



Open Access et gestion des données : quel agenda pour la recherche scientifique européenne ?

(Slides follow in EN)

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The European Commission is a...

- **Policy maker**

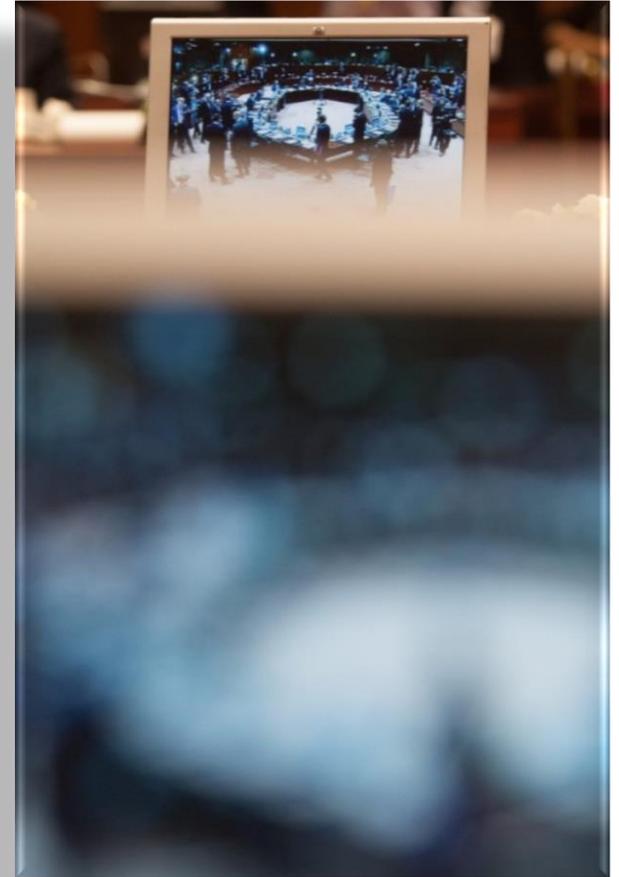
- It propose EU legislation & it legislates with other EU institutions
- It invites Member States to act

- **Funding agency**

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

- **Capacity builder**

- It funds project that support EC/EU policy



A new European Commission (2014-19)



Andrus Ansip, Vice-President, Digital Single Market



Günther Oettinger,
Commissioner for Digital
Economy and Society



Carlos Moedas,
Commissioner for Research,
Science and Innovation

Commissioner's view

"Open Science, of which Open Access is an important part, will be vital to ensuring European progress and prosperity in the future"



(Speech at NETHER, January 26, 2015)

What do we understand by 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**: 'traditional' publication plus deposit of manuscripts in a repository ('Green OA')

