



# Open Access in a European policy context

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**OPEN SCIENCE AS A COMMON GOOD,**  
**May 3, 2017**



# **Agenda**

**Open Access - The general concept**

**National and international policies**

**Open access to scientific peer reviewed publications in Horizon 2020**





# Open Access (OA)

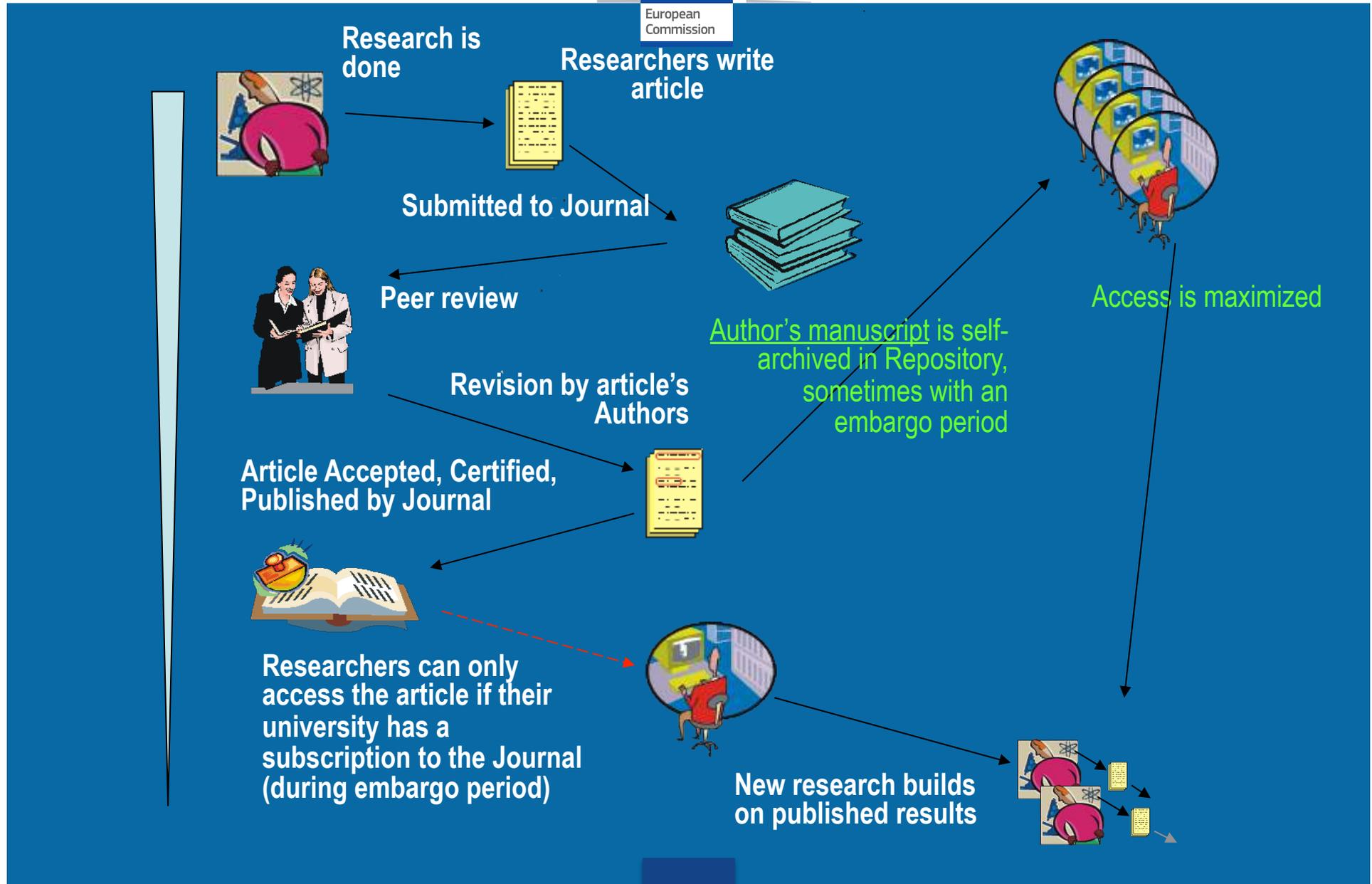
OA = online access at no charge to the user

