



## EU Perspective on Open Science

“A **systemic** change to the way science is **organised** and research is **carried out**. Based on **new ways of diffusing and sharing** knowledge. Using **digital technologies** and new collaborative tools. Affecting the **whole research cycle** and all its **stakeholders**.”

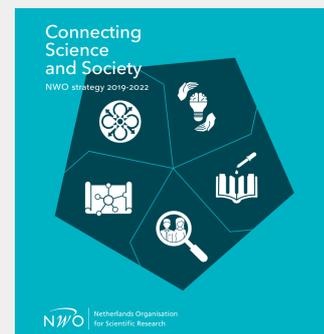


Carlos Moedas, EC 2016

## How does NWO define Open Science?

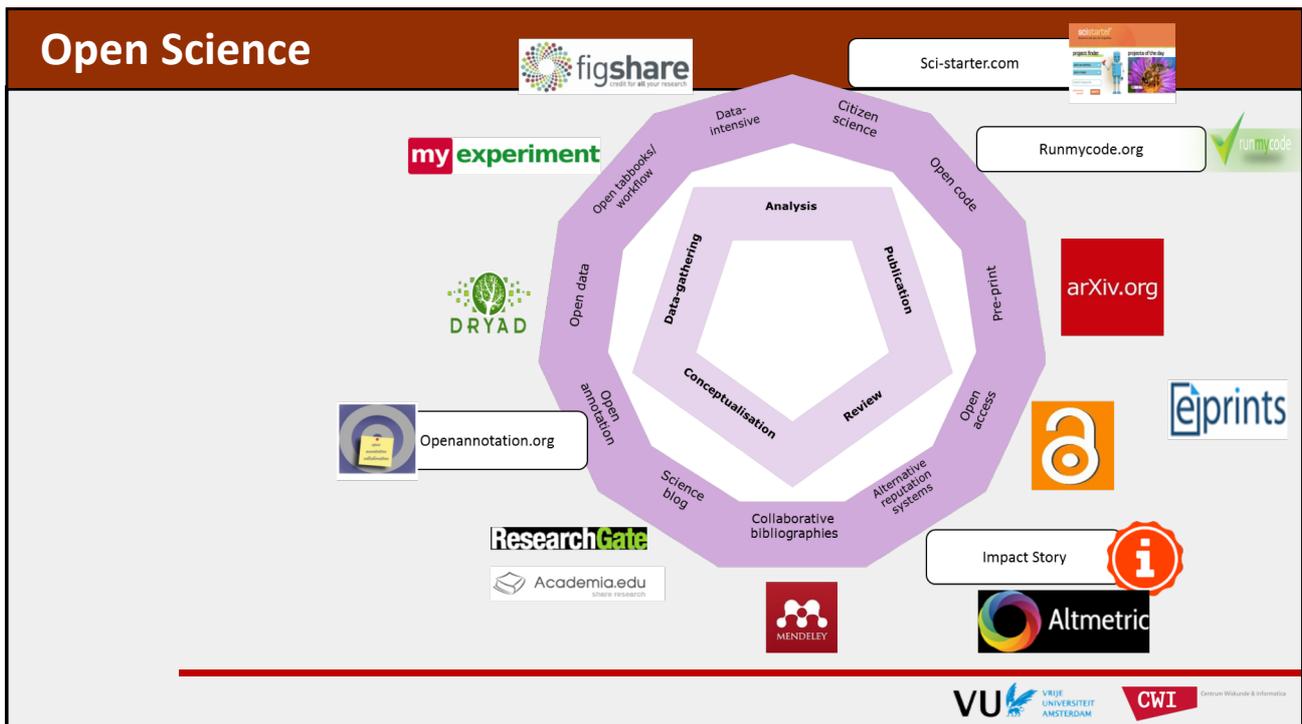
“ Open Science is defined as the scientific practice where research data, research methodologies and other information (methods, publications, data, workflows, software, standards, et cetera) are made available for use and reuse across disciplinary, social and national boundaries at the earliest possible stage.

**Open Science implies** a change in the approach of carrying out and evaluating scientific research: **a shift from an emphasis on publications of mainly positive results in scientific journals to the sharing of all available knowledge, such as research hypotheses, methods and techniques, and research data in various stages of the research process.**”