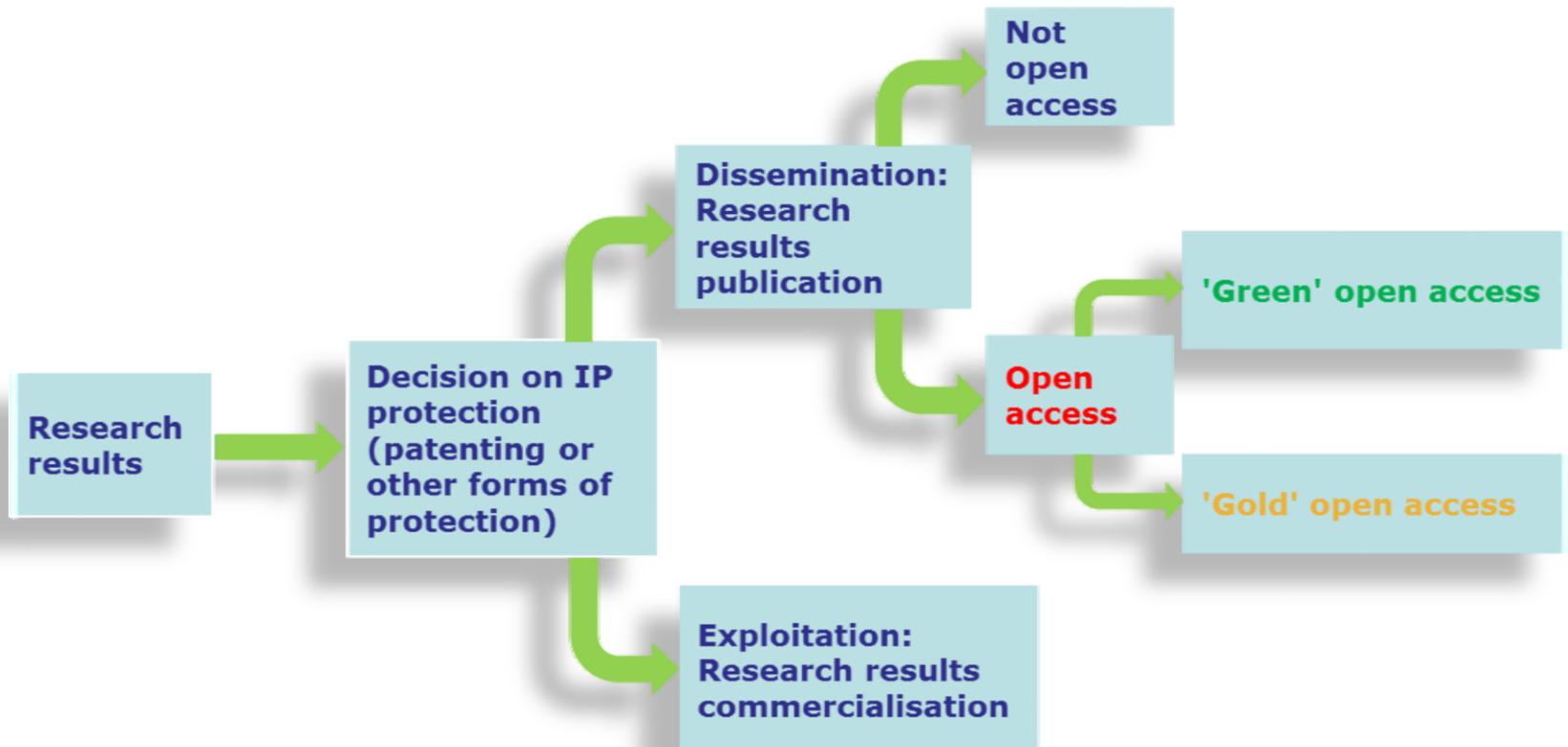
Both versions contain the same peer-reviewed content, but may be differently formatted
 - **OA publishing**: immediate OA provided by publisher ('Gold OA')

Usually (not always) 'Author-pay' model (APC)