- to *peer-reviewed scientific publications*
- to *research data* (→ data management implications)
- *Part of open science, systemic change in the modus operandi of science and research affecting the whole research cycle and its stakeholders*

Two main OA publishing business models (for publications)

- **Self-archiving**: deposit of manuscripts & **immediate/delayed OA** provided by author ("Green OA")
- **OA publishing: immediate OA** provided by publisher ("Gold OA"), e.g. 'author-pay' model (APC)

# open access loop - green

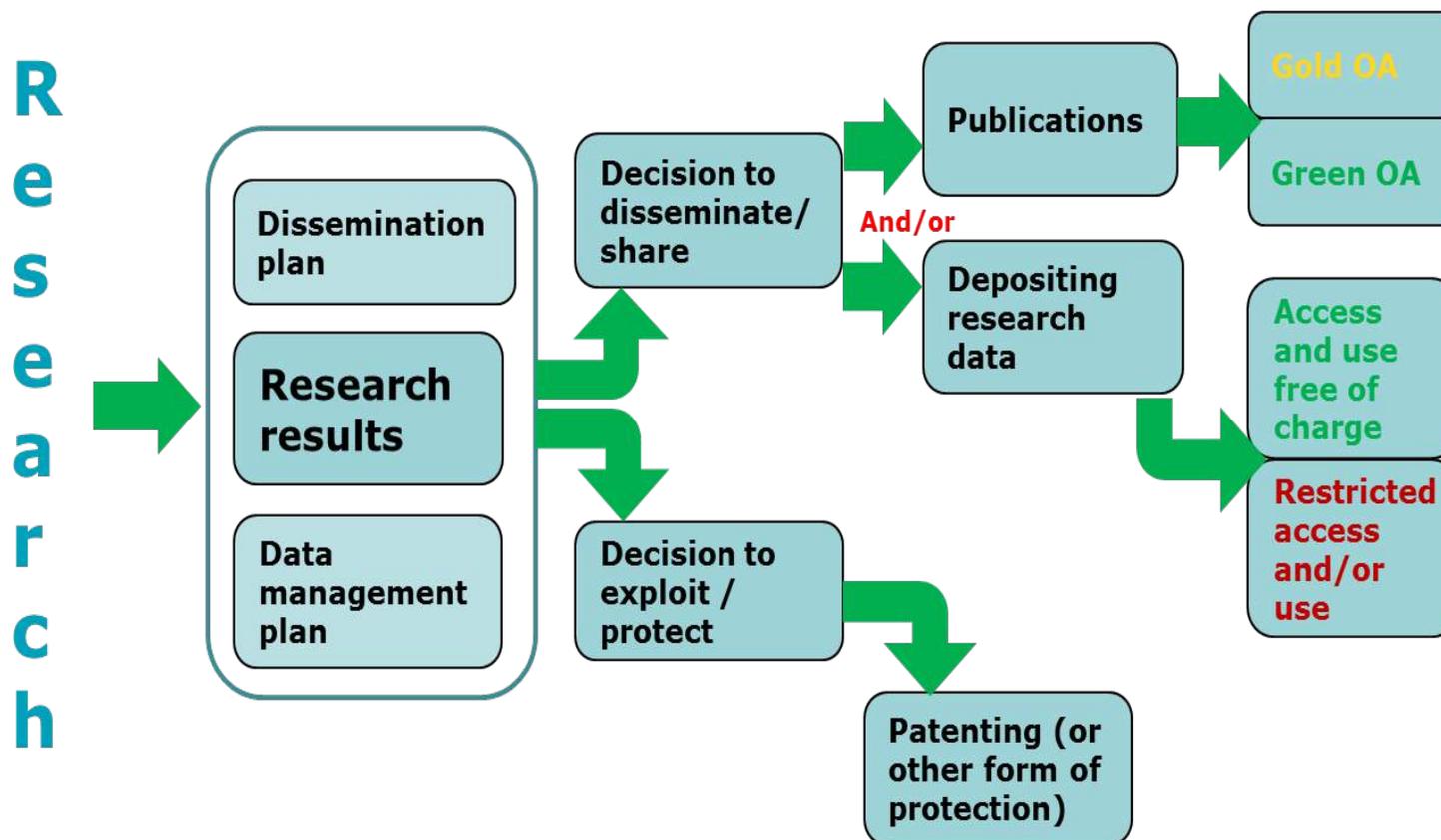


# open access loop - gold



# What OA is NOT

- Not an obligation to publish
- Not at odds with patenting (see graph)
- OA publications go the same peer review process



# Looking for scientific information in the 21<sup>st</sup> century



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## Artikel

Tipp: Suchen Sie nur nach Ergebnissen auf **Deutsch**. Sie können Ihre Sprache in den Scholar-Einstellungen festlegen.

Meine Bibliothek

### Extra-solar planets

MAC Perryman - Reports on Progress in Physics, 2000 - iopscience.iop.org

Abstract The discovery of the first extra-solar planet surrounding a main-sequence star was announced in 1995, based on very precise radial velocity (Doppler) measurements. A total of 34 such planets were known by the end of March 2000, and their numbers are growing  
Zitiert von: 251 Ähnliche Artikel Alle 15 Versionen Web of Science: 114 Zitieren Speichern Mehr

[PDF] arxiv.org

Beliebige Zeit

Seit 2017

Seit 2016

Seit 2013

Zeitraum wählen...

Detection of an **Extrasolar Planet** AtmosphereBased on observations with the NASA/ESA Hubble Space Telescope (HST), obtained at the Space Telescope Science ...

[PDF] arxiv.org

D Charbonneau, TM Brown, RW Noyes... - The Astrophysical ..., 2002 - iopscience.iop.org

