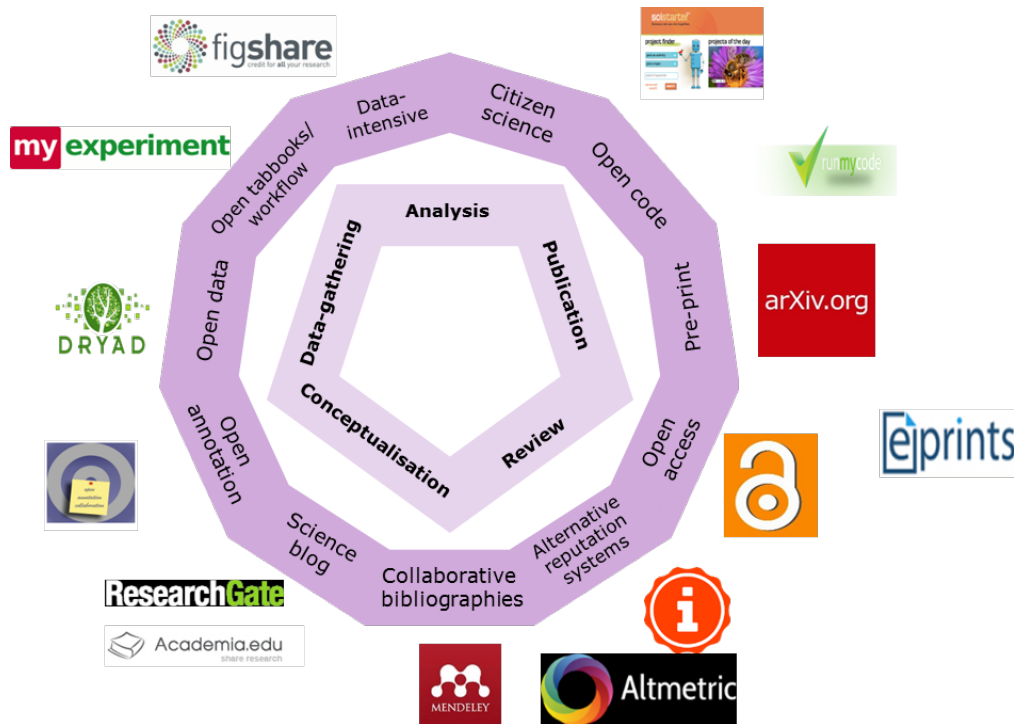# The EU policy on open acces

Alea López de San Román, DG R&I G.4, Open Science unit
Workshop REBIUN Proyectos Digitales, 27 September 2019

The policy context: Open Science

Illustration: Ron Dekker, CESSDA

Open Science
=
Systemic transition of the science system which affects the way

- research is performed
- knowledge is shared/diffused/preserved
- research projects/results are evaluated
- research is funded
- researchers are rewarded
- future researchers are trained

Affecting the whole research cycle and all its stakeholders

Why is Open Science so important?

It's good for science: efficiency, verifiability, transparency, inter-disciplinarity

It's good for the economy: access to and re-use of scientific information by industry, innovation

It's good for society: broader, faster, transparent & equal access for citizens, increased societal impact of science and research

Open Science is:

- *Just science done right!*

- *Excellent science!*

Stickers: Melanie Imming, ImmingImpact

European Commission

Scope & ambitions by 2020

Use & management of research results and data

- ❑ **Open Data**

- ❑ **European Open Science Cloud**

- ❑ **Altmetrics**

- ❑ **Future of scholarly communication**

Research actors (researchers, institutions and funders)

- ❑ **Rewards**

- ❑ **Research Integrity**

- ❑ **Education and skills**

- ❑ **Citizen Science**
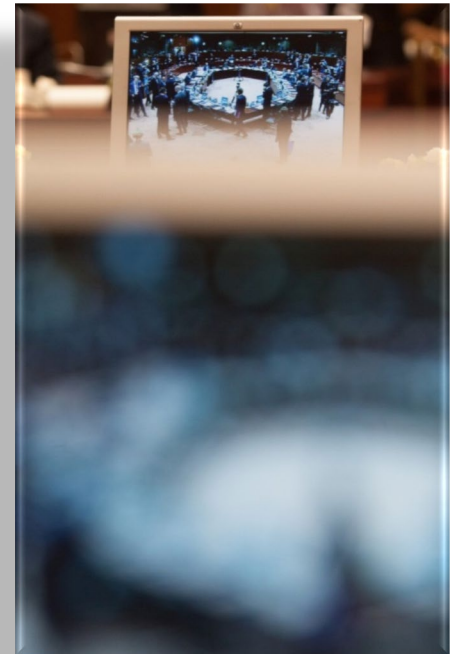
Who are we?

