Open access to research data in a European policy context

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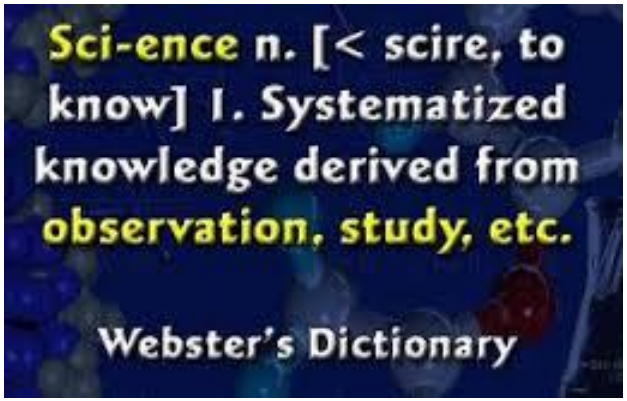
RECODE final conference Thursday, January 15th

Open access as part of Open Science

Enabled by digital technologies

Doing research is becoming:

- more open
- data-driven
- people-focused



On-going transitions in the way:

- research is performed
- researchers collaborate
- knowledge is shared
- science is organised

Driven by:

- ICT revolution
- the globalisation of the scientific community
- the need to address societal challenges

- **A systemic change in the modus operandi of science and research**
- **Affecting the whole research cycle and its stakeholders**


Citizens science
Data-intensive
Open code
Open workflows
Pre-print
Analysis
Open data
Data gathering
Publication
Open access
Open annotation
Conceptualisation
Review
Alternative Reputation systems
Scientific blogs
Collaborative bibliographies

Consultation process

- **Online consultation open from 03.07.2014 to 30.09.2014**
  - **498 submitted responses of which 164 Organisations and 38 Public Authorities**
  - **25 position papers voluntary submitted in addition to questionnaire (LERU, UK University Organisations, Dutch University Association, EuroTech University Alliance,Publishers (Elsevier, STM), Research Funding Agencies etc.)**
- **Outcomes are currently being validated in 4 stakeholder workshops**
- **A separate communication seminar will be held on open science**

- **Initial finding: open access to scientific publications and research data a key part of the changing scientific system**

The Commission objective

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

The European Commission is a…

Policy maker

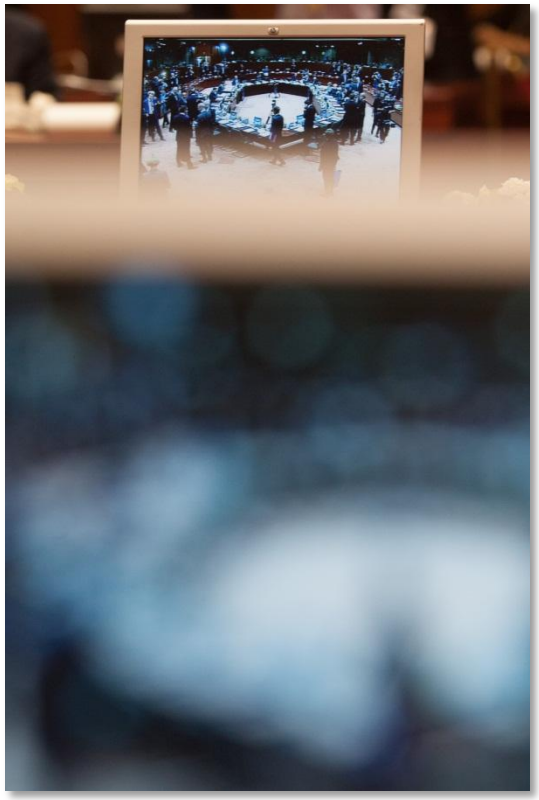
- It proposes EU legislation & legislates with other EU institutions
- It invites Member States to act

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

Communication 'ERA'

MS are invited to coordinate their policies on access to and preservation of scientific information

→ Recommendation on access to and preservation of scientific information (C(2012)4890).

SHO are invited to adopt and implement open access measures for publications and data resulting from publicly funded research

→ Signed Memorandum of Understanding with LERU, EARTO, EUA, NORDFORSK and Unilateral Statement by Science Europe

The Commission "will adopt establish open access to scientific publications as a general principle for all EU funded research projects in Horizon 2020. For research data the EC will develop a flexible approach that takes into account different scientific areas and business related interests". "The Commission will continue to fund projects related to open access."

→ Communication 'Towards better access to scientific information', COM(2012)401

European Commission

Open access policies across the EU

Preliminary findings from

(i) NPR reporting template of 13 EU MS & 1 Associated Country

(ii) Results of 2014 ERA Progress Report

General findings

- **Mostly soft measures rather than legislation: exceptions in more proactive and advanced OA policies**
- **OA to publications still much more developed than OA to data. Progress as to infrastructures for data (repositories), but openness still quite complex an issue and not addressed in many countries (for data)**
- **Bigger countries and countries with better budget capabilities tend to have more comprehensive OA policies and OA enabling infrastructures, as well as tend to lead or participate more actively in OA networking initiatives**
- **Nevertheless, smaller or less federated countries have the advantage of easier coordination and better synergistic capabilities**

European Commission

OA to research data

Some progress on infrastructure for data collection, archiving, access and re-use (FI, BUT not an overarching solution (complex issue with challenges such as: different types of data, privacy and IPR, funding for long-term preservation, standardisation and interoperability)

Some MS very proactively driving forward, contributing or participating in European and global organisations such as Knowledge Europe, Science Europe, RDA, GRC, etc.