NWO strategy 2019-2022

# Open Science



# FAIR: A seminal concern

## What is 'FAIR' Open Science?

- Findable
- Accessible
- Interoperable
- Reusable



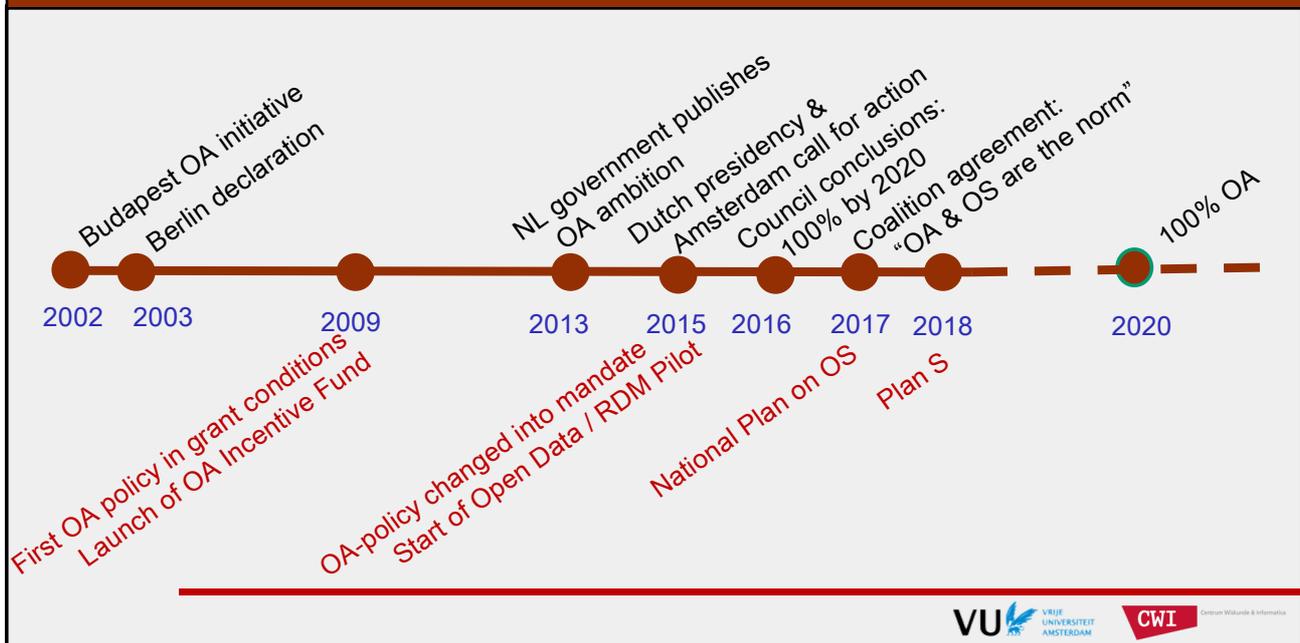
## Key ingredient:

- Data management plan for all funded research

## Potential H2020 danger:

- Information should be "As open as possible, closed if necessary" ...

## NWO and Open Science



## Case Study: Journal of Data Science

### Aims and Scope



Data Science is an interdisciplinary journal that addresses the development that data has become a crucial factor for a large number and variety of scientific fields. This journal covers aspects around scientific data over the whole range from data creation, mining, discovery, curation, modeling, processing, and management to analysis, prediction, visualization, user interaction, communication, sharing, and re-use. We are interested in general methods and concepts, as well as specific tools, infrastructures, and applications. The ultimate goal is to unleash the power of scientific data to deepen our understanding of physical, biological, and digital systems, gain insight into human social and economic behaviour, and design new solutions for the future. The rising importance of scientific data, both big and small, brings with it a wealth of challenges to combine structured, but often siloed data with messy, incomplete, and unstructured data from text, audio, visual content such as sensor and weblog data. New methods to extract, transport, pool, refine, store, analyze, and visualize data are needed to unleash their power while simultaneously making tools and workflows easier to use by the public at large. The journal invites contributions ranging from theoretical and foundational research, platforms, methods, applications, and tools in all areas. We welcome papers which add a social, geographical, and temporal dimension to Data Science research, as well as application-oriented papers that prepare and use data in discovery research.

### Vital stats:

- started in 2017
- not seeking author publication charges (yet)

## Main characteristics

### Journal foundations

- The journal is open access.
- Authors receive first decision within weeks rather than months
- Open and Attributed reviews for accepts and rejects. Community can also review
- All submitted papers are made available as pre-prints before the reviewing starts
- Data sets used/referenced are openly available and freely reusable
- Authors are encouraged/required to provide (meta)data with formal semantics
- Authors are encouraged to submit their papers in HTML

### Escape clauses

- There are several ways to be less open, but the intention is to keep it pure

## Editor experiences (Tobias Kuhn)

### The start

- “After our inaugural issue with position papers in 2017, we struggled to find enough high-quality submissions in 2018, but after a more intense outreach to potential authors, we now seem to have a better inflow. We still need to do more work on establishing the journal though. We are still waiving all article processing charges, so there is no financial income at this point.”