A policy maker

- We propose EU legislation
- We legislate with other Community institutions (European Parliament, Council…)
- We invite Member States to act

A funding agency

- We set our own rules for EC-funded scientific research and innovation

A capacity builder

- We fund projects that support our policy

Open Science in the R&I Framework Programmes

Open access
to scientific publications

Scientific publications in H2020
(Art. 29.2 MGA)

Mandatory open access to peer-reviewed publications through repositories

What to do?

Deposit + open access

Subscription Publisher

Publish
Paper has been accepted in peer-reviewed venue, has been PRed and fully edited

-watch the contracts you sign with publishers- you can negotiate!

-make sure you can deposit

Deposit
Deposit final author copy or publisher pdf in repository at the same time as publication

-at your institutional repository or appropriate subject repository or zenodo

Open Access
Provide open access through repository at same time as publication

-max. acceptable embargo: 6/12 months (STEM/SSH)

Open access Publisher

Publish
Paper has been accepted in open access peer-reviewed venue and is published directly in open access by publisher

-you may need to pay fee (APC) or not (most journals don't charge)

-DOAJ.org

Deposit
Deposit final author copy or publisher pdf in repository at the same time as publication

-at your institutional repository or appropriate subject repository or zenodo

Open Access
Provide open access with a link from the repository to publisher's site

-no embargo here, since journal is open access

European Commission

Open access
to research data

Research data in H2020
(Art. 29.3 MGA)
a.k.a. the Open Research Data Pilot (ORD)

Not so much a pilot any more! By default in!

- unless exception in WP

Addresses several things at once:

- **Streamlining Research Data Management (RDM)** as a standard practice through **Data Management Plans (DMPs)**- required as deliverable
- **Open access to research data-** as open as possible, as closed as necessary!

Costs for open access to research data fully eligible during the duration of the project

The Open Research Data Pilot will apply to all *thematic areas* of Horizon 2020 from the **start of the 2017 work programme**.

However, not all *instruments* are suitable for research data sharing. **The following instruments are excluded**:

- "co-fund" and "prizes" instruments
- "ERC proof of concept" grants
- "ERA-Nets" that do not produce data
- SME instrument, phase 1

Coordination and support actions are included in the Open Research Data Pilot, as many of them produce relevant data.

For 2-stage calls, information on participation in the Pilot will be requested only at stage 2.

Which types of data?

- **'underlying data'**

(the data needed to validate the results presented in scientific publications), **including the associated metadata** (i.e. metadata describing the research data deposited), **as soon as possible**

- **any other data**

(for instance curated data not directly attributable to a publication, or raw data), **including the associated metadata, as specified and within the deadlines laid down in the DMP** – that is, according to the individual judgement by each project/grantee.

Data Management Plans (DMPs)

●**Projects need to create a DMP**, except if they opt-out (although they still can on a voluntary basis).

●DMP=early deliverable **within 6 months** of the start of the project

●**Living document**! To be updated

But not all data can be open

"as open as possible, as closed as necessary!"

Projects can therefore **partially or totally opt out** at any stage (either before or after signing the grant) **or stay in and have their data closed** (and "just" have a DMP) if they explain that:

- participation is incompatible with the obligation to protect results that can reasonably be expected to be **commercially or industrially exploited**

- participation is incompatible with the need for **confidentiality** in connection with security issues

- participation is incompatible with rules on protecting **personal data**

- participation would mean that the **project's main aim** might not be achieved

- the project will **not generate / collect any research data** or

- there are **other legitimate reasons** *(you can enter these in a free-text box at the proposal stage)*

Participation in the Open Research Data Pilot
is **not** part of the project evaluation.

In other words, proposals will not be penalised for
opting out.

Some misconceptions…..

about Horizon 2020 and OA

"H2020 is forcing me to publish!"

OPEN ACCESS IS NOT A REQUIREMENT TO PUBLISH
In Horizon 2020 researchers are free to publish or not.

OPEN ACCESS DOES NOT AFFECT THE DECISION TO EXPLOIT RESEARCH RESULTS COMMERCIALLY,
e.g. through patenting.

