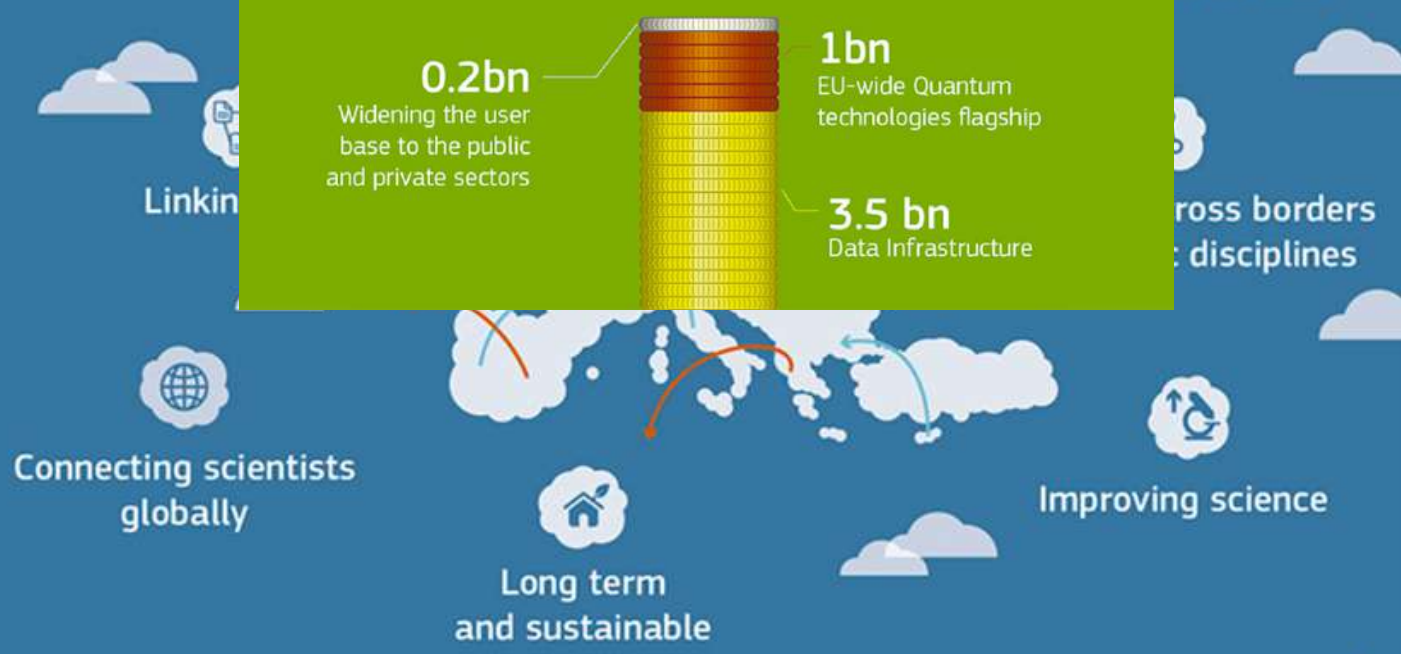
The Vienna  
Vienna, 23 Novem

BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

We, Ministers  
European Op

1. **Recall** the challenge
2. **Reaffirm** the po
3. **Recognise** that
4. **Highlight** that E
5. **Recall** that the

€2 BN IN OVERALL HORIZON 2020 FUNDING TO THE EUROPEAN CLOUD INITIATIVE, WITH ESTIMATED ADDITIONAL PUBLIC AND PRIVATE INVESTMENT OF €4.7 BN REQUIRED TO FURTHER DEVELOP THE EUROPEAN DATA INFRASTRUCTURE.



ACCESSO TRASPARENTE A DATI FAIR  
«AS OPEN AS POSSIBLE, AS CLOSED AS NECESSARY»

9. **Call** for the European Open Science Cloud to provide all researchers in Europe with seamless access to an open-by-default, efficient and cross-disciplinary environment for storing, accessing, reusing and processing research data supported by FAIR data principles.

6. **Note** that the 2016 EOSC Summit (held on 11 June 2016) called for acceleration towards making the European Open Science Cloud a reality, hinting at the need to further strengthen the ongoing dialogue across institutions and with stakeholders, for a new governance framework to be launched in Vienna, on 23 November 2018.

u 18  
- a t  
Vienna, Nov.23, 2018

of the  
Declaration" signed in  
Europe. Confirm that  
ciplines and Member  
by its nature  
gue to build trust and  
lication of cloud  
the world,  
d the federated

...mantenendo i «diritti»



ALCUNI DIRITTI RISERVATI

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Consenti che vengano condivisi adattamenti della tua opera?

Sì  No  Sì, fintanto che gli altri condividono allo stesso modo

che la tua opera venga utilizzata a scopi commerciali?

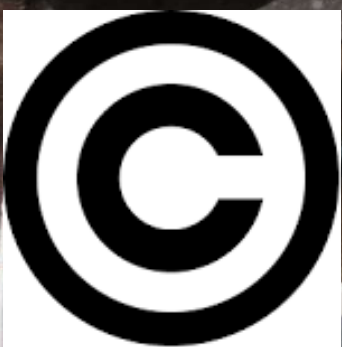
Sì  No

### Licenza selezionata

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TUTTI I DIRITTI RISERVATI

# Open Science???

<https://www.fosteropenscience.eu/toolkit>

FOSTER About Resources Events Courses News

## Open Science Training Courses

### What is Open Science?

This introductory course will help you to understand what open science is and why it is something you should care about.



### Best Practices

This course introduces funding body policies and other environmental factors that influence good practice in opening up research practice.



### Managing and Sharing Research Data

In this course, you'll focus on which data you can share and how you can go about doing this most effectively.



### OSS and Workflows

This course introduces Open Source Software (OSS) and workflows as an emerging but critical component of Open Science.



### Data Protection and Ethics

This course helps you to get to grips with responsible data sharing.



### Licensing

This course helps you to find the best license for your outputs.



SERVICES SUPPORT OPEN SCIENCE IN EUROPE

## Open Science Primers: getting you started on good practices



Open Access Basics

An Open Access primer to get you started



An RDM Handbook

A primer on managing your research data

OpenAIRE

# Open science



## GUIDES 2021

The Passport For Open Science is a guide designed to accompany PhD students at every step of their research career, whatever their disciplinary field. It provides a set of tools and good practices that can be directly implemented.

## Act now

**When you can**, submit your publications to open access journals.

**Deposit** your publications in an open archive:

- Keep the latest version approved by peers but not yet formatted by the publisher.
- Ask your co-authors for approval.
- Deposit the latest version approved by the peer reviewers in an open archive.

**Take part** in discussions within your disciplinary community about pre-publications deposited in the open archive.

**Document and share** research data and/or the source code you developed:

- Store data using a perennial system or format in compliance with your team or institution's policy.
- Document the data with metadata so that they are reusable.
- Deposit the datasets associated with your publications in an online repository.
- Deposit your codes in a dedicated perennial open archive like **Software Heritage**.

**Follow** the evolutions of open science and get involved!

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

**DOVEVANO**  
**LeNUVOLE**  
REGIA MASSIMO FERRARI

Quando soffia il VENTO del CAMBIAMENTO

c'è chi costruisce MURI

e chi MULINI A VENTO



...grazie!

[DMP]

...e le scienze umane?

PARTHENOS HOME TRAINING MODULES FOR TRAINERS FOR LEARNERS ABOUT PARTHENOS TRAINING

PARTHENOS TRAINING

**MANAGE, IMPROVE AND OPEN UP YOUR RESEARCH AND DATA**

SHARE

**About the module**

This module will look at emerging trends and best practice in data management, quality assessment and IPR issues

We will look at policies regarding data management and their implementation, particularly in the framework of a Research Infrastructure

“ Learning Outcomes

By the end of this module, you should be able to:

- Understand and describe the FAIR Principles and what they are used for

**BROWSE**

- Introduction to Research Infrastructures
- Management Challenges in Research Infrastructures
- Introduction to Collaboration in Research Infrastructures
- Manage, Improve and Open up your Research and Data**
- Introduction to Research Data Management

**How does humanities data tend to be different?**

There are problems with sharing and managing the humanistic data, however. First of all, much of it is not digital. Humanists still tend to gravitate toward multimodal knowledge creation systems, hybrid digital and technical worlds that resist norms of deposit and reuse. Second, the semiotic systems of humanities data can be quite personal and individual: we prepare our sources to be useful for us, and what works for our research questions and personal epistemic instruments may not work at all for anyone else. Finally, and perhaps most importantly, cultural data is seldom if ever 'raw,' and seldom, if ever, under the sole ownership of the researcher him or herself. The records of human activity and creativity belong to everyone and no one, they are often preserved and curated by dedicated public institutions or private publishers. Whatever humanities data is, it is not simple!