### Positive experiences

- “I think the authors choose us because the journal is fully Open Access including reviews (for some open science advocates, that's a strong point, but most don't care that much), that it is free for now, and that we are promising fast responses (“weeks rather than months”, though now about 2 months is normal).”

## Editor experiences (Tobias Kuhn)

### Negative experiences

- “People don't know us yet and we don't have an impact factor, both due to the fact that we are still a very young journal. The lack of impact factor also means that we don't get any submissions from China. But the waived article processing charge means that we often get low-quality submissions from countries like India.”

### Other OA journals of interest

- PeerJ (<https://peerj.com>)
- Semantic Web Journal (<http://www.semantic-web-journal.net/>)

### Interesting experiment to track

- It is, of course, only one data point

## Multiple routes to compliance

	Open Access publishing venues (journals or platforms)	Subscription venues (repository route)	Transition of Subscription venues (transformative arrangements)
<b>Route</b>	Authors publish in an Open Access journal or on an Open Access platform.	Authors publish in a subscription journal and make either the final published version (Version of Record (VoR)) or the Author's Accepted Manuscript (AAM) openly available in a repository.	Authors publish Open Access in a subscription journal under a transformative arrangement.
<b>Funding</b>	cOAlition S funders will financially support publication fees.	cOAlition S funders will not financially support "hybrid" Open Access publication fees in subscription venues.	cOAlition S funders can contribute financially to Open Access publishing under transformative arrangements.
	<b>= GOLD</b>	<b>= GREEN</b>	<b>= HYBRID</b>

## Open Access: what does NWO do already?

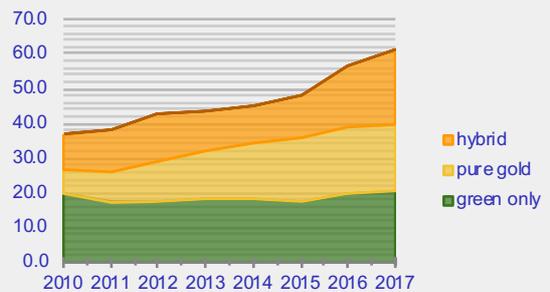
OA mandate in place since 2015  
(for articles and books)

Gold preferred route. Green accepted.  
No embargos!

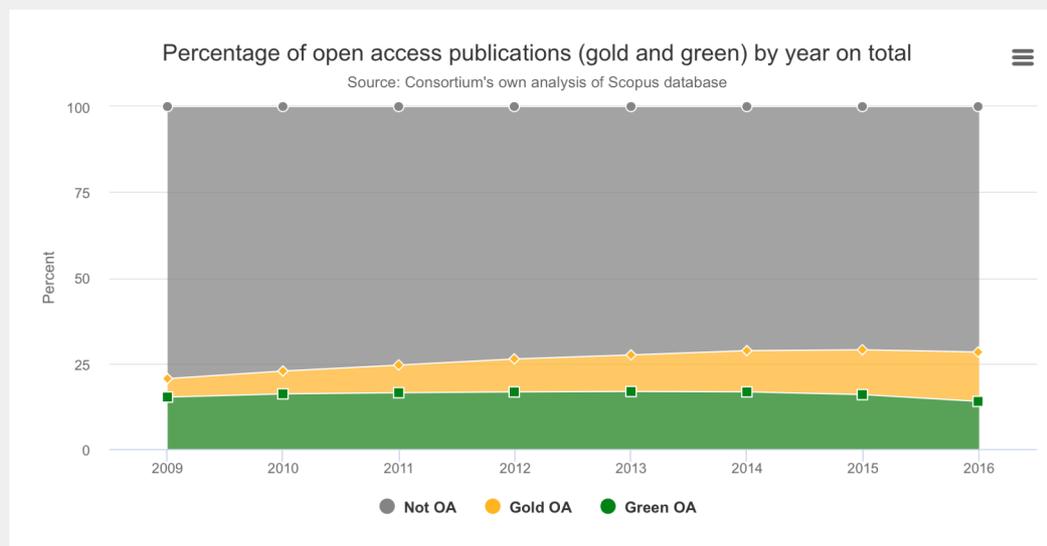
Funding (APCs for full gold only)  
as part of grants.

Large number of (transformative) OA-  
deals by Dutch VSNU in place

OA level NWO funded  
output (articles) 2010-2017



## The EU Reality...



## Enter "Plan S"



cOAlition S

Accelerating the transition to full and immediate Open Access to scientific publications

- Shared objective:
  - “After 1 January 2021 scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms.”