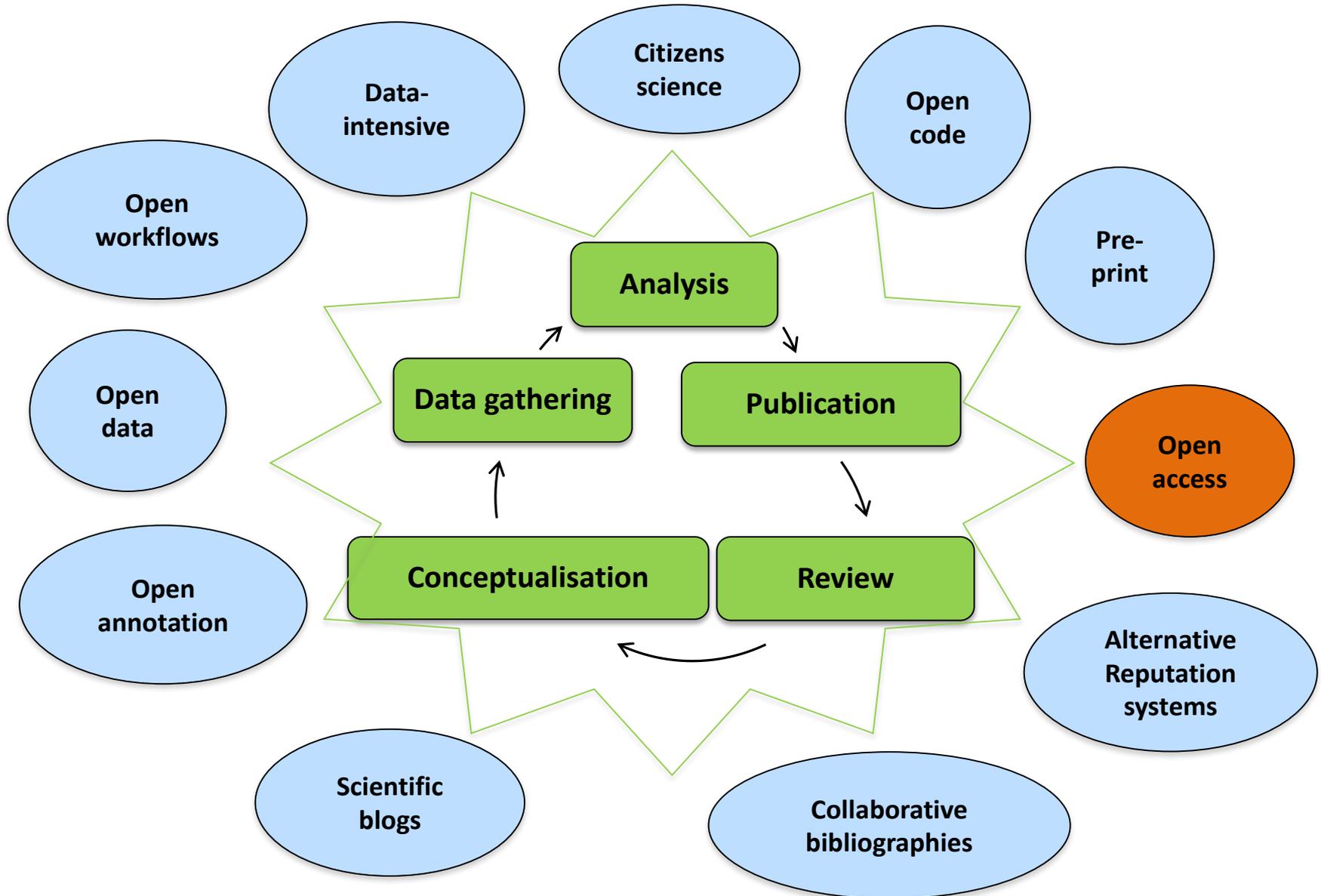
Some journals offer both subscriptions and open access publishing to selected on-line articles (hybrid journals)

What OA is not

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



The bigger picture: 'Open Science'



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
 - Economic growth
 - Broader, faster, more transparent and equal access across Europe for the benefit of researchers, industry and citizens

The Commission strategy

- Develop and implement open access to research results from projects funded by the EU Research Framework Programmes (FP7, Horizon 2020)
 - Incl. funding research and supporting activities in the area of open access
- Encourage national initiatives at Member State level
- Contribute to co-ordination between EU Member States and beyond

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



Open Access in Horizon 2020



Where to look?

- Regulation establishing Horizon 2020 (Art. 18)
- Specific Programme (Preamble 1.3)
- Rules for Participation (Art. 43)
- Work Programme 2014-15 (Introduction 1.5 and relevant areas)
- Model Grant Agreement (Art. 6.2.D.3, 29.2 and 29.3)
- Annotated Model Grant Agreement (reference to Guidelines below)
- **Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020**
- **Guidelines on Data Management in Horizon 2020**

Where???