...e le scienze um

Edmond, 2020



# Sustainable and FAIR Data Sharing in the Humanities

ALLEA Report | February 2020

February 2020

10. THE RISK OF LOSING THE *THICK DESCRIPTION*: DATA MANAGEMENT CHALLENGES FACED BY THE ARTS AND HUMANITIES IN THE EVOLVING FAIR DATA ECOSYSTEM 235  
Erzsébet Tóth-Czifra

DARIAH-CAMPUS Resources Topics Sources Course Registry About May 2019

## DARIAH Pathfinder to Data Management Best Practices in the Humanities

Written by Erzsébet Tóth-Czifra May, 03 2019 Source: DARIAH Pathfinders, DARIAH Topics: Data management



**1. Why research data management?**

Systematically planning how you will collect, document, manage, organize, manage, share and preserve your data has many benefits. It helps to build a common framework of understanding with your collaborators and other stakeholders such as data archivists or professionals of GLAM institutions. But you can also think of your future self as your primary collaborator, imagining yourself looking for

### RECOMMENDATIONS


- » Think of all your research assets as research data that could be potentially reused by other scholars. Consider how useful it would be for your own work if others shared their data.
- » Familiarise yourself with the FAIR Data Principles before you start collecting data and building corpora e.g. FORCE11: the FAIR Data Principles, GO-FAIR: FAIR Data Principles and discuss with colleagues and experts to build a better understanding.
- » Digitally document all your research and data collection work -- at the beginning of a project it is difficult to judge which information of the research process will be important and valuable later on.
- » Use well-established tools to facilitate your research work, as many of them allow data sharing e.g. MIT Libraries Digital Humanities: Tools and Resource Recommendations.
- » Browse humanities datasets and consider whether your own assets could be published in a similar fashion (e.g. Humanities Commons, UK Data Archive, ARCHE re3data.org filtered for humanities).
- » When you start producing data, keep this maxim of Open Science in mind: data should be 'as open as possible and as closed as necessary'.

# I = Interoperable. Standards

## Standardization Survival Kit

---

A collection of research use case scenarios illustrating best practices in Digital Humanities and Heritage research

 Browse scenarios

 Add a new scenario

 About the SSK

Increase efficiency, interoperability and sustainability by using standards

Incorporating standards in all the steps of your research process will make it last longer, easier to update, improve and share. Standards are non legally binding documents produced by an organisation ensuring :

**STANDARDIZATION KIT**

...FAIR data

**GUIDELINES to FAIRify data management and make data reusable**

PARTHENOS

2019

Feb. 2019

**A FAIRy tale**

A FAKE STORY IN A TRUSTWORTHY GUIDE TO THE FAIR PRINCIPLES FOR RESEARCH DATA

### Introduction



Once upon a time in the beautiful kingdom of Datamania lived a prince named Prince Fairhair. Though he was gentle as few, and good looking too, his father would not let him choose the love of his life on his own. No, he was destined to marry a woman from the neighbouring kingdom. He did not even know her name, only that she was referred to as My Fair Lady. Before the father of My Fair Lady could accept the marriage, he had a quest for Prince Fairhair. Only by fulfilling the quest, would he be able to marry the princess. His quest was to find out how to turn water into gold. A quest that would require gathering loads of data chests and look for clues that could lead to the recipe.

Luckily, Prince Fairhair was not alone in his quest. One of the castle wings housed a number of wizards who could help him decrypt and investigate the data chests. However, it was impossible for the data wizards to go and hunt for data themselves. Thus to assist them, a huge number of elves were trained to

### Findable #1:

*(Meta)data are assigned globally unique and persistent identifiers*



The elves returned one by one to the castle, and some of them were really frustrated. They had been following paths to data chests that had been meticulously described, but somehow the data chests had been removed, just leaving holes in the ground. Fimble was one of these elves, who came back quite puzzled about some strange codes he had found. He could not decipher them and therefore did not know where to go.

"Look" said Fimble to the data wizard, "I have this strange code 10.1234/abbb, and I don't know what it means?"

"Oh, these are very useful indeed" said the data wizard. "We can look up the codes in these huge books. Now let me see. 10 is the great country of Datavalley, and we should look in the house number 1234." He showed a map to Fimble in the book. "This is where you should go".

"Are you sure it's still there?" said Fimble, not wanting to waste a single more step on hunting down data chests he could not find.

"Absolutely. These books are magic. If someone moves the data chest to a new location, the book will know."

"Great" said Fimble, and took off in a sprint. He soon returned happy carrying a data chest.

Open Science e finanziamenti europei  
Come ottemperare agli obblighi nei progetti H2020 e in Horizon Europe



Corso online in 4 moduli:  
2, 4, 9, 11 febbraio 2021 ore 14.00 - 16.30



## 3 – COSA SUCCEDE IN EUROPA

Elena Giglia  
Università di Torino  
elena.giglia@unito.it  
 @egiglia

06/2015



**Impareremo:**

- 1. Horizon 2020, Horizon Europe e le politiche europee**
- 2. EOSC, European Open Science Cloud**
- 3. due parole sulla VQR**

**Messaggi chiave:**

- 1. l'Europa supporta l'Open Science più di quanto crediamo/sappiamo**
- 2. EOSC è il futuro della ricerca: non possiamo rimanere fuori**

# «make science fit for the 21th century»

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

Open science will make science more efficient, reliable, and responsive to societal challenges. The European Commission

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

[Nov.2019]

Jean-Claude Burgelman<sup>1</sup>, Corina Pascu<sup>2</sup>, Katarzyna Szkuta<sup>1</sup>, Rene Von Schomberg<sup>3</sup>, Athanasios Karalopoulos<sup>4</sup>, Konstantinos Repanas<sup>5</sup> and Michel Schoupe<sup>1</sup>

Open science (or in fact, open scholarship) has shifted the prime focus of researchers away from publishing toward knowledge sharing.

SINTESI DELLE POLITICHE DI APERTURA DEGLI ULTIMI 15 ANNI

and access will be maximized. In Horizon Europe, research data will be open by default while taking into account the need to balance openness and protection of scientific information, commercialization and Intellectual Property Rights, privacy concerns and security, following the principle “as open as possible, as closed as necessary.” Data management plans (DMP) will become mandatory, even if not making research data open. The requirement for responsible data management will be separated from the requirement for providing open access to research data. Emphasis will be placed on supporting as much as possible the proliferation of data that are findable, accessible, interoperable, and re-usable (FAIR). Finally, the use of trusted or certified repositories and infrastructures like the European Open Science Cloud (EOSC) will be required for research data in some Horizon Europe work programs.

Changing the reward and incentive system for researchers is a key open science challenge and a broader issue for which primarily the responsibility lies in the scientific community (universities and funders). This includes making open science practices rewardable and fundable as well as the employment of specific indicators for researchers' engagement with open science. A change of the reward and incentive system can only be stakeholders-driven, and it has to be bottom-up. This change also includes changing mind-sets of researchers to open up and share data and “seduction” to make open science easy, useful, and affordable<sup>3</sup>.


The European Open Science agenda contain the ambition to make FAIR data sharing the default for scientific research by 2020. To

... as Open as possible

 **Carlos Moedas**   
@Moedas

2/4 "Open as possible, as closed as necessary" is the new principle for all #data from publicly

 Segui

 **Iryna Kuchma** @irynakuchma · 18 nov 2015

#Openscience is about making sure that science serves innovation & growth – Günther Oettinger & Carlos Moedas

**HORIZON 2020**  
TESTI E DATI OPEN  
BY DEFAULT  
(GUIDA)

HORIZON2020: AS OPEN AS POSSIBLE  
HORIZON EUROPE: ANCORA MAGGIORE  
APERTURA + UNITED NATIONS  
SUSTAINABLE DEVELOPMENT GOALS



**Horizon Europe**  
THE NEXT EU RESEARCH & INNOVATION  
INVESTMENT PROGRAMME (2021 – 2027)

 2019

 **Open Science across the programme**

**Open Science** Better dissemination and exploitation of R&I results and support to active engagement of society

**Mandatory Open Access to publications:** beneficiaries shall ensure that they or the authors retain sufficient intellectual property rights to comply with open access requirements

**Open Access to research data ensured:** in line with the principle "as open as possible, as closed as necessary"; Mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Re-usable) and Open Research Data

- Support to researcher skills and reward systems for open science
- Use of European Open Science Cloud

May 2019 | Version 25 

**Our vision**

A sustainable, fair and **prosperous** future for **people** and **planet** based on European values.

- Tackling **climate change** (35 % budgetary target)
- Helping to achieve **Sustainable Development Goals**
- Boosting the Union's **competitiveness and growth**



May 2019 | Version 25 

# Horizon Europe

## TESTI E DATI APERTI MISSIONS INTERDISCIPLINARI



Dec.2020 December 2020



*"With Horizon Europe Programme, the European research community, research organizations and our citizens can count on the world largest research and innovation Programme. It is our main tool to strengthen our scientific and technological base, develop solutions for healthier living, drive digital transformation and fight climate change, for our collective resilience."*

Mariya Gabriel Commissioner for Innovation, Research, Culture, Education and Youth

**THE EU RESEARCH AND INNOVATION PROGRAMME (2021-27)**

**FOR A GREEN, HEALTHY, DIGITAL AND INCLUSIVE EUROPE**



**Support breakthrough innovation > European Innovation Council:** One-stop shop to bring the most promising ideas from lab to real world application and support the most innovative SMEs, including start-ups, to scale up their ideas.



**Deliver targeted solutions to societal challenges together with citizens > EU missions:** Ambitious, bold goals to tackle issues that affect our daily lives, ranging from fighting cancer to adapting to climate change, living in greener cities, ensuring soil health for food, nature, people and climate, and protecting our waters and ocean.



**Rationalise the funding landscape > Streamlined approach to European Partnerships:** Streamlined number of partnerships while encouraging wide participation of partners from public and private sectors.



**Strengthen international cooperation > extended association possibilities:** Extended openness to association for non-EU countries (third countries) with good capacity in science, technology and innovation.



**Reinforce openness > Open Science policy:** Mandatory open access to publications, open access to research data ensured. Use of European Open Science Cloud as appropriate.

# Horizon Europe



## What are EU missions?

EU missions are commitments to solve some of the greatest challenges facing our world like fighting cancer, adapting to climate change, protecting our oceans, living in greener cities and ensuring soil health and food.

They are an integral part of the Horizon Europe framework programme beginning in 2021.

EU missions will

- be bold, inspirational and widely relevant to society
- be clearly framed: targeted, measurable and time-bound
- establish impact-driven but realistic goals
- mobilise resources on EU, national and local levels
- link activities across different disciplines and different types of research and innovation
- make it easier for citizens to understand the value of investments in research and innovation

## Areas where there will be missions

- [cancer](#)
- [adaptation to climate change including societal transformation](#)
- [healthy oceans, seas coastal and inland waters](#)
- [climate-neutral and smart cities](#)
- [soil health and food](#)

Missions

# ...Open Access by default in 2020...

12. AGREES to further promote the mainstreaming of open access to scientific publications by continuing to support a transition to immediate open access as the default by 2020, using the various models possible and in a cost-effective way, without embargoes or with as short as possible embargoes, and without financial and legal barriers, taking into account the diversity

in research systems and disciplines, and that open access to scientific publications should be

Brussels, 27 May 2016  
(OR\_en)

9526/16

RECH 208  
TELECOM 100

the principle that no researcher should be prevented from  
mission, Member States and relevant stakeholders, including  
to catalyse this transition; and STRESSES the importance of  
reements.

#### OUTCOME OF PROCEEDINGS

From: General Secretariat of the Council  
To: Delegations  
No. prev. doc.: 8791/16 RECH 133 TELECOM 74  
Subject: The transition towards an Open Science system  
- Council conclusions (adopted on 27/05/2016)

European Council  
Council of the European Union

The European Council The Council of the EU Topics Policies Meetings Documents & Publications

Home > Meetings > Competitiveness Council, 26-27/05/2016

### Competitiveness Council, 26-27/05/2016

#### Research and Innovation

Following a debate on **open science**, the Council adopted conclusions on the transition towards an open science system.

“Open Science is a topic which is very dear to our hearts. During the Netherlands presidency, we have aimed at bringing Europe to the forefront of global change and at leading the transition to a new way of doing research and science based on openness, big data and cloud computing.”

Sander Dekker, State Secretary of Education, Culture and Science of the Netherlands

It also adopted conclusions on the lessons learnt from the 7th research framework programme and the future outlook and on the creation of a friendly regulatory environment for research and innovation.

Chairing the Council, Sander Dekker, State Secretary of Education, Culture and Science of the Netherlands, made the following statement: “Open Science is a topic which is very dear to our hearts. During the Netherlands presidency, we have aimed at bringing Europe to the forefront of global change and at leading the transition to a new way of doing research and science based on openness, big data and cloud computing. Open Science breaks down the barriers around universities and ensures that society benefits as much as possible from all scientific insights. In that way we maximize the input of researchers, universities and knowledge institutions”.

Today, building on work done during recent months, particularly at the April conference when we approved the “Amsterdam Call for Action on Open Science”, I can say that we have made a major step forward”.

- > Indicative programme - Competitiveness Council of 26-27/05/2016
- > Background brief



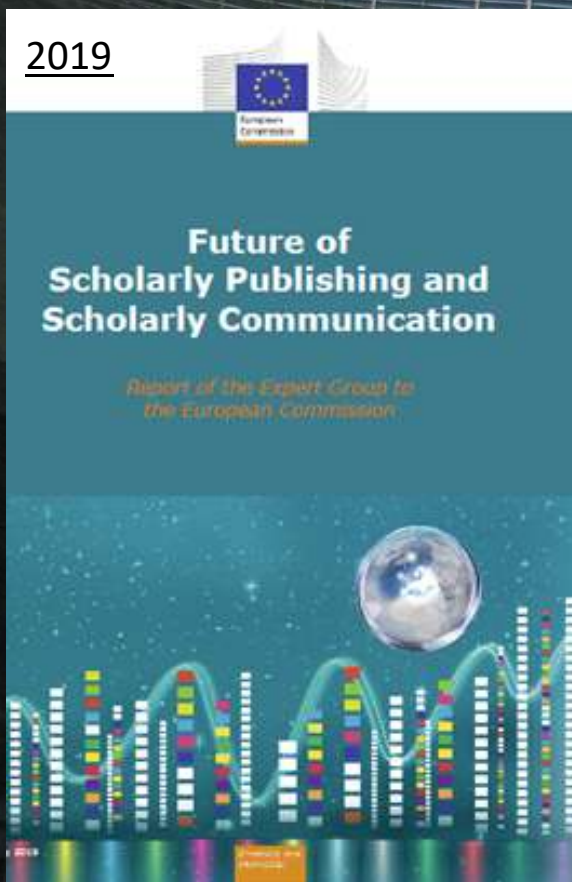
Highlights of the Competitiveness Council, taking place on 27 May in Brussels.

6/2015

...sulla via **nce**

- Rewards and Incentives
- Research Indicators and Next-Generation Metrics
- Future of Scholarly Communication
- European Open Science Cloud
- FAIR Data
- Research Integrity
- Skills and Education
- Citizen Science

**Integrated advice of the Open Science Policy Platform on 8 prioritised Open Science ambitions** 2018



2019

### Future of Scholarly Publishing and Scholarly Communication

Report of the Expert Group to the European Commission

#### Removing barriers to open science

1. Change assessment, evaluation and reward systems in science . . . . .
2. Facilitate text and data mining of content . . . . .
3. Improve insight into IPR and issues such as privacy . . . . . 12
4. Create transparency on the costs and conditions of academic communication 4

#### Developing research infrastructures

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6. Set up common e-infrastructures . . . . . 18

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7. Adopt open access principles . . . . . 22
8. Stimulate new publishing models for knowledge transfer . . . . . 23
9. Stimulate evidence-based research on innovations in open science. . . . . 26

#### Mainstreaming and further promoting open science policies

10. Develop, implement, monitor and refine open access plans . . . . . 30

#### Stimulating and embedding open science in science and society

11. Involve researchers and new users in open science . . . . . 32
12. Encourage stakeholders to share expertise and information on open science 34

Amsterdam Call for Action on Open Science  
2016

### Providing researchers with the skills and competencies they need to practise Open Science

Open Science Skills Working Group Report

2017

Apr. 25, 2018



Mutual Learning Exercise

## Open Science: Altmetrics and Rewards

Horizon 2020 Policy Support Facility



### Evaluation of Research Careers fully acknowledging Open Science Practices

Revenues, incentives and/or recognition for researchers practicing Open Science

**/2015**

2017

# ...sulla via della Open science

Open Science for its own sake has never been the goal. While a focus on Open Science as a mechanism must be emphasised in any transition, Open Science must ultimately be embedded as part of a larger more systemic effort to foster all practices and processes that enable the creation, contribution, discovery and reuse of research knowledge more reliably, effectively and equitably. Research cannot be 'excellent' without such attributes at its core.

to help co-create, develop and maintain a 'Research System based on shared knowledge' by 2030. As a start, we commit to working together to implement a system with the five attributes outlined below.

1. An academic career structure that fosters outputs, practices and behaviours to maximise contributions to a shared research knowledge system. To this
2. A research system that is reliable, transparent and trustworthy. To achieve this, Member States should
3. A research system that enables innovation. Five key elements were identified as necessary to facilitate such a research system:
4. A research culture that facilitates diversity and equity of opportunity. To enable such a culture to
5. A research system that is built on evidence- based policy and practice. To enable this, we recommend



6/2015

# Raccomandazione 790/2018



(12) The move towards open access is a worldwide endeavour. Member States have been part of this endeavour and should be supported in enhancing an open, collaborative research environment based on reciprocity at a global level. Open science is a key feature of Member States' policies for responsible research and for open innovation. As new digital technologies become available, research and funding policies should adapt to this new environment.

## *Management of research data, including open access*

3. Member States should set and implement clear policies (as detailed in national action plans) for the management of research data resulting from publicly funded research, including open access. Those policies and action plans should provide for:

- research data that results from publicly funded research becomes and stays findable, accessible, interoperable and re-usable ("FAIR principles") within a secure and trusted environment, through digital infrastructures (including those federated within the European Open Science Cloud (EOSC), where relevant), unless this is not possible or is incompatible with the further exploitation of the research results ("as open as possible, as closed as necessary"). This could be for reasons, in particular, of privacy, trade secrets, national security, legitimate commercial interests and to intellectual property rights of third parties. Any data, know-how and/or information whatever its form or nature which is held by private parties in a joint public/private partnership prior to the research action should not be affected by these policies or national action plans;

4. Member States should ensure that research funding institutions responsible for managing public research funding and academic institutions receiving public funding implement the policies and national action plans referred to in point 3 at national level in a coordinated way by:

- providing guidance to researchers on how to comply with research data management policies, and supporting them to do so, especially regarding the development of sound data management planning skills and digital infrastructures that support access to and preservation of research data;

DATA POLICY  
(A LIVELLO NAZIONALE)

DATI FAIR PER EOSC

DATA POLICY  
(LIVELLO ISTITUZIONALE)

COMPETENZE  
INFRASTRUTTURE

# Raccomandazione 790/2018

## *Open access to scientific publications*

1. Member States should set and implement clear policies (as detailed in national action plans) for the dissemination of and open access to scientific publications resulting from publicly funded research. Those policies and action plans should provide for:

- researchers, when entering into contractual agreements with scientific publishers, retain the necessary intellectual property rights, inter alia, to comply with the open access policy requirements. This concerns in particular self-archiving and re-use (notably through text and data mining);

2. Member States should ensure that research funding institutions responsible for managing public research funding and academic institutions receiving public funding implement the policies and national action plans referred to in point 1 at national level in a coordinated way by:

- setting institutional policies for the dissemination of and open access to scientific publications, and establishing implementation plans;

- including requirements for open access as a condition to give out grant agreements or to provide other financial support for research, together with mechanisms for monitoring compliance with these requirements and follow up actions to correct cases of non-compliance;

- making the necessary funding available for dissemination (including open access and re-use) in a transparent and non-discriminatory manner allowing for different channels, including digital infrastructures where appropriate, as well as new and experimental methods of scholarly communication;

- providing guidance to researchers on how to comply with open access policies, and supporting them to do so, especially regarding the management of their intellectual property rights to ensure open access to their publications;

- conducting joint negotiations with publishers to obtain transparent and the best possible terms for access to publications, including use and re-use;

OPEN ACCESS POLICY  
NAZIONALE

MANTENERE I DIRITTI

OPEN ACCESS POLICY PER  
ATENEO

- LEGATE ALLA VALUTAZIONE
- DISSEMINAZIONE IN CANALI DIVERSI
- FORMAZIONE E SUPPORTO

# Bruxelles non sta mai f

26.6.2019 IT Gazzetta ufficiale dell'Unione europea [Open data directive](#) L 172/56

DIRETTIVA (UE) 2019/1024 DEL PARLAMENTO EUROPEO E DEL CONSIGLIO

del 20 giugno 2019

relativa all'apertura dei dati e al riutilizzo dell'informazione del settore pubblico

## I DATI DELLA RICERCA ORA RIENTRANO NELLA DIRETTIVA DATI SETTORE PUBBLICO

- Stimulate the publishing of dynamic data and the uptake of Application Programme Interfaces (APIs).
- Limit the exceptions which currently allow public bodies to charge more than the marginal costs of dissemination for the re-use of their data.
- **Enlarge the scope of the Directive to:**
  - data held by public undertakings, under a specific set of rules. In principle, the Directive will only apply to data which the undertakings make available for re-use. Charges for the re-use of such data can be above marginal costs for dissemination;
  - **research data resulting from public funding – Member States will be asked to develop policies for open access to publicly funded research data. New rules will also facilitate the re-usability of research data that is already contained in open repositories.**
- Strengthen the transparency requirements for public–private agreements involving public sector information, avoiding exclusive arrangements.



Brussels, 19.2.2020  
COM(2020) 66 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A European strategy for data

In order to release Europe's potential we have to find our European way, balancing the flow and wide use of data, while preserving high privacy, security, safety and ethical standards.

## I DATI SONO POSSONO ESSERE RIUSATI SENZA PERDERE VALORE.

### 3. The vision

The Commission's vision stems from European values and fundamental rights and the conviction that the human being is and should remain at the centre. The Commission is convinced that businesses and the public sector in the EU can be empowered through the use of data to make better decisions. It is all the more compelling to seize the opportunity presented by data for social and economic good, as data – unlike most economic resources – can be replicated at close to zero cost and its use by one person or organisation does not prevent the simultaneous use by another person or organisation. That potential should be put to work to address the needs of individuals and thus create value for the economy and society. To release this potential, there is a need to ensure better access to data and its responsible usage.

The EU should create an attractive policy environment so that, by 2030, the EU's share of the data economy – data stored, processed and put to valuable use in Europe - at least corresponds to its economic weight, not by *fiat* but by choice. The aim is to create a single European data space – a genuine single market for data, open to data from across the world – where personal as well as non-personal data, including sensitive business data, are secure and businesses also

# ...una risorsa: le infrastrutture di ricerca



## What are Research Infrastructures?

---

Research Infrastructures are facilities that provide resources and services for research communities to conduct research and foster innovation.

They can be used beyond research e.g. for education or public services and they may be single-sited, distributed, or virtual.

They include




- major scientific equipment or sets of instruments
- collections, archives or scientific data
- computing systems and communication networks
- any other research and innovation infrastructure of a unique nature which is open to external users

Research infrastructures

...infrastrutture per una ricerca  
efficace



## Key objectives

- reduce fragmentation of the research and innovation ecosystem
- avoid duplication of effort
- better coordinate the development and use of Research Infrastructures
- establish strategies for new pan-European, well-established intergovernmental or national Research Infrastructures
- join forces internationally to construct and run large, complex or expensive infrastructures, respond to global challenges and/or foster combining skills, data and efforts of the world's best scientists
- foster the innovation potential of Research Infrastructures by making industry more aware of opportunities offered to improve their products and by the co-development of advanced technologies e.g. [ATTRACT](#) 
- use Research Infrastructures for science diplomacy - using science collaboration to address common problems and build partnerships internationally e.g. [SESAME](#)  in Jordan and [EU-CELAC](#)  in Latin America

Research infrastructures

# ESFRI – EU

- FACILITA STRATEGIA COMUNE PER INTEGRAZIONE DELLE RI E RAFFORZARE L'IMPATTO INTERNAZIONALE
- STABILISCE UNA ROADMAP

## The Forum

ESFRI, the European Strategy Forum on Research Infrastructures, is a strategic instrument to develop the scientific integration of Europe and to strengthen its international outreach. The competitive and open access to high quality Research Infrastructures supports and benchmarks the quality of the activities of European scientists, and attracts the best researchers from around the

The screenshot shows the ESFRI website interface. At the top left is the ESFRI logo. The navigation menu includes 'ABOUT', 'ESFRI ROADMAP', and 'EVENTS'. A banner below the navigation reads 'ESFRI is helping the scientific community by aggregating information about dedicated services offered by Research' with an 'Explore Services' button. The main heading is 'Taking Europe to the forefront of Innovation'. Below this is a paragraph: 'ESFRI supports a coherent and strategy-led approach to policy-making on research infrastructures in Europe, and facilitates multilateral initiatives leading to the better use and development of research infrastructures, at EU and international level. Following a vision for sustainable policies and funding, ESFRI updates the European Roadmap for research Infrastructures systematically.' At the bottom, there are four statistics: 18 Projects, 37 Landmarks, 74 Delegates, and 5 Roadmaps / 11 Working Groups.

ESFRI

ESFRI

ESFRI

HOME > ESFRI ROADMAP

## ESFRI Roadmap 2021

Taking Europe to the forefront of **Innovation**

ESFRI supports a coherent and strategy-led approach to policy-making on research infrastructures in Europe, and facilitates multilateral initiatives leading to the better use and development of research infrastructures, at EU and international level. Following a vision for sustainable policies and funding, ESFRI updates the European Roadmap for research Infrastructures systematically.

**18** Projects

**37** Landmarks

**74** Delegates

**5** Roadmaps  
**11** Working Groups

The image shows the cover of the 'ESFRI White Paper 2020' titled 'MAKING SCIENCE HAPPEN'. The subtitle is 'A new ambition for Research Infrastructures in the European Research Area'. The cover features a stylized globe graphic.

ESFRI

### MAKING SCIENCE HAPPEN

A new ambition for Research Infrastructures in the European Research Area

ESFRI WHITE PAPER  
2020

# C'è la vostra?

## SOLID EARTH SCIENCES

EUROPEAN RESEARCH INFRASTRUCTURE ON SOLID EARTH



**EPOS** HOME

**ERI** EUROPEAN RESEARCH INFRASTRUCTURE CONSORTIUM

is designed to DRIVE the INTEGRATION of Thematic and Integrated Core Services and to GOVERN the EPOS DELIVERY



## SOCIAL SCIENCES

CESSDA

ABOUT NEWS & EVENTS CONTACT COVID-19 TOOLS & SERVICES TRAINING DATA CATALOGUE

### Data Catalogue

The CESSDA Data Catalogue contains the metadata of all data in the holdings of CESSDA's service providers. It is a one-stop-shop for search and discovery, enabling effective access to European social science research data.