Bottom-up movement: SHOs such as research institutes and funders, universities and libraries, usually very proactive and actively driving OA forward

Top-down movement: although a need for coordination at EU level is generally perceived, many MS still need to formulate clear overarching and comprehensive OA policies, strategies and laws (save the front runners)

European Commission

Interoperability and multi-stakeholder dialogues

Participation to regional and international initiatives a good way towards inter-operability and transnational cooperation

Multi-stakeholder dialogues on OA to research data and infrastructures (at European level: Knowledge Exchange, Science Europe, and globally: Global Research Council, Research Data Alliance)

In most MS stakeholders are the driving forces for OA (universities, libraries, national archives)

Further information: Science Metrix Study

- State-of-art analysis of OA strategies to peer-review publications
- State-of-art analysis of OA strategies to scientific data
- Comparative analysis of the strengths and weaknesses of existing open access strategies

http://science-metrix.com/en/publications/reports

Pilot on Open Research Data in H2020

Three key questions:

- **Which thematic areas should be covered?**
- **What kind of data should be covered?**
- **What about data management?**

Pilot on Open Research Data in H2020

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 in H2020

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)

Pilot on Open Research Data in H2020

Types of data concerned:

- Data needed to validate the results presented in scientific publications ("underlying data")
- Other data as specified in data management plan (=up to projects)

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, reproduce and disseminate free of charge
- 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)

EC: Support & monitoring (Annotated MGA, Specific guidance etc…)

Data management in Horizon 2020

- Data Management Plans (DMPs) mandatory for all projects participating in the Pilot, optional for others
  - DMPs are NOT part of the proposal evaluation, they need to be generated within the first six months of the project and updated as needed
- DMP questions:
  - What data will be collected / generated?
  - What standards will be used / how will metadata be generated?
  - What data will be exploited? What data will be shared / made open?
  - How will data be curated and preserved?

ORD Pilot: initial take-up in first calls of H2020

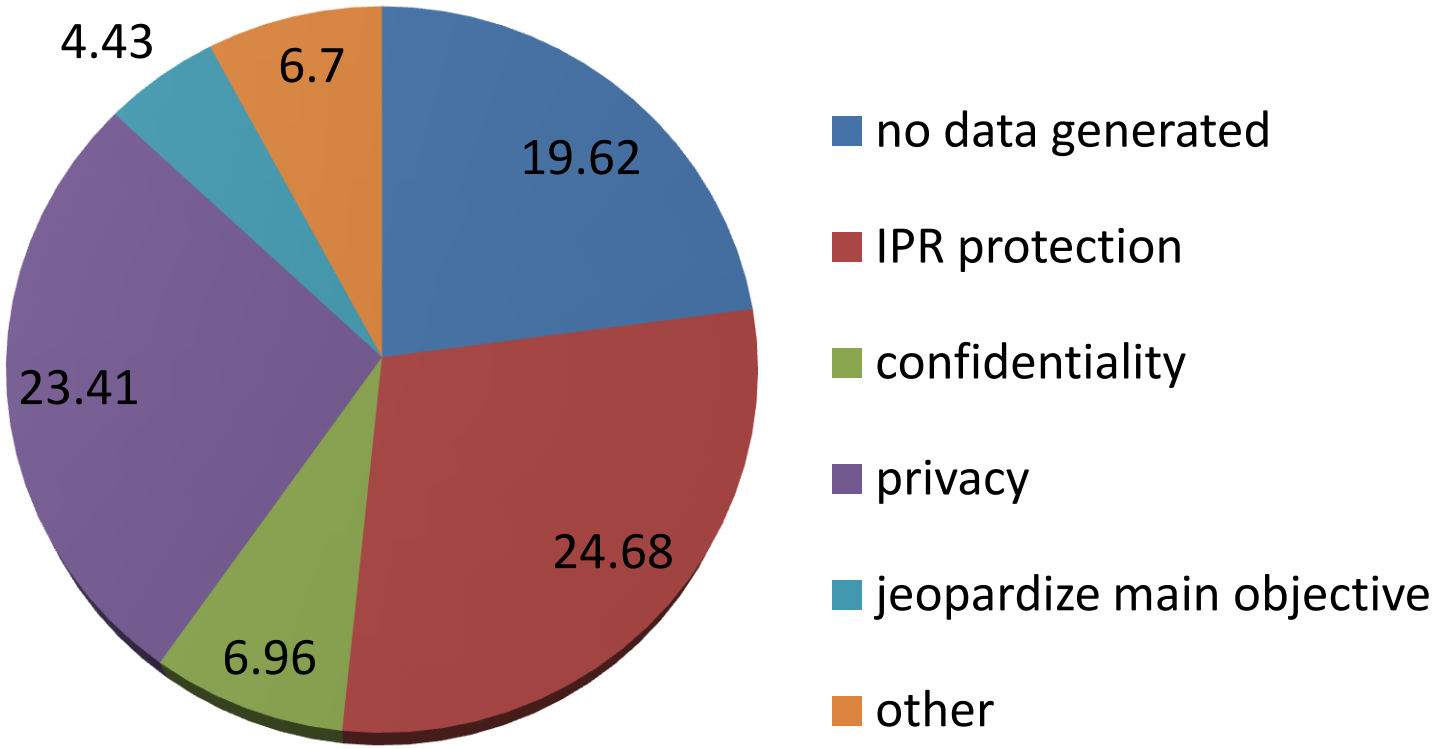
- Preliminary!
- Basis: 3054 Horizon 2020 proposals