The **Participant Portal** is the source of all reference documents

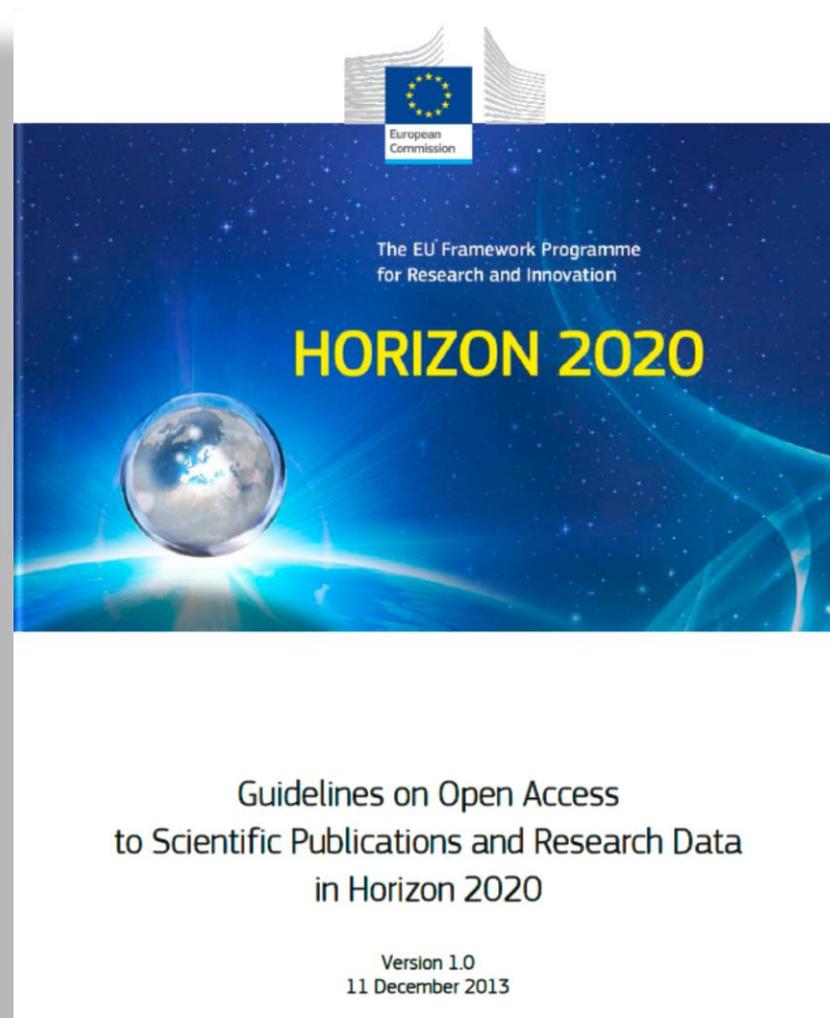


<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

And **OpenAIRE** is here to help you!



Your document of reference



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

FP7: the Pilot

- **Green** open access pilot in 7 areas of FP7 with 'best effort' stipulation
- Allowed embargoes: 6/12 months
- **Gold** open access costs eligible for reimbursement as part of the project budget while the project runs

H2020: Underlying principles

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

OA to publications mandate in H2020

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

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 opt-in on a voluntary basis.**

Pilot on Open Research Data in H2020

- **Projects can 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)

Do you wish to opt out?

European Commission - Research - Participants
Proposal Submission Forms

Proposal ID	Acronym	Go to
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5 - Call specific questions

Open Research Data Pilot in Horizon 2020

If selected, all applicants will participate in the [Pilot on Open Research Data in Horizon 2020¹](#), which aims to improve and maximise access to and re-use of research data generated by actions. Participating in the Pilot does not necessarily mean opening up all research data. Actions participating in the Pilot will be invited to formulate a Data Management Plan in which they will determine and explain which of the research data they generate will be made open.

Applicants have the possibility to opt out of this Pilot and must indicate a reason for this choice.

Participation in this Pilot does not constitute part of the evaluation process. Proposals will not be evaluated favourably because they are part of the Pilot and will not be penalised for opting out of the Pilot.

We wish to opt out of the Pilot on Open Research Data in Horizon 2020. Yes No

Please indicate the reason(s) for not being able to participate in the Pilot:

- the project does not generate any data	<input type="checkbox"/>
- to allow the protection of results (e.g. patenting)	<input type="checkbox"/>
- incompatibility with the need for confidentiality linked to security reasons	<input type="checkbox"/>
- incompatibility with privacy/data protection reasons	<input type="checkbox"/>
- achievement of the project's main aim would be jeopardised	<input type="checkbox"/>
- other legitimate reasons	<input checked="" type="checkbox"/>

Please specify the reason:

Other legitimate reasons (Maximum 300 characters)

Remaining characters 300

¹ According to article 43.2 of Regulation (EU) No 1290/2013 of the European Parliament and of the Council, of 11 December 2013, laying down the rules for participation and dissemination in Horizon 2020 - the European Union's Research and Innovation (2014-2020) and amending Regulation (EC) No 1806/2006.

Do you wish to opt in?

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We wish to participate in the [Pilot on Open Research Data in Horizon 2020](#) on a voluntary basis Yes No

Participation in this Pilot does not constitute part of the evaluation process. Proposals will not be evaluated favourably because they are part of the Pilot and will not be penalised for not participating.