### Data Management Expert Guide

This guide is designed by European experts to help social science researchers make their research data findable, accessible, interoperable and reusable.

### Training

The CESSDA Training website provides a collection of resources and events for learning about the management, preservation and distribution of research data.



ELIXIR

## LIFE SCIENCES

ABOUT US SERVICES HOW WE WORK EVENTS NEWS INTRANET

ELIXIR unites Europe's leading life science organisations in managing and safeguarding the increasing volume of data being generated by publicly funded research. It coordinates, integrates and sustains bioinformatics resources across its member states and enables users in academia and industry to access services that are vital to their research. See About us.

### ELIXIR support to COVID-19 research



ESS

About ESS Science & Instruments

## NEUTRON SCIENCE

### European Spallation Source

The European Spallation Source (ESS) is a European Research Infrastructure Consortium (ERIC), a multi-disciplinary research facility based on the world's most powerful neutron source. Our vision is to build and operate the world's most powerful neutron source, enabling scientific breakthroughs in research related to materials, energy, health and the environment, and addressing some of the most important societal challenges of our time.

Mission Statement

ESS Timeline	GROUND BREAKING	INITIAL OPERATIONS	INSTRUMENT COMMISSIONING BEGINS	USER PROGRAMME BEGINS	PROJECT COMPLETION STATUS
	2014	2019	2022	2023	76%

### Services

ELIXIR services make it easier to discover, store, and analyse life science data.

### Platforms

ELIXIR's activities are divided into five areas called 'Platforms'.

## HEALTH AND AGING

### SHARE

Survey of Health, Ageing and Retirement in Europe 50+ in Europe

Health, Ageing and Retirement in Europe

You are here: Home

SHARE - Survey of Health, Ageing and Retirement in Europe

The Survey of Health, Ageing and Retirement in Europe (SHARE) is a research infrastructure for studying the effects of health, social, economic and environmental policies over the life-course of European citizens and beyond. From 2004 until today, 380,000 in-depth interviews with 140,000 people aged 50 or older from 28 European countries and Israel have been conducted.

Search

News

SHARE-COVID-19 data available now!

Early release of SHARE Wave 8 CATI...

# In futuro

## What are your options?

### Your community is already part of a RI

Get engaged, discover and use the RI services, developed tools, infrastructures, repositories, standards, best practices, etc

### Your Institution could set up a data strategy

At the level of your Institution, several actions can be taken. You can learn from others' experience: set up a working group, adopt a data policy, design and develop a data registry/repository, give access to your contents



### Your community could be part of a RI

Get engaged with your reference RI, get your community together and liaise with other communities to understand how to apply existing best practices in your specific domain

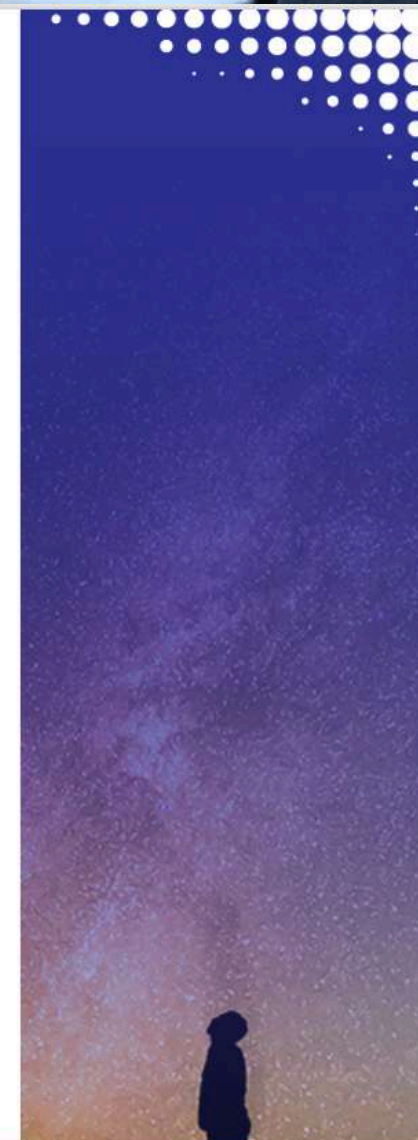
### None of the above

You can still apply the Open Science generic best practices that you will learn in this course to your projects and research workflow

Do not reinvent the wheel

Build on others' experience

Liase with your and other communities



# EOSC! 23 novembre 2018

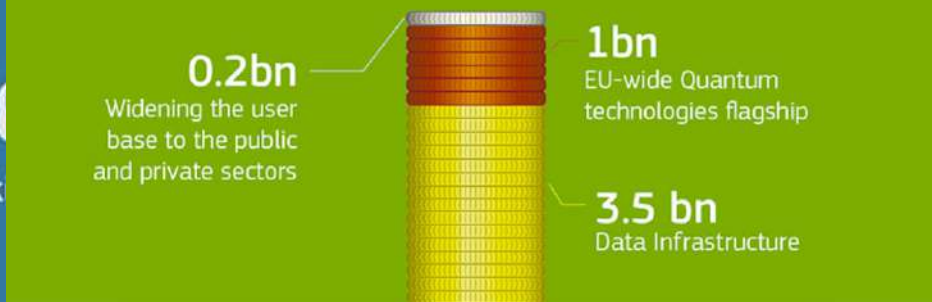
The Vienna Declaration  
Vienna, 23 November

BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

## We, Ministers, European Open Science Cloud

1. **Recall** the challenge of the European Open Science Cloud, as set out in the Declaration signed in Brussels on 10 July 2016.
2. **Reaffirm** the potential of the European Open Science Cloud to realise the vision of the European Council of Heads of State and Government in 2012, of a Europe of knowledge, sustainable and inclusive growth.
3. **Recognise** that the European Open Science Cloud is an iterative and based on consensus among scientists and researchers across Europe.
4. **Highlight** that European Open Science Cloud services for Science. Reaching out over time to the wider community.
5. **Recall** that the Council of Ministers in 2016 called for the European Open Science Cloud to be a reality, hinting at the need to further strengthen the ongoing dialogue across institutions and with stakeholders, for a new governance framework to be launched in Vienna, on 23 November 2018.

€2 BN IN OVERALL HORIZON 2020 FUNDING TO THE EUROPEAN CLOUD INITIATIVE, WITH ESTIMATED ADDITIONAL PUBLIC AND PRIVATE INVESTMENT OF €4.7 BN REQUIRED TO FURTHER DEVELOP THE EUROPEAN DATA INFRASTRUCTURE.



SEAMLESS ACCESS TO OPEN BY DEFAULT  
FAIR DATA

9. **Call** for the European Open Science Cloud to provide all researchers in Europe with seamless access to an open-by-default, efficient and cross-disciplinary environment for storing, accessing, reusing and processing research data supported by FAIR data principles.

6. **Note** that the 2016 EOSC Summit (held on 11 June 2016) called for acceleration towards making the European Open Science Cloud a reality, hinting at the need to further strengthen the ongoing dialogue across institutions and with stakeholders, for a new governance framework to be launched in Vienna, on 23 November 2018.

## European Open Science Cloud (EOSC)

The generic term for the envisioned federation of research (data) infrastructures that will enable the Web of FAIR Data and Services and help researchers to perform Open Science and open up and exploit their data, publications and code.

[EOSC – cosa?]

UN AMBIENTE CHE SOSTIENE LA OPEN SCIENCE E  
NON UN «OPEN CLOUD» PER LA SCIENZA



## THE EUROPEAN OPEN SCIENCE CLOUD? SOME NUANCES AND DEFINITIONS

Imagine a federated, globally accessible environment where researchers, innovators, companies and citizens can publish, find and re-use each other's data and tools for research, innovation and educational purposes. Imagine that this all operates under well-defined and trusted conditions, supported by a sustainable and just value for money model. This is the environment that must be fostered in Europe and beyond to ensure that European research and innovation contributes in full to knowledge creation, meet global challenges and fuel economic prosperity in Europe. This we believe encapsulates the concept of the European Open Science Cloud (EOSC), and indeed such a federated European endeavour might be expressed as the European contribution to an Internet of FAIR Data and services.

The European Open Science Cloud is a supporting environment for Open Science and not an 'open Cloud' for science.

# EOSC – benefici attesi

- Improved trust, quality and productivity in science:
  - **Encouraging collaboration and openness**, potentially changing the way research is performed and enabling new mechanisms for communication and evaluation of research.
  - **Trusted frameworks for data availability and security**, unlocking the full value of research data.
  - **Infrastructure planning**, reducing the disparities in open science readiness in different countries and improving the quality of the integrated research landscape.
  - **Broadening discoverability** within and across domains, encouraging multi-disciplinary research.
  - **Making new connections**, maximising the potential of machine searching through standardised metadata and persistent identifiers.
  - **Addressing global challenges** by facilitating cross-disciplinary research through the federation and interoperability of data and research infrastructures.
  - **Enhancing reproducibility** by opening up research processes and outputs and providing a shared, sustained and stable infrastructure for research.