## Who is cOAlition S?

### National funders



### Charitable and international funders



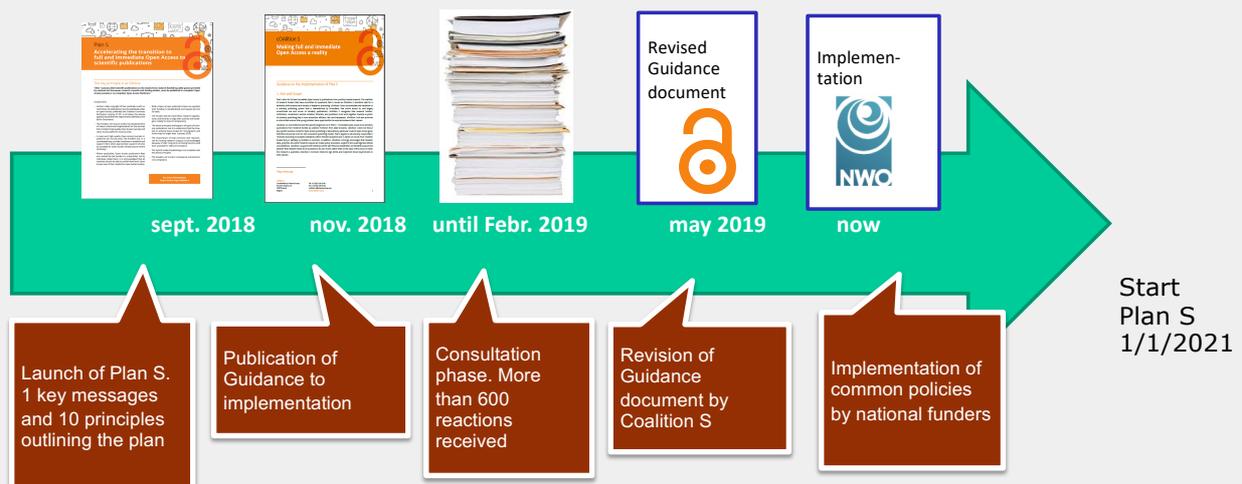
### European funders



## The 10 Principles of Plan S

- **Authors retain copyright of their publication** with no restrictions. All publications must be published under an open license, preferably the Creative Commons Attribution License CC BY. In all cases, the license applied should fulfil the requirements defined by the Berlin Declaration;
- **The Funders** will ensure jointly the **establishment of robust criteria and requirements for the services** that compliant high quality **Open Access journals and Open Access platforms** must provide;
- In case such high quality Open Access journals or platforms do not yet exist, **the Funders will**, in a coordinated way, provide incentives to **establish and support them** when appropriate; support will also be provided for Open Access infrastructures where necessary;
- Where applicable, **Open Access publication fees are covered by the Funders or universities**, not by individual researchers; it is acknowledged that all scientists should be able to publish their work Open Access even if their institutions have limited means;
- When Open Access **publication fees are** applied, their funding is **standardised and capped** (across Europe);
- **The Funders will ask universities, research organisations, and libraries to align their policies** and strategies, notably to ensure transparency;
- The above principles shall apply to all types of scholarly publications, but it is understood that **the timeline to achieve Open Access for monographs and books may be longer** than 1 January 2020;
- **The importance of open archives** and repositories for hosting research outputs is acknowledged because of **their long-term archiving function** and their potential for editorial innovation;
- The 'hybrid' model of publishing is **not compliant** with the above principles;
- **The Funders will monitor compliance and sanction non-compliance.**

## NWO Timeline



## Open Access Publication fees (APCs)

### Issues

- Recognise the importance of ‘fee-free’ OA Journals and Platforms (‘free to read – free to publish’)
- Pay a fair and reasonable APC level that reflects the costs involved in the quality assurance, editing and publishing process,
- APC waivers for authors from low-income countries and discounts for authors from middle-income countries
- Calls for full transparency of Open Access publication costs and fees.
- To help inform the potential standardisation of fees and/or APC caps, cOAlition S will commission an independent study on OA publication costs and fees (including APCs)

## Open access: next steps

### Implementation of Plan S foreseen from 2021 onwards

- Monitoring compliance
- Support for OA books and national (Dutch) language journals
- Support OA infrastructure
- Awareness and education



## Other Voices

What are the roles of professional societies and vested publishers?

- ACM
- IEEE
- Commercial Journals

What is the impact on careers

- Quality guarantee
- Finding/Marketing content
- Reputation management vs publication management

Is this the real solution to the problem?

- “Open Access” vs. “Affordable Access”

## Expectation (in the Netherlands)

All parties will need to support some form of Plan S compliance

- But unclear if this can be arranged by January 2021

Journals and conference publications are the ‘easy’ part

- Nobody really understands the impact of archiving *all* data that supports a publication
- Nobody understands the impact of open reviewing
- Who has time to read all of the negative results that accompany the (ultimate) positive results of an article?