Abstract We report high-precision spectrophotometric observations of four **planetary** transits of HD 209458, in the region of the sodium resonance doublet at 589.3 nm. We find that the photometric dimming during transit in a bandpass centered on the sodium feature is deeper  
Zitiert von: 994 Ähnliche Artikel Alle 16 Versionen Web of Science: 656 Zitieren Speichern Mehr

Nach Relevanz sortieren

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Web-Suche

Seiten auf Deutsch

### Infrared radiation from an extrasolar planet

D Deming, S Seager, LJ Richardson, J Harrington - Nature, 2005 - nature.com

Abstract A class of **extrasolar** giant **planets**—the so-called 'hot Jupiters' (ref. 1)—orbit within 0.05 au of their primary stars (1 au is the Sun–Earth distance). These **planets** should be hot and so emit detectable infrared radiation 2. The **planet** HD 209458b (refs 3, 4) is an ideal  
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[HTML] nature.com  
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Patente einschließen

Zitate einschließen

Toward a deterministic model of **planetary** formation. I. A desert in the mass and semimajor axis distributions of **extrasolar planets**

[PDF] arxiv.org

S Ida, DNC Lin - The Astrophysical Journal, 2004 - iopscience.iop.org

Abstract In an attempt to develop a deterministic theory for **planet** formation, we examine the accretion of cores of giant **planets** from planetesimals, gas accretion onto the cores, and their orbital migration. We adopt a working model for nascent protostellar disks with a wide  
Zitiert von: 632 Ähnliche Artikel Alle 7 Versionen Web of Science: 422 Zitieren Speichern Mehr

Alert erstellen

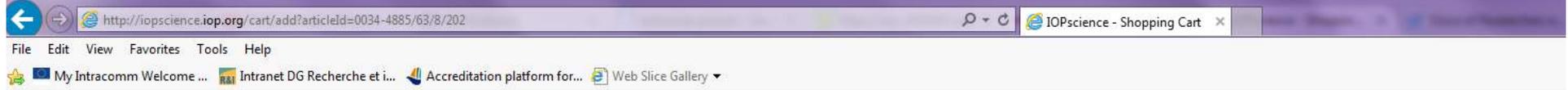
### The presence of methane in the atmosphere of an extrasolar planet