# EOSC: fattori critici per il successo

Strategic Research and Innovation Agenda  
(SRIA)  
of the  
European Open Science Cloud (EOSC)  
SRIA Version 0.9 16 November 2020

A number of critical success factors must be in place for those benefits to be realised. They include:

- Researchers performing publicly funded research make relevant results available, as openly as possible;
- Professional data stewards are available in research-performing organisations in Europe to support Open Science;
- Research data produced by publicly funded research in Europe is FAIR by design;
- The EOSC Interoperability Framework supports a wide range of FAIR digital objects including data, software and other research artefacts;
- EOSC is operational and provides a stable infrastructure, supporting researchers addressing societal challenges;
- EOSC is populated with a valuable corpus of interoperable data;
- EOSC is a valuable and valued resource to a wide range of users from the R&E, public and private sectors.

# EC proposal for FAIR building blocks



10+16 bn/year

Cost of not having FAIR research data

Cost-Benefit analysis for FAIR research data

Europe's decision to develop the European Open Science Cloud reflects the willingness to embrace change, but also to empower 1.7 million European researchers and 70 million professionals in science and technology. The ultimate goal is to achieve a fundamental transformation of the whole research lifecycle and to make it more credible with increased integrity, more efficient, collaborative and more responsive to societal challenges.

I am convinced that the Cloud will allow a new generation of scholars to find, combine and analyse data and discoveries in a way that supersedes anything we have ever seen before. It will accelerate the transition to Open Science and Open Innovation and bring science and research closer to societal needs.

Carlos Moedas,  
Commissioner for Research, Science and Innovation.

# EOSC viene da lontano

## What are the solutions?

### 1. European Open Science Cloud

The European Open Science Cloud aims to give Europe a global lead in scientific data infrastructures, to ensure that European scientists reap the full benefits of data-driven science. Practically, it will offer 1.7 million European researchers and 70 million professionals science and technology a virtual environment with free at the point of use, open and seamless services for storage, management, analysis and re-use of research data, across borders and scientific disciplines. Its development will be driven by the scientific community, who are the most advanced users and the largest producers of science in the world. The European Open Science Cloud will be also open for education and training purposes in higher education and over time, to government and business users as the technologies developed will be promoted for wider application.

The European Open Science Cloud will start by federating existing scientific data infrastructures, today scattered across disciplines and Member States. This will make access to scientific data easier, cheaper and more efficient. It will enable the creation of new market opportunities and new solutions in key areas such as health, environment, or transport. The European Open Science Cloud will provide a secure environment where privacy and data protection must be guaranteed by design, based on recognised standards, and where users can be confident concerning data security and liability risks. It will leverage other actions taken by the Commission to promote Open Science in Europe, such as open access to scientific publications and data in Horizon 2020, and convene key stakeholders to co-design the next actions. The governance of the European Open Science Cloud will be determined upon the conclusion of a thorough preparation process that is already under way.

- CO-CREATION
- CO-DESIGN
- RESEARCH-LED
- COMMUNITY-DRIVEN
- FLEXIBLE BY DESIGN
- EXTENSIBLE / SCALABLE
- INCREMENTAL AND ITERATIVE
  - HANDS-ON AND PARTICIPATORY
- CONTINUOUS ENGAGEMENT, CONSULTATION & USER TESTING

# EOSC vien

## THE COUNCIL OF THE EUROPEAN UNION

### RECALLING:

- its Conclusions of 27 May 2016 on “The transition towards an Open Science system”<sup>1</sup>, which called on the Commission, the Member States and the stakeholders to take the necessary actions needed for making open science a reality and to advocate the need for concerted actions in relevant national, EU, multilateral and international fora;

3. HIGHLIGHTS that the implementation and further development of advanced solutions for the effective provision and use of high quality scientific data, with effective descriptors, ease of access, interoperability and reusability, fully implementing the FAIR<sup>2</sup> principles and developing and promoting Data Commons, should take into account already established practices by research communities, ESFRI Research Infrastructures, e-Infrastructures, as well as other relevant national infrastructures;
4. STRESSES that with regard to data sharing, relevant commercial, privacy and security interests need to be addressed, following the formula “as open as possible, as closed as necessary”;

6. ACKNOWLEDGES that the development of the EOSC is the supply side of a broader policy initiative aimed at ensuring as far as possible open access to scientific results and mainstreaming open science practices in Europe; STRESSES that effectiveness requires to act simultaneously on the demand side, with research funders fostering open access, data management mandates and FAIR principles as well as incentives and rewards. URGES the Commission and the Member States to ensure that the EOSC is a user-centred environment, serving the research community foremost at the start, building on its most advanced practices, and then expanding further to the broader user community, including SMEs, citizens and public authorities;
7. ACKNOWLEDGES that a change of culture among researchers towards openness is a precondition for the successful implementation of the EOSC, hence current discussions on merit in research careers and how to supplement the current parameters with new ones should be taken into consideration;

- FAIR DATA
- AS OPEN AS POSSIBLE, S CLOSED AS NECESSARY
- ENTI FINANZIATORI DEVONO FAVORIRE POLITICHE OPEN ACCESS E FAIR
  - PRECONDIZIONE: CAMBIAMENTO CULTURALE FRA I RICERCATORI
  - INCENTIVI



# EU strategy for data



strengthen the governance mechanisms at EU level and in the Member States relevant for cross-sector data use and for data use in the common sectoral data spaces, involving both private and public players. This could include a mechanism to prioritise standardisation activities<sup>36</sup> and to work towards a more harmonised description and overview of datasets, data objects and identifiers to foster data interoperability (i.e. their usability at a technical level<sup>37</sup>) between sectors and, where relevant, within sectors<sup>38</sup>. This can be done in line with the principles on Findability, Accessibility, Interoperability and Reusability (FAIR) of data taking into account the developments and decisions of sector-specific authorities;

## Leading by example

The Commission will strive for excellence in the way it organises its own data, uses the data for better policy making, and makes the data it produces and funds available to others, including through the EU Open Data Portal<sup>45</sup>.

The EU will continue to make data resulting from its research and deployment programmes available in line with the principle 'as open as possible, as closed as necessary', and will continue to facilitate discovery, sharing of, access to and reuse of data and services by researchers through the European Open Science Cloud (EOSC)<sup>46</sup>.

# EOSC Declaration

- necessario cambiamento culturale e formazione
- NESSUNA DISCIPLINA, NESSUNA ISTITUZIONE E NESSUN PAESE DEVE ESSERE LASCIATO INDIETRO

## Data culture and FAIR data

- [Data culture] European science must be grounded in a common culture of data stewardship, so that research data is recognised as a significant output of research and is appropriately curated throughout and after the period conducting the research. Only a considerable cultural change will enable long-term reuse for science and for innovation of data created by research activities: no disciplines, institutions or countries must be left behind.
- [Open access by-default] All researchers in Europe must enjoy access to an open-by-default, efficient and cross-disciplinary research data environment supported by FAIR data principles. Open access must be the default setting for all results of publicly funded research in Europe, allowing for proportionate limitations only in duly justified cases of personal data protection, confidentiality, IPR concerns, national security or similar (e.g. 'as open as possible and as closed as necessary').
- [Skills] The necessary skills and education in research data management, data stewardship and data science should be provided throughout the EU as part of higher education, the training system and on-the-job best practice in the industry. University associations, research organisations, research libraries and other educational brokers play an important role but they need substantial support from the European Commission and the Member States.



# EOSC



sustainable and a data economy. Data is a renewable resource as much as sun and wind. Every 18 months we double the amount of data we produce. **Industrial and commercial data, 85% of which is never used.**

**This is not sustainable. Within those data, there are hidden treasures and untapped opportunities for business and society. Europe is going to co-create a framework to allow the use of these data. It should consist of a trusted pool of non-personal data that governments, businesses and other stakeholders can contribute to. This pool will be a resource for open innovation, and bring new solutions to the market. And our scientists are already beginning to do this.**

**We are creating a European Open Science Cloud now. It is a trusted space for researchers to store their data and to access data from researchers from all other disciplines. We will create a pool of interlinked information, a 'web of research data'. Every researcher will be able to better use not only their own data, but also those of others. They will thus come to new insights, new findings and new solutions.**

**85% DEI DATI PRODOTTI NON VIENE USATO. INSOSTENIBILE**

This is what we call the European Open Science Cloud and we are the first in the world to do that. It is being developed in Europe for Europe and for European researchers. The idea is that once we have the rules of the game ready, then we will open this up to the broader public sector and to business as well. So that companies can come in, store the data and use the data. And the idea is that it will also open up to international players.

Jan. 22, 2020

**A QUESTO SERVE EOSC. LA STIAMO CREANDO ADESSO**

# EOSC regional

## The five InfraEOSC 5b Projects



**EOSC-Nordic**'s overall objective is to foster and advance the take-up of EOSC at Nordic level by coordinating relevant initiatives taking place in Finland, Sweden, Norway, Denmark, Iceland, Estonia, Latvia and Lithuania; bringing them to bear in the context of the EOSC. The project aims to foster and coordinate all EOSC-relevant initiatives within the Nordic & Baltic countries and exploit synergies to achieve greater harmonisation at policy and service-provisioning level not only across the Nordic and Baltic region, but also with other countries, in compliance with EOSC agreed standards and practices.