  Calls in core-areas: **opt out 24.2%** (442 of 1824 proposals) – range from 9,1-29,1%

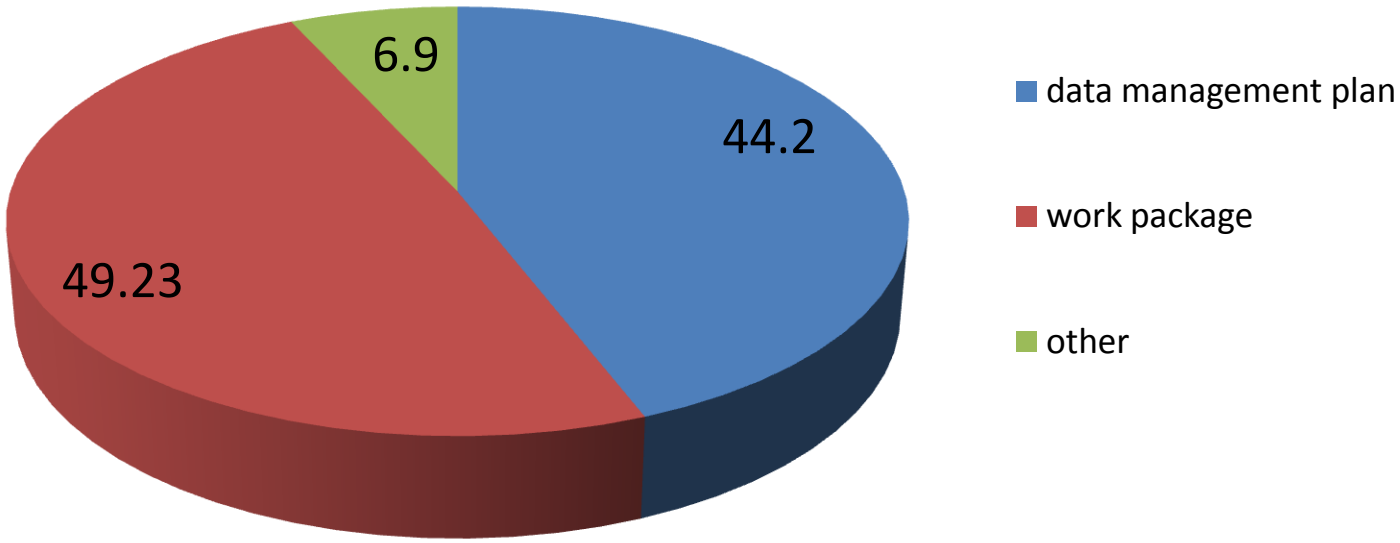
  Other areas: voluntary **opt in 27.2%** (334 of 1230 proposals) – range from 9 to 50%

- Conclusion: 'early days' for the open access to research data pilot, but initial data on uptake in the proposals for the first calls of Horizon 2020 are encouraging. Initial areas well chosen (drop outs below 30%, similar range), comprehensive follow up needed

ORD Pilot: opt-out reasons among proposals



ORD Pilot: approach to data management among proposals



Ongoing coordination and support actions (FP7 funded)

PASTEUR4OA (Open Access Policy Alignment Strategies for European Union Research) Started 2014

FOSTER (Foster Open Science Training for European Research) Started 2014

RECODE - (Policy Recommendations for Open Access to Research Data in Europe) – 2013, finishing

OpenAIRE/OpenAIRE+: supporting the implementation of Open Access in Europe (publications and data)

Infrastructure projects(with OA components), e.g. GEO/GEOSS, ELIXIR…

In summary…

- Open access as part of a changing scientific system (Science 2.0/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 (green or gold)

  Limited pilot for open access to research data (opt-in/opt out principle)
- Support from/for H2020: work programmes e-Infrastructure & Science with and for Society
- Open access must be effective, affordable, competitive and sustainable for researchers and innovative businesses

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We welcome your input

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Links

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

Open Access Resources: Links (Netvibes – EC Central Library)
http://www.netvibes.com/open-access

Study to measure growth of OA
http://science-metrix.com/en/publications/reports

H2020 guidance
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf