Open Access & Open Data

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What is open access?

Open access can be defined as the practice of providing on-line access to scientific1 information that is free of charge to the end-user and that is re-usable. In the context of research and innovation, 'scientific information' can refer to (i) peer-reviewed scientific publications (published in scholarly journals) or (ii) research data (data underlying publications, curated data and/or raw data).

What is Open Access (OA)?

OA = online access at no charge to the user

- to peer-reviewed scientific publications to
- research data

Two main OA publishing business models

- **Self-archiving**: deposit of manuscripts & immediate/delayed OA provided by author ("Green OA")
- **OA publishing**: costs covered & **immediate OA** provided by publisher ("Gold OA")

What OA is NOT

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

Why open access?

Communication 'ERA'

The ERA is based on the internal market in which researchers, scientific knowledge and technology circulate freely

Five priority areas:

- More effective national research systems
- Optimal transnational cooperation and competition
- An open labour market for researchers
- Gender equality and gender mainstreaming in research
- Optimal circulation, access to and transfer of scientific knowledge

Joint statement by stakeholders organisations

Formal commitments and activities on open access by:
EARTO, NordForsk, Science Europe, LERU and EUA (+CESAR)

Why open access?

optimise the impact of publicly-funded scientific research

- At European level (FP7 & Horizon 2020)
- At Member State level

One way to get there: open access

Expected benefits:

- Better and more efficient science → *Science 2.0*
- Economic growth → *Innovation Union*
- Broader, faster, more transparent and equal access for the benefit of researchers, industry and citizens →*Responsible Research and Innovation*

… in the European Research Area and beyond

Open access in FP7

- Open access Pilot in FP7
  - 'Best effort' to provide OA
  - 7 areas
  - Peer-reviewed publications
  - Allowed embargos: 6/12 months
  - Green and Gold OA supported

Open Access in H2020

- Open access mandate in H2020
  - Obligation to provide OA to publications
  - All areas
  - Peer-reviewed publications
  - Allowed embargos: 6/12 months
  - Green and Gold OA supported
  - Beneficiaries must aim to deposit the research data needed to validate the results presented in publications ('underlying'/'linked' data)

OA to publications: H2020 mandate (1)

Each beneficiary must ensure OA to all peer-reviewed scientific publications relating to its results:

- Deposit a machine-readable copy of the published version
- final peer-reviewed manuscript accepted for publication in repository of the researchers choice (possibly OpenAIRE compliant)
- Ensure OA on publication or at the latest within 6 months
  - (12 for SSH)
- Aim to deposit at the same time the research data needed to validate the results ("underlying data")
- Ensure OA to the bibliographic metadata that identify the deposited publication, via the repository

OA to publications: H2020 mandate (2)

Routes towards OA:

- OA publishing and self-archiving considered valid and complementary routes
- Deposit into a repository also in the case of OA publishing

Costs for OA publishing:

- Eligibility of OA publishing costs during the grant (as in FP7)
- Piloting a mechanism for open access publishing after the end of the grant agreement (call EINFRA-2-2014 – eInfrastructure for Open Access)

Licencing:

- Encouragement to authors to retain their copyright and grant adequate licences to publishers (e.g. Creative Commons)

Self-archiving (the Green OA)

The author archives an electronic copy of a peer-reviewed publication (author final copy or publisher copy) in an institutional or subject repository at the time of publication, after which it is freely available to everybody under specific license.

- A repository is an online database operating under specific technical standards that allows the institution to manage, preserve, disseminate, showcase its scientific output.
- The repository is a valuable tool in an institution's research information system and evaluation process, and one that offers added value services for the scientific community.

Open access publishing (the Gold OA)

Authors publish their scholarship in open access journals or monograph series. These publications are freely available to the end users on the Internet.

- Copyright is usually retained by the authors.
- Open access publications follow the same processes as toll access publications (i.e. peer review), but provide open access to the content of the publications.
- There is no correlation between the quality of a publication and the access to it.
- Open access publishing often entails costs (author processing fees), usually covered by funders/employers.
- Open access publishing has led to new business models in scholarly publishing

Self-archiving and publishing

Self-archiving and Open access publishing are NOT the same thing, but complementary

- Purpose of self-archiving is to curate one's scientific output in the repository and provide access to them
- Gold open access is a mode of publishing and follows the processes of publishing

Open Research Data Pilot

Areas of the 2014-2015 Work Programme participating in the Open

- Research Data Pilot are:
  - Future and Emerging Technologies
  - Research infrastructures – part e-Infrastructures
  - Leadership in enabling and industrial technologies – Information and Communication Technologies
  - Societal Challenge: Secure, Clean and Efficient Energy – part Smart cities and communities
  - Societal Challenge: Climate Action, Environment, Resource Efficiency and Raw materials – except raw materials
  - Societal Challenge: Europe in a changing world – inclusive, innovative and reflective Societies
  - Science with and for Society

- Projects in other areas can participate on a voluntary basis.

Pilot on Open Research Data (2)

Types of data concerned:

- Data (including associated metadata) needed to validate the results presented in scientific publications ("underlying data")
- Other data (including associated metadata) as specified in data management plan

Beneficiaries participating in the Pilot will:

- Deposit this data in a research data repository of their choice
- Take measures to make it possible to access, mine, exploit, reproduceand disseminate free of charge (using e.g. Creative Commons licences)
- Provide information about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (where possible, provide the tools and instruments themselves)

Support & monitoring to be developed

Pilot on Open Research Data (3)

Projects may opt out of the Pilot on Open Research Data in Horizon 2020 in a series of cases:

- If the project will not generate / collect any data
- Conflict with obligation to protect results
- Conflict with confidentiality obligations
- Conflict with security obligations
- Conflict with rules on protection of personal data
- If the achievement of the action's main objective would be jeopardised by making specific parts of the research data openly accessible (to be explained in data management
- plan)

Data Management Plan in Horizon 2020

Data Management Plans (DMPs) mandatory for all projects participating in the pilot (deliverable within the first six months)

- Other projects invited to submit a DMP if relevant for their planned research DMP questions:
- What data will be collected / generated?
- What standards will be used / how will metadata begenerated?
- What data will be exploited? What data will beshared/made open?
- How will data be curated and preserved?

More information

EC OA website

- http://ec.europa.eu/research/science-society/open_access

European Research Area (ERA)

- http://ec.europa.eu/research/era/index_en.htm

Study to measure growth of OA

- http://europa.eu/rapid/press-release_IP-13-786_en.htm

H2020 guidance

- http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilo
- t/h2020-hi-oa-pilot-guide_en.pdf
- http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilo
- t/h2020-hi-oa-data-mgt_en.pdf