**EOSC-Pillar** gathers representatives of the fast-growing national initiatives for coordinating data infrastructures and service providers in Austria, Belgium, France, Germany, and Italy, to establish an agile and efficient federation model for open science services covering the full spectrum of European research communities.



**EOSC-Synergy** will expand the capacity and capabilities of the EOSC by leveraging the experience, effort and resources of national publicly funded digital infrastructures in a coherent way, therefore acting also as an incentive for national resource providers. EOSC-Synergy extends the EOSC coordination to participating countries by harmonising policies and federating relevant national research e-Infrastructures, scientific data and thematic services, bridging the gap between national initiatives and EOSC. The participating countries are: Spain, Portugal, UK, Czech Republic, Slovakia, Poland, the Netherlands, and Germany.



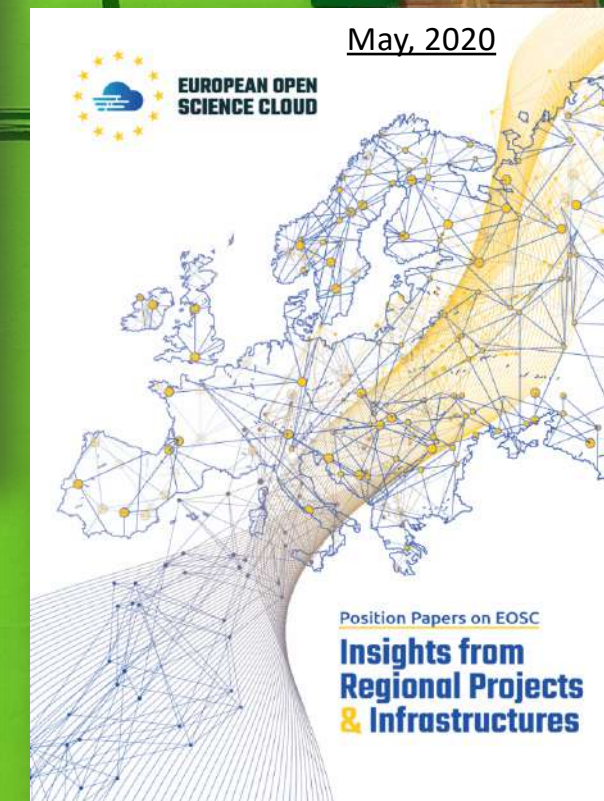
**NI4OS-Europe** aims to be a core contributor to the EOSC service portfolio, commit to EOSC governance and ensure inclusiveness at the European level for enabling global open science. The project supports the development and inclusion of the national Open Science initiatives in 15 Member States and Associated Countries in the EOSC governance. NI4OS-Europe aspires to instil within the community the EOSC philosophy and FAIR principles. It also provides technical and policy support for the on-boarding of service providers into EOSC.



**ExPaNDS** is the EOSC Photon and Neutron (PaN) Data Service. PaN Research Infrastructures are service providers with a high relevance for the success of EOSC. Through ExPaNDS for national PaN RIs and PaNOSC for PaN ESFRIs, coherent FAIR data services will be enabled to the scientific users of all European PaN facilities, universities and even industry.

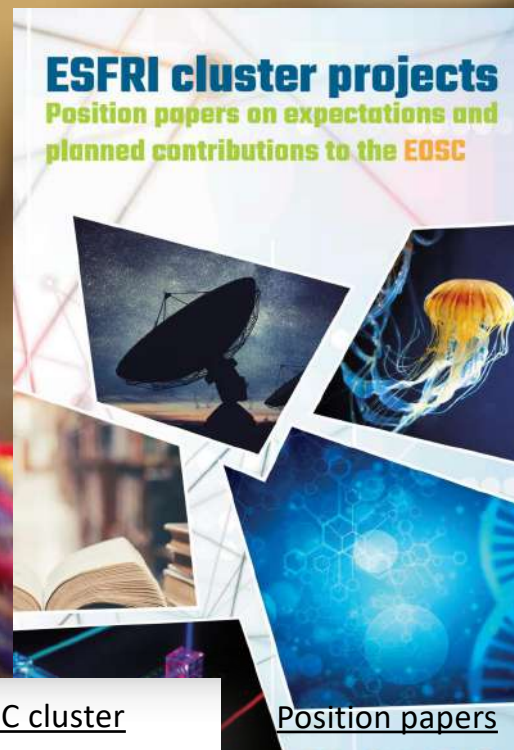
<https://www.eoscsecretariat.eu/communities/eosc-regional-projects>

EOSC PILLAR  
(GARR)



# EOSC - cluster

PER CREARE SINERGIE FRA EOSC E LE  
INFRASTRUTTURE DI RICERCA  
RAPPRESENTANO LE COMUNITÀ



## The five ESFRI Cluster Projects

[EOSC cluster](#)

[Position papers](#)



**EOSC-Life**

**EOSC-Life** brings together the Biological and Medical ESFRI to create an open, digital and collaborative space for biological and medical research. The project will publish FAIR data and a catalogue of services provided by participating RIs for the management, storage, and reuse of data in the EOSC.



**ENVRI**  
FAIR

**ENVRI-FAIR** connects the Environmental Research Infrastructure (ENVRI) community to the EOSC. The overarching goal is for all participating Research Infrastructures to build a set of FAIR data services, enhancing the efficiency and productivity of researchers, supporting innovation, and enabling data- and knowledge-based decisions to answer global challenges.



**ESCAPE**

**ESCAPE** establishes a single collaborative cluster of next-generation ESFRI facilities in the area of astronomy- and accelerator-based particle physics in order to implement a functional link between the concerned ESFRI projects and EOSC.



**SSHOC**

**SSHOC** develops the social sciences and humanities area of EOSC, transforming the current data landscape with its disciplinary silos and separate facilities into an integrated, cloud-based network of interconnected data infrastructures.



**panosc**  
photon and neutron science  
open network of facilities

**PaNOSC** brings together strategic European research infrastructures in the area of Photon and Neutron science with the goal of contributing to the construction and development of the EOSC. The mission is to contribute to the realisation of a data commons for Neutron and Photon science.

# EOSC

## EOSC Association Timeline

**EOSC Association: Advancing Open Science to accelerate the creation of new knowledge, inspire education, spur innovation and promote accessibility and transparency**

The European Open Science Cloud (EOSC) initiative will offer researchers a virtual environment with open and seamless services for storage, management, analysis and re-use of research data, across borders and scientific disciplines by federating existing data infrastructures.

EOSC is being co-created in a series of funded projects and initiatives from Member States