MR Swain, G Vasisht, G Tinetti - Nature, 2008 - nature.com

Abstract Molecules present in the atmospheres of **extrasolar planets** are expected to influence strongly the balance of atmospheric radiation, to trace dynamical and chemical processes, and to indicate the presence of disequilibrium effects. As molecules have the

[HTML] nature.com  
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# The paywall



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M A C Perryman 2000 <i>Rep. Prog. Phys.</i> <b>63</b> 1209		<b>£66.00</b>
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REVIEW ARTICLE

## Extra-solar planets

M A C Perryman

Astrophysics Division, European Space Agency, ESTEC, Noordwijk 2200AG, The Netherlands; and Leiden Observatory, University of Leiden, The Netherlands

**Abstract.** The discovery of the first extra-solar planet surrounding a main-sequence star was announced in 1995, based on very precise radial velocity (Doppler) measurements. A total of 34 such planets were known by the end of March 2000, and their numbers are growing steadily. The newly-discovered systems confirm some of the features predicted by standard theories of star and planet formation, but systems with massive planets having very small orbital radii and large eccentricities are common and were generally unexpected.

Other techniques being used to search for planetary signatures include accurate measurement of positional (astrometric) displacements, gravitational microlensing, and pulsar timing, the latter resulting in the detection of the first planetary mass bodies beyond our Solar System in 1992. The transit of a planet across the face of the host star provides significant physical diagnostics, and the first such detection was announced in 1999. Protoplanetary disks, which represent an important evolutionary stage for understanding planet formation, are being imaged from space. In contrast, direct imaging of extra-solar planets represents an enormous challenge. Long-term efforts are directed towards infrared space interferometry, the detection of Earth-mass planets, and measurement of their spectral characteristics.

Theoretical atmospheric models provide predictions of planetary temperatures, radii, albedos, chemical condensates, and spectral features as a function of mass, composition and distance from the host star. Efforts to characterise planets occupying the 'habitable zone', in which liquid water may be present, and indicators of the presence of

arXiv:astro-ph/0005602v1 31 May 2000



# The EU & open access





# The Commission objective

**optimise the impact of publicly-funded scientific research**

- At European level (Horizon 2020)
- At Member State level (ERA)

**One way to get there: open access**

**Expected benefits:**

- Better and more efficient science
- Economic growth
- Broader, faster, more transparent and equal access for the benefit of researchers, industry and citizens

... in the European Research Area and beyond





# The European Commission is a...

## **Policy maker**

- It proposes EU legislation & legislates with other EU institutions
- It invites Member States to act

## **Funding agency**

- It sets its own access and dissemination rules for EC-funded research

## **Capacity builder**

- It funds projects that support EC/EU policy





## Three key documents (16.07.2012)

**Communication** 'A reinforced European Research Area partnership for excellence and growth'

**Communication** 'Towards better access to scientific information: boosting the benefits of public investments in research'

**Recommendation** on access to and preservation of scientific information





# Political Support

## Council Conclusions 27 May 2016

WELCOMES OA to scientific publications as the default. Target of 100% OA by 2020

SUPPORTs optimal re-use of data with the underlying principle of "as open as possible as closed as necessary"

WELCOMES the intention of the Commission to make research data produced by Horizon 2020 open by default, whilst recognising the right of opting out

CALLS on the Commission to promote data stewardship, including DMPs – importance of making data findable, accessible, interoperable and re-usable (FAIR)



# Open access policies across the EU

most EU Member States reported a national preference for one of the two types of open access,

Preference for the Green model: Belgium, Cyprus, Denmark, Estonia, Greece, Ireland, Lithuania, Malta, Norway, Portugal, Slovakia and Spain.

Preference for the Gold model: Hungary, the Netherlands, Romania, Sweden and the United Kingdom.

Other Member States support both models equally, such as Germany, France, Croatia, Italy, Luxembourg, Poland and Finland.