The decision whether to publish through open access comes after the more general decision on whether to publish directly or to first seek protection.
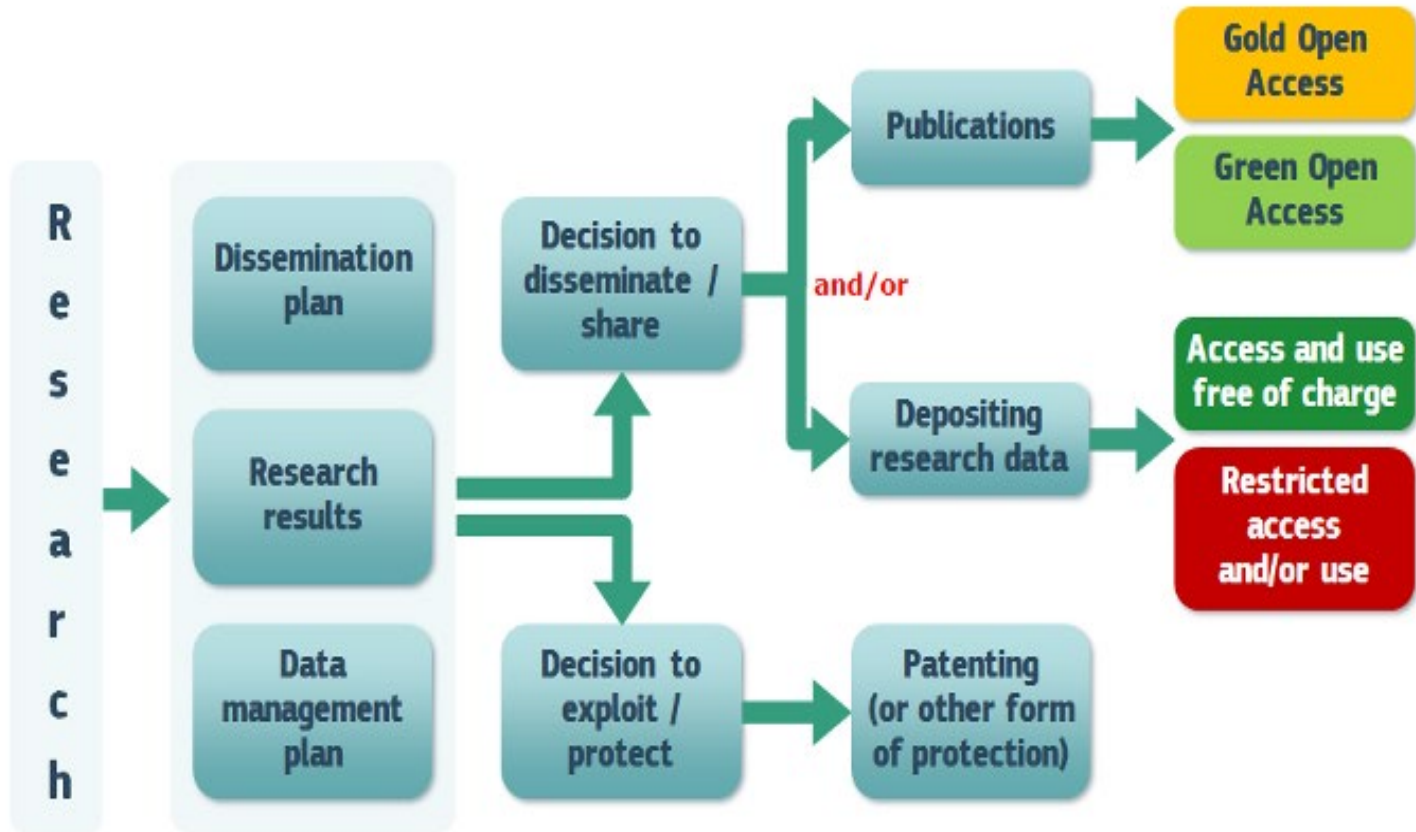
It is important to stress that open access publications undergo the same kind of peer review process as subscription publications.

"H2020 is forcing me to disclose all of my data!"

European Commission

AS OPEN AS POSSIBLE, AS CLOSED AS NECESSARY

Grantees have the right to opt-out, but need to say why

Top three reasons for opt-out:

intellectual property rights

privacy

might jeopardise project's main objective

Resources

Open access | Data management

Open access & Data management

These pages guide you through

- context and rules on **open access** covering beneficiaries in projects funded or co-funded under Horizon 2020 and
- **data management under Horizon 2020** for applicants and beneficiaries who take part in the **pilot on open access to research data**

What Is Open Access (OA)?

Open access can be defined as the practice of **providing on-line access to scientific information that is free of charge to the reader**. In the context of R&D, open access typically focuses on access to 'scientific information' or 'research results', which refers to two main categories:

- **Peer-reviewed scientific research articles** (primarily published in academic journals)
- **Research data**

More details about Horizon 2020 provisions for open access to publications and data is given below.

OPEN ACCESS TO PUBLICATIONS

Under Horizon 2020, each **beneficiary must ensure open access to all peer-reviewed scientific publications relating to its results**.

Beneficiaries can freely choose between the most appropriate route towards open access for them:

- **Self-archiving** (also referred to as 'green' open access) means that a published article or the final peer-reviewed manuscript is archived (deposited) in an online repository before, alongside or after its publication. Repository software usually allows authors to delay access to the article ('embargo period') If this route is chosen beneficiaries must ensure open access to the publication within a maximum of six months (twelve months for publications in the social sciences and humanities).
- **Open access publishing** (also referred to as 'gold' open access) means that an article is immediately provided in open access mode (on the publisher/journal website). Publishers sometimes charge so called Article Processing Charges (or APCs) to make articles open. Such **costs are eligible for reimbursement during the duration of the project** as part of the overall project budget.
  Furthermore, the EU funded pilot project **OpenAIRE** (Open Access Infrastructure for Research in Europe) currently provides support for open access costs incurred **after the end of the grant**. This also applies to FP7 projects. In the case of gold open access publishing, open access must be granted at the latest on the date of publication and yo...

OPEN A...

RESEARCH & INNOVATION
Participant Portal H2020 Online Manual

Search

H2020 Online Manual
My Area - User account & roles
  EU Login
  Roles & access rights
  Terms and Conditions of Use
Grants
  Applying for funding
    Find a call
      Horizon 2020 structure and budget
      What you need to know about Horizon 2020 calls
    Find partners or apply as individual
    Register in the Participant Register
      Registration of your organisation
      LEAR appointment
      Validation of potential beneficiaries
      Bank account validation
      Financial Capacity Assessment
      Data update
      Certifications
    Submit a proposal
      Get prepared
      Electronic proposal submission
  From evaluation to grant signature
    Admissibility and eligibility check
  Evaluation of proposals
    Evaluation criteria
    Evaluation process and results
  Grant preparation
    Enter & submit grant data
    Ethics review

Grants

Applying for funding

Find a call | Find partners | Register an organisation | Submit a proposal

Evaluation & Grant signature

Eligibility check | Evaluation of proposals | Grant preparation | Grant signature

Grant management

Keeping records | Amendments | Reports & payment requests | Deliverables
Dissemination & exploitation | Communicating your project | Acknowledgement of EU funding | Checks, audits, reviews & investigations

Working as an expert

Expert registration | Contracting & payment | Expert roles & tasks

Cross-cutting priorities & issues

International cooperation | Social Sciences & Humanities | Open access & Data management | Climate action & Sustainable development
Ethics | Gender | SMEs | ERA-NETs
Links to regional policy | Intellectual property | Innovation procurement

Financial instruments
Prizes

My Area - User account & roles

Reference documents

- Guidelines to rules on Open Access to Scientific Publications & Open Access to Research Data in Horizon 2020
- Guidelines on the Implementation of Open Access to Scientific Publications & Research Data in projects supported by the European Research Council under Horizon 2020
- Guidelines on Data Management in Horizon 2020
- Template for the Data Management Plan [ODT format]
- Template for the Data Management Plan. Annotated version for participants under Societal Challenge 1
- ERC template for the Data Management Plan [ODT format]
- Scope of pilot indicated in the introduction to the Horizon 2020 Work Programme
- H2020 Annotated Model Grant Agreement - Open access to scientific publications
- H2020 Annotated Model Grant Agreement - Open access to research data

Related links

- European Commission Open Access Policy (Open Science)
- OpenAIRE - Open Access Infrastructure for Research in Europe
- European IPR Helpdesk factsheet "Publishing vs. patenting"

Participant Portal H2020 Online Manual

http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm

Still many challenges ahead!

Open access to publications

- Increasing uptake to 100%
- Reinforcing monitoring and incentives/'sanctions'
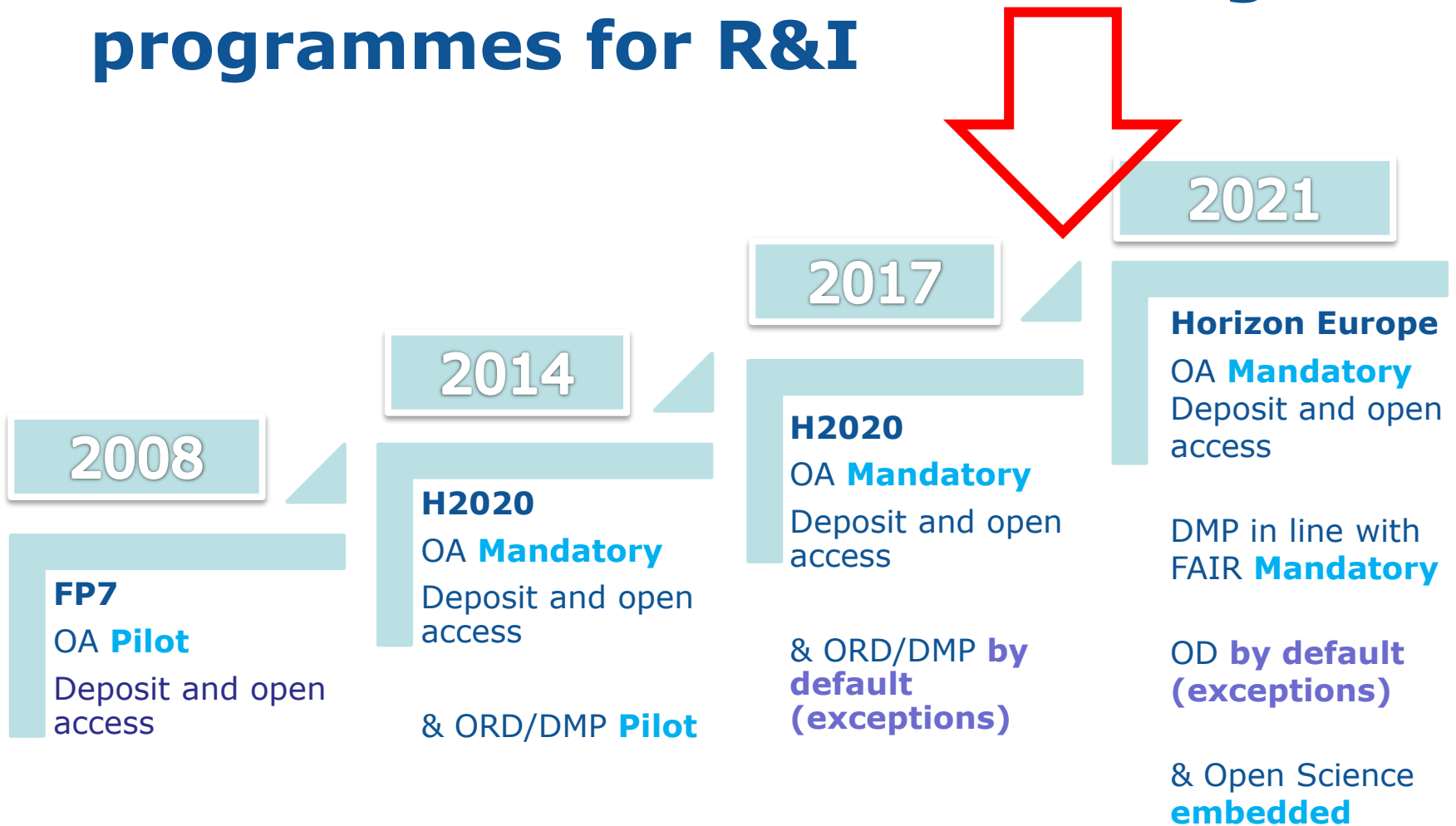- Hybrid journals and other financial issues (caps, post-grant etc.)

Open access and research data

- The DMPs!
- Mainstreaming FAIR data across the FPs
- Stimulating a change in scientific culture

What about Horizon Europe?