<https://www.eosc.eu/>

**NATA 17 DICEMBRE  
GARR FONDATORE  
~ 20 MEMBRI ITALIANI**

27  
nov

All legal materials for first GA ready

17  
dec

First General Assembly of the EOSC Association

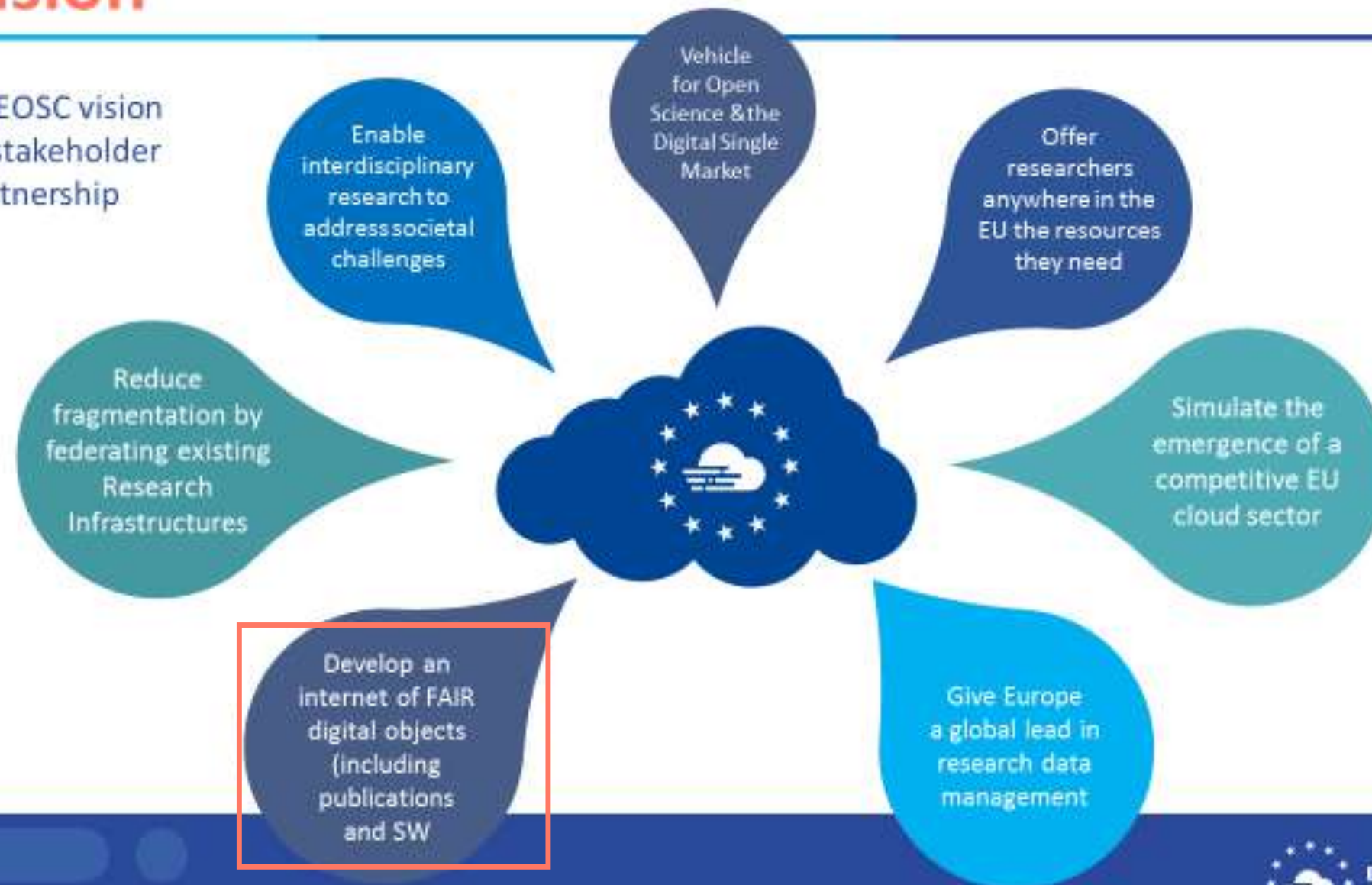


# EOSC vision

## The Vision

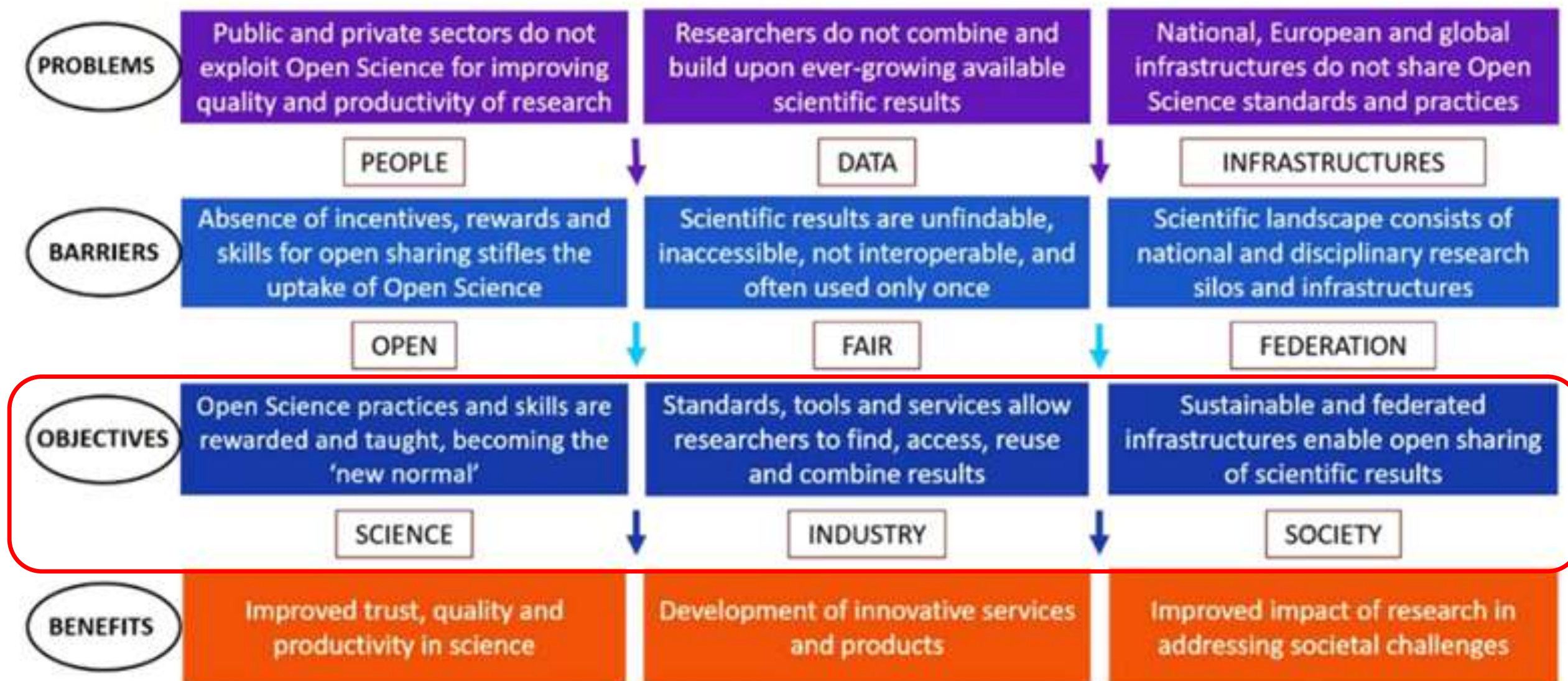
EOSC Hub week May 18 2020, C. Stover

Enabling the EOSC vision  
with a multi-stakeholder  
European partnership



# EOSC, albero degli obiettivi

## European Open Science Cloud Objectives Tree



# [EOSC e I data stewards]



The number of people with these skills needed to effectively operate the EOSC is, we estimate, likely exceeding half a million within a decade. As we further argue below, we believe that the implementation of the EOSC needs to include instruments to help train, retain and recognise this expertise, in order to support the 1.7 million scientists and over 70 million people working in innovation<sup>9</sup>. The success of the EOSC depends upon it.

## Open Working

An Experiment in Open Working from 4TU.Centre for Research Data & TU Delft Research Data Services (Note! This is a test)

[HOME](#) [ABOUT OPEN WORKING AT TU DELFT](#) [DRAFT DATA MANAGEMENT PLAN CATALOGUE](#) [DATA STEWARDSHIP](#) [CONTACT](#)

FEBRUARY 23, 2018

### We are hiring (again!) – Data Steward position at TU Delft

WE ARE HIRING

≠ DATA SCIENTIST

≠ DATA ANALYST

# Il dovere

## ARTICLE 29 — DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING

### ARTICLE 29 — DISSEMINATION OF RESULTS — OPEN ACCESS — VISIBILITY OF EU FUNDING

#### 29.1 **Obligation to disseminate results**

Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘**disseminate**’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).

#### 29.2 **Open access to scientific publications**

Each beneficiary must ensure open access (free of charge, online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

- (a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

- (b) ensure open access to the deposited publication — via the repository — at the latest:
  - (i) on publication, if an electronic version is available for free via the publisher, or
  - (ii) within six months of publication (twelve months for publications in the social sciences and

#### 29.3 **Open access to research data**

*[OPTION 1 for actions participating in the open Research Data Pilot: Regarding the digital research data generated in the action ('data'), the beneficiaries must:*

- (a) deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:
  - (i) the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;
  - (ii) other data, including associated metadata, as specified and within the deadlines laid down in the ‘**data management plan**’ (see Annex 1);



GRANT AGREEMENT  
ART. 29  
(pag. 234)

16/2015

# [REMINDER: VQR 2015-2019]

...Open Access è  
UN PREREQUISITO  
**NON** un elemento di valutazione



3. Al fine di riportare l'URL corretto sarà cura di ogni Istituzione procedere, entro il 3 novembre 2021, a inserire le informazioni necessarie per consentire il collegamento ai prodotti della ricerca consultabili in accesso aperto indicando il collegamento corretto a uno degli archivi di cui al comma 4.

4. I prodotti di cui al comma 1, lettera a) e, laddove possibile in base agli accordi sottoscritti con gli editori, quelli di cui alle lettere b) e c) dovranno essere resi disponibili in accesso aperto in almeno una delle seguenti modalità:

- a) Pubblicazione ad accesso aperto in Rivista o Volume;
- b) **Archivio di Ateneo ad accesso aperto;**
- c) Archivio disciplinare ad accesso aperto (es. PubMed, ArXiv, etc);
- d) Documenti di Lavoro (serie);
- e) Siti Web personali dei ricercatori.

e in almeno una delle seguenti versioni:

- a) versione finale pubblicata (*Version of Record, VoR*);
- b) versione manoscritta accettata per la pubblicazione (*Author's Accepted Manuscript, AAM*);
- c) versione inviata alla rivista per la pubblicazione (*Submitted Version*).

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IL DEPOSITO

PDF EDITORIALE

POST-PRINT

PRE-PRINT

LA VERSIONE DA DEPOSITARE NON È AD ARBITRIO  
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COPYRIGHT DELL'EDITORE

[una chiamata]



...NON AVERE DATI FAIR E NON ESSERE  
IN EOSC SIGNIFICA RESTARE TAGLIATI  
FUORI DALLA RICERCA EUROPEA...

Grazie!

# Thank you!

**Elena Giglia, Emma Lazzeri, Gina Pavone**

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