However, there is generally a system of predominance of one model with the possibility of using the other model, so a mixture of both routes results.

In most cases based on soft-law, not national legislation





# The international landscape

## Robust open access policies around the world – not invented in Europe

- Strong US OA mandate for federally funded research (agencies with budget of over 100 million €), most notably NIH
- Strong green open access mandate in Latin America (SCIELO)
- Strong open access policies also in Canada, Australia and Japan
- Developing policies in other countries, e.g. China, Russia...
- Key non-state funders also have robust mandates (Wellcome Trust, Gates Foundation)





# Open access in Horizon 2020





# Open access in Horizon 2020

## Regulation establishing Horizon 2020

*"To increase the circulation and exploitation of knowledge, open access to scientific publications should be ensured. Furthermore, open access to research data resulting from publicly funded research under Horizon 2020 should be promoted, taking into account constraints pertaining to privacy, national security and intellectual property rights"*

*Open access to **scientific publications** resulting from publicly funded research under Horizon 2020 shall be **ensured** [...].*

*Open access to **research data** resulting from publicly funded research under Horizon 2020 shall be **promoted**. [...].*





## From FP7 to H2020: OA to publications from pilot to underlying principle

- Obligation to provide OA, either through the Green or Gold way in all areas (deposition mandatory either way)
- Allowed embargoes: 6/12m
- Gold open access costs eligible for reimbursement as part of the project budget while the project runs & post-grant support being piloted through OpenAIRE
- Authors encouraged to retain copyright and grant licences instead





## OA to publications in H2020: first results

- 87% of Horizon 2020 projects have not yet produced publications
- 1639 projects have already produced a total number of 7376 publications,
- 61-68% of scientific publications produced as a result of Horizon 2020 funding are already open access
- Most of them green open access with an average embargo period of 11 months
- An encouraging start but more needs to be done





# Open Science Policy Platform

- ERA & framework conditions for actors:
- European Charter for researchers
  - Code of conduct for Research Integrity
  - Charter for Access to Research Infra
  - ...
- DSM & framework conditions for data:
- Copyright - TDM
  - Data Protection
  - Free Flow of Data
  - ...

European Commission

Open Science Policy Platform

Wide input from stakeholders:

- ad-hoc meetings and workshops
- e-platform with wider community
- *reports and independent experts*

- ✓ EG on open science cloud
- ✓ EG on altmetrics
- ✓ EG on alt. business models for OA publishing
- ✓ EG on FAIR open

## European Open Science Agenda:

- OA publishing models
- FAIR open data
- Science Cloud
- Alternate metrics
- Rewards & careers
- Education & skills
- Citizen Science
- Research integrity
- ...

↑ advice

↻ context

↑ opinions



## In summary...

- Open access as part of a changing scientific system (Open Science)
- Open access as a means to improve knowledge circulation and provide value for the taxpayers' money
- Horizon 2020 ambitious yet pragmatic on aspects of open access
  - Open access to publications mandatory but allows free choice of green or gold
- Support from/for H2020: work programmes e-Infrastructure & Science with and for Society (e.g. OpenAIRE project)
- Open access must be effective, affordable, competitive and sustainable for researchers and innovative businesses





# Ressources

## **Open innovation, open science, open to the world. A vision for Europe**

<http://bookshop.europa.eu/en/open-innovation-open-science-open-to-the-world-pbKI0416263/>

## **NPR report (Open Access in the EU Member States)**

[https://ec.europa.eu/research/openscience/pdf/openaccess/npr\\_report.pdf#view=fit&pagemode=none](https://ec.europa.eu/research/openscience/pdf/openaccess/npr_report.pdf#view=fit&pagemode=none)

## **H2020 guidance**

[http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination\\_en.htm](http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm)

## **May 2016 Council Conclusions**

<http://data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf>

## **Uptake of open access to scientific publication in Horizon 2020:**

<https://data.europa.eu/euodp/data/dataset/open-access-to-scientific-publications-horizon2020>





# We welcome your input



## Contact us

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