The evolution of the EU funding programmes for R&I

2008

FP7
OA **Pilot**
Deposit and open access

2014

H2020
OA **Mandatory**
Deposit and open access

& ORD/DMP **Pilot**

2017

H2020
OA **Mandatory**
Deposit and open access

& ORD/DMP **by default (exceptions)**

2021

Horizon Europe
OA **Mandatory**
Deposit and open access

DMP in line with FAIR **Mandatory**

OD **by default (exceptions)**

& Open Science **embedded**

Horizon Europe goes beyond OA (publications & data)

to embrace & incentivise Open Science as *modus operandi* for science

European Commission

Articles setting Open Science obligations in Horizon Europe

Article 2 defines open access and open science

Article 10 sets the **obligations** for Open Science with regard to Open Access, RDM, FAIR and other open science practices. It also sets the **principle of reciprocity** in Open Science.

Article 35 foresees further **obligation**s in terms of IPR, Data Management Plans, FAIR and use of European Open Science Cloud and certain exceptions ("as open as possible as closed as necessary")

European Commission

Article 2- Definitions

(4) 'open access' means the practice of providing online access to research outputs resulting from actions funded under the Programme, free of charge to the end-user, in accordance with Article 10 and 35(3) of this Regulation;

(4a) 'open science' means an approach to the scientific process based on open cooperative work, tools and diffusing knowledge, including the elements of article 10.

Article 10- Open science

1. The programme shall encourage open science as an approach to the scientific process based on cooperative work and diffusing knowledge, in particular in line with the following elements:

- **open access to scientific publications** resulting from research funded under the Programme;

- **open access to research data**, including those underlying scientific publications.

These elements shall be ensured **in accordance with Article 35(3) of this regulation**. The latter shall also be in line with the principle **'as open as possible, as closed as necessary**';

European Commission

Article 10- Open science

1a. The principle of reciprocity in open science shall be promoted and encouraged in all association and cooperation agreements with third countries, including agreements signed by funding bodies entrusted for indirect management of the Programme.

2. Responsible management of research data shall be ensured in line with the principles 'Findability', 'Accessibility', 'Interoperability' and 'Reusability' (**FAIR**). Attention shall also be paid to the long-term preservation of data.

3. Other open science practices shall be promoted and encouraged, including for the benefit of SMEs.

Article 35- Exploitation and dissemination

3. Beneficiaries shall ensure that **open access to scientific publications** applies under the terms and conditions laid down in the grant agreement. In particular, the beneficiaries shall ensure that they or the authors retain sufficient intellectual property rights to comply with their open access requirements.

Open access to research data shall be the general rule under the terms and conditions laid down in the grant agreement, ensuring the possibility of exceptions **following the principle 'as open as possible, as closed as necessary'**, taking into consideration the legitimate interests of the beneficiaries including commercial exploitation and any other constraints, such as data protection rules, privacy, confidentiality, trade secrets, Union competitive interests, security rules or intellectual property rights.

The work programme may provide for **additional incentives or obligations to adhere to open science practices.**

Open Science in Horizon Europe

Article 35- Exploitation and dissemination

4. Beneficiaries shall manage all research data generated in a Horizon Europe action **in line with the FAIR principles and in accordance with the terms and conditions laid down in the grant agreement and shall establish a Data Management Plan.**

The work programme may provide, where justified, for **additional obligations to use the European Open Science Cloud** (EOSC) for storing and giving access to research data.

Plan S
Making full and immediate Open Access a reality

Principles and Implementation

Part I: The Plan S Principles

"With effect from 2021, all scholarly publications on the results from research funded by public or private grants provided by national, regional and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo."

In addition:

01 Authors or their institutions retain copyright to their publications. All publications must be published under an open license, preferably the Creative Commons Attribution license (CC BY), in order to fulfil the requirements defined by the Berlin Declaration;

02 The Funders will develop robust criteria and requirements for the services that high-quality Open Access journals, Open Access platforms, and Open Access repositories must provide;

03 In cases where 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;

06 The Funders encourage governments, universities, research organisations, libraries, academies, and learned societies to align their strategies, policies, and practices, notably to ensure transparency.

07 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 book chapters will be longer and requires a separate and due process;

08 The Funders do not support the 'hybrid' model of publishing. However, as a transitional pathway towards full Open Access within a clearly defined timeframe, and only as part of transformative arrangements, Funders may contribute to financially supporting such arrangements;

Possible implementation of Plan S in HE

- **Publication in hybrid journals allowed but not funded** (already announced in Horizon Europe´s Impact Assessment)

- **Immediate open access**: embargoes not accepted

- **Copyright retention and open license:** copyright retention already in the HE Regulation. Open license to be required in MGA

But...

We do more than funding research!

- **Open Research Europe publishing platform**

- **European Open Science Cloud**
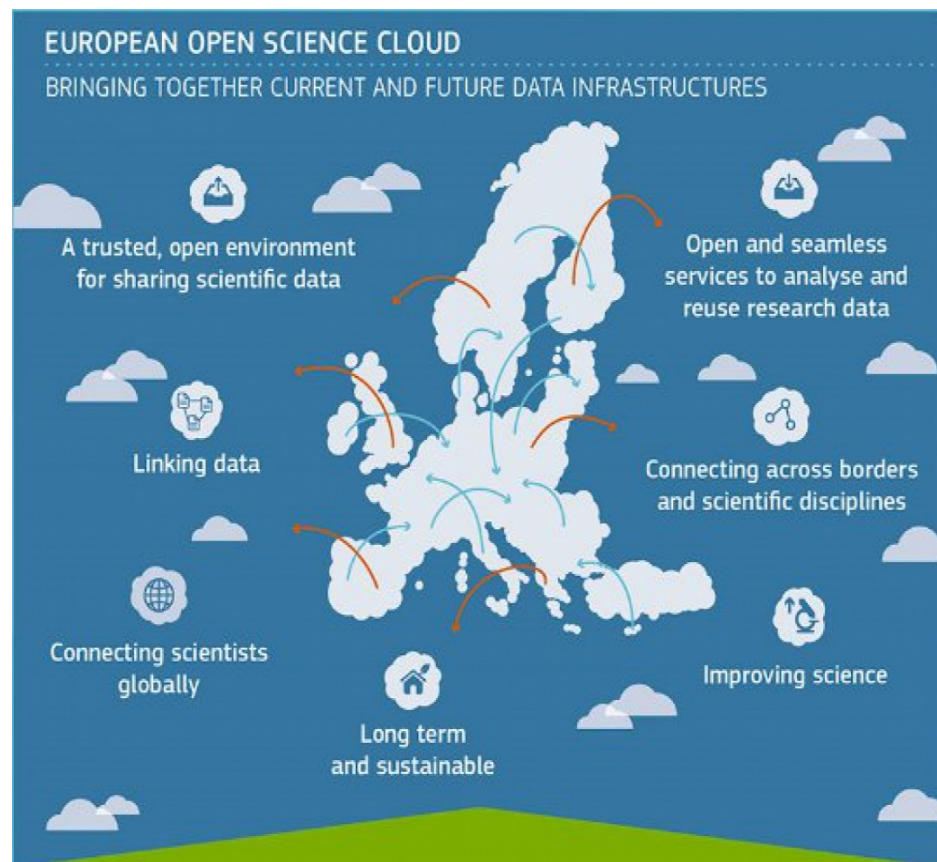
- **EU legislation**
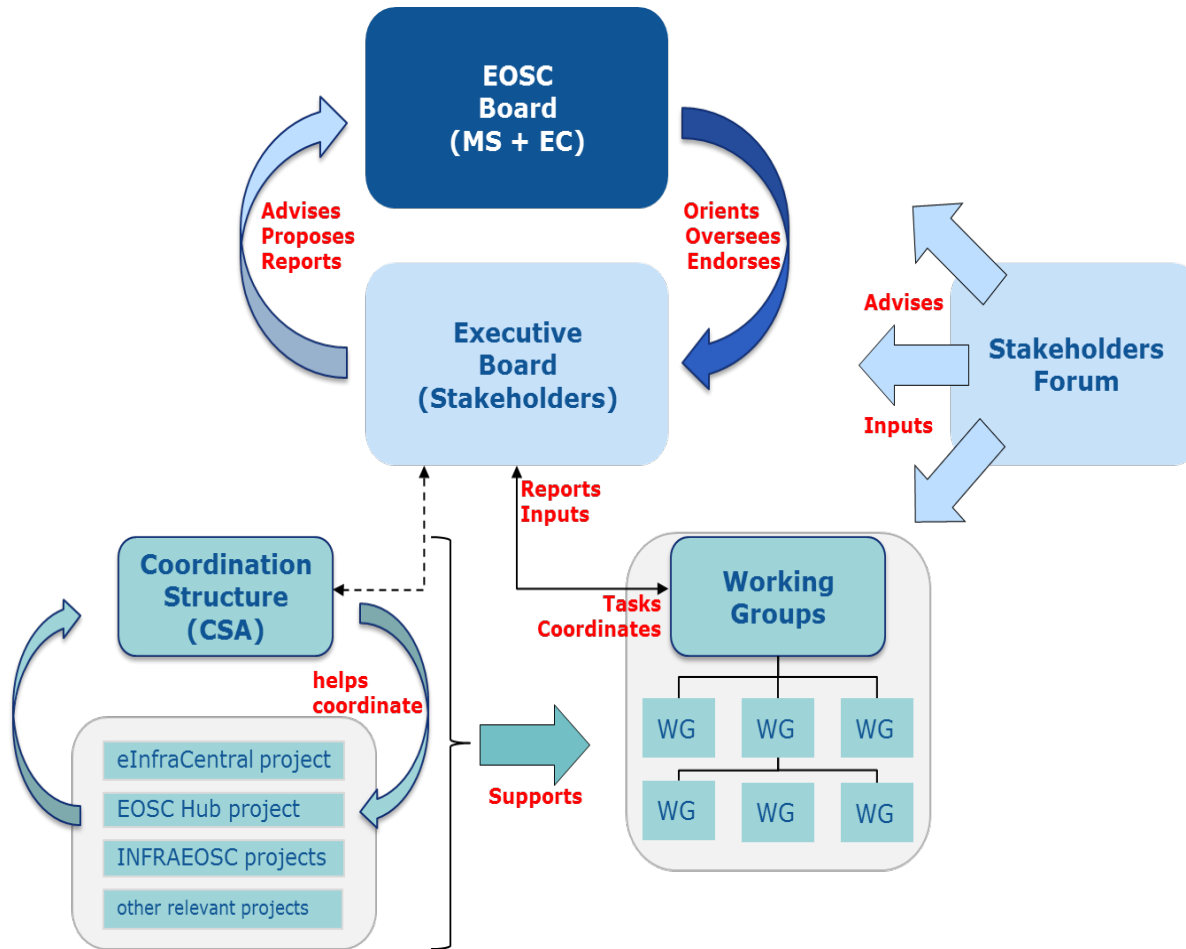
The Open Research Europe publishing platform

- Help H2020 beneficiaries and their researchers comply with the open access mandate without paying APCs during and after the grant

- Improve uptake of OA in H2020

- Promote OA as THE mode for publishing from now on

- Support open science and lead by example
  - ✓ Early sharing of research (pre-prints + peer-reviewed articles)
  - ✓ Open peer-review+ post publication commenting
  - ✓ New generation metrics

- Explore business models in OA publishing and sustainability

- Tenders under evaluation

The Vision for EOSC

- ➤ **EOSC will provide 1.7m EU researchers an environment with free, open services for data** storage, management, analysis and re-use across disciplines

- ➤ **EOSC will join existing and emerging horizontal and thematic data infrastructures**, bridging todays fragmentation and ad-hoc solutions

- ➤ **EOSC will add value** (scale, data-driven science, inter-disciplinarity, faster innovation) and leverage past infrastructure investment (10b per year by MS, two decades EU investment)

EUROPEAN OPEN SCIENCE CLOUD
BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

A trusted, open environment for sharing scientific data

Open and seamless services to analyse and reuse research data

Linking data

Connecting across borders and scientific disciplines

Connecting scientists globally

Long term and sustainable

Improving science

Governance framework

Three layer structure

➢ ***EOSC Board* of MS/AC and EC representatives** to ensure effective supervision of EOSC implementation

  ➢ ***Working Group of the strategic configuration of the Programme Committee***

➢ ***Executive Board* of stakeholder representatives** to help ensure proper EOSC implementation and accountability

  ➢ ***Commission expert group***

➢ ***Stakeholder Forum* to** provide input from a wide range of actors

  ➢ ***Self-organised with EC support***

42

Open Science in the EU legislation

Revision of the Recommendation on access to and preservation of scientific information (2018)

- Setting the landscape for OS with a view to tackle disparities
- Also covers infrastructure, metrics, rewards, skills…

Revision of the EU Copyright Directive (2018)

- Provides for an exception for research organisations to carry out Text and Data Mining (data analytics)

Revision of the Open data and the re-use of public sector information Directive (2018)

- Applies to publicly funded research data that are publicly available through repositories
- 'As open as possible, as closed as necessary

European Cloud Initiative (2016) Communication

- Tapping into the wealth of data in Europe
- European Open Science Cloud (EOSC)

Thank you!

Mail: RTD-open-access@ec.europa.eu

Web: ec.europa.eu/research/openscience/