¹According to article 43.2 of Regulation (EU) No 1290/2013 of the European Parliament and of the Council, of 11 December 2013, laying down the rules for participation and dissemination in 'Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)' and repealing Regulation (EC) No 1906/2006.

Data management activities

The use of a [Data Management Plan \(DMP\)](#) is required for projects participating in the [Open Research Data Pilot in Horizon 2020](#), in the form of a deliverable in the first 6 months of the project.

All other projects may deliver a DMP on a voluntary basis, if relevant for their research.

Are data management activities relevant for your proposed project? Yes No

A Data Management Plan will be delivered (Please note: Projects participating in the Open Research Data Pilot **must** include a Data Management Plan as a deliverable in the first 6 months of the project).

Data Management is part of a Work Package.

Data Management will be integrated in another way.

Please indicate how data management will be addressed in your project:

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Remaining characters 300

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 the 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
 - All proposers to submit general information on data management - evaluated under criterion 'Impact'
- **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?

A chance to co-shape policy

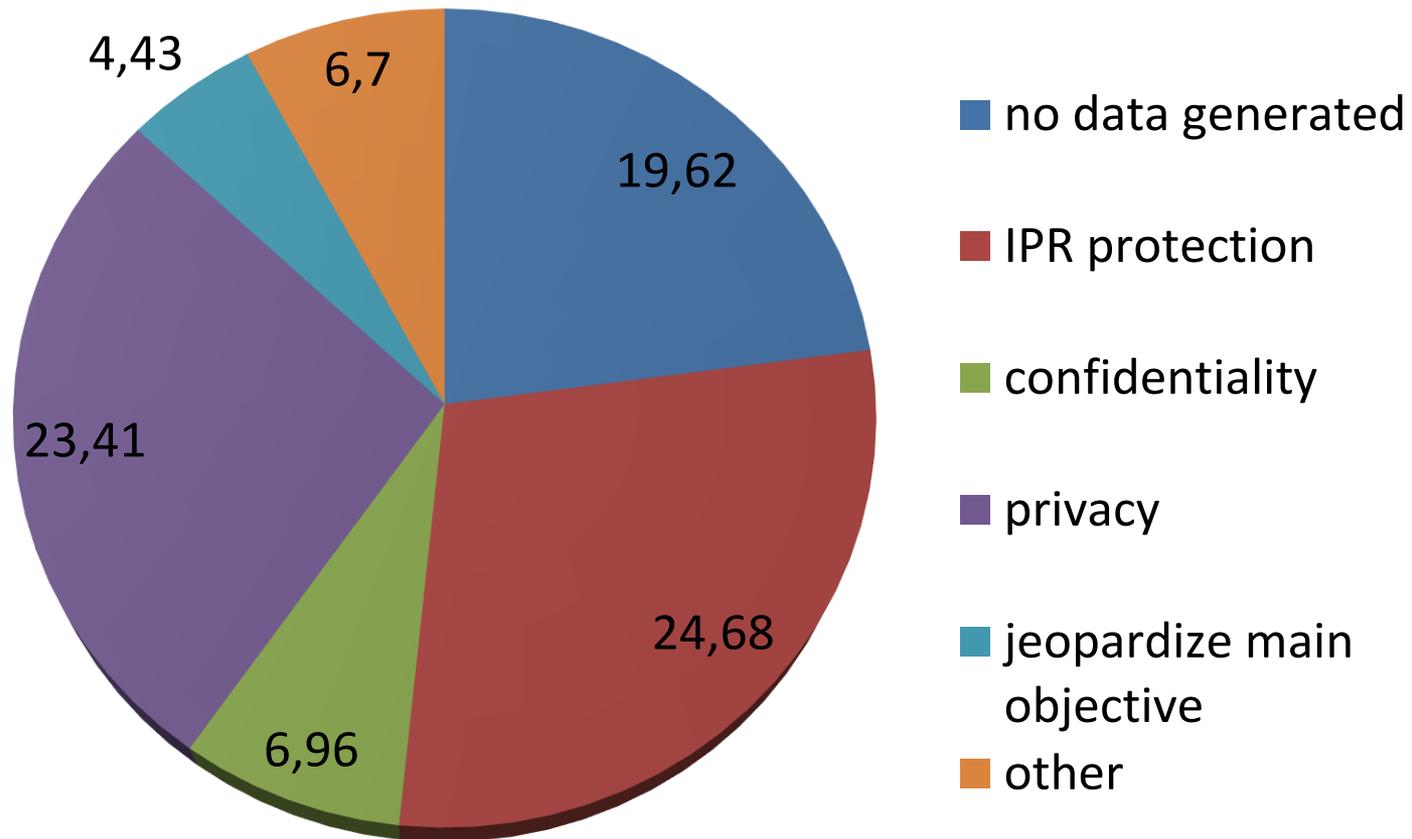


- Opening up research data: the new frontier
- Ambitious, yet pragmatic design of the pilot: broad scope, opt-out, voluntary participation possible
- Pilot is flexible: numerous safeguards are in place (incl. opt-out during the project, if really necessary)
- Aim: kick-starting a virtuous circle
- Uptake of and experiences need to be monitored during the complete life cycle of a project: from application, to grant preparation, execution and final reporting
- **Participating in the Pilot means co-shaping European policy on opening up research data**

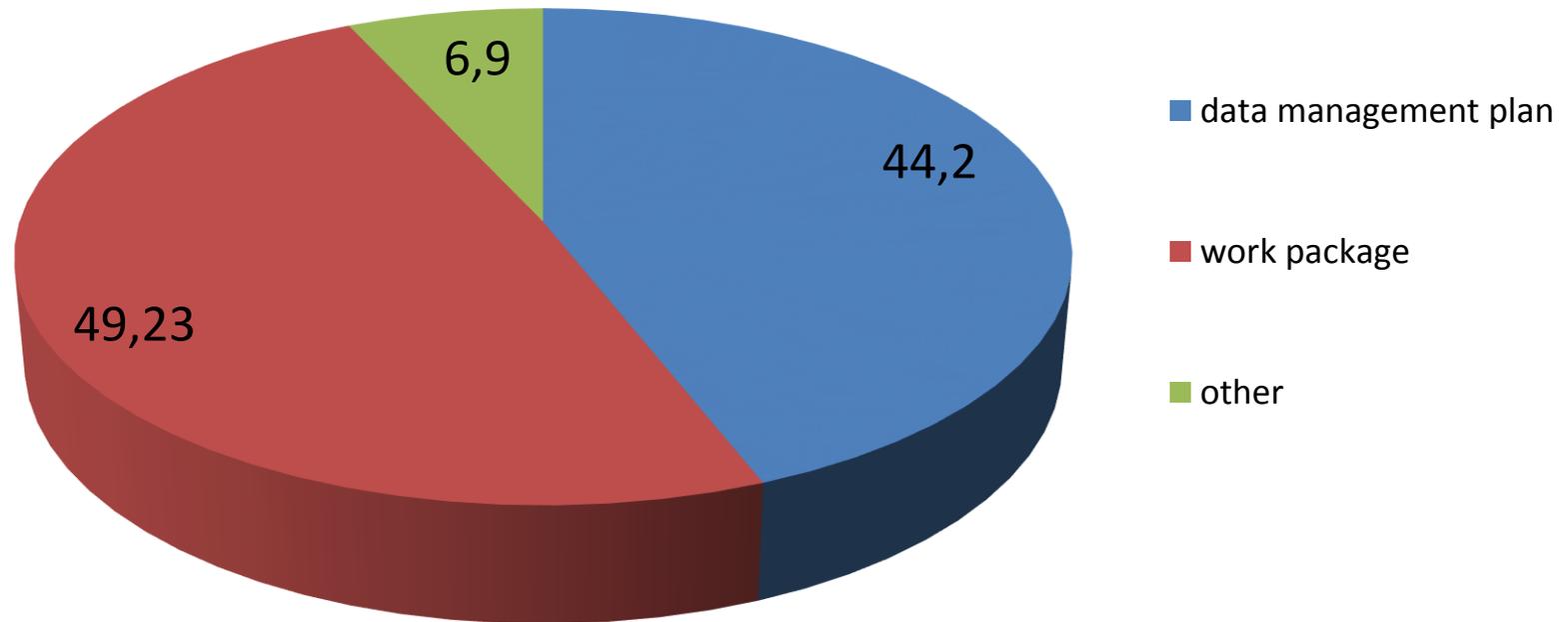
ORD Pilot: initial take-up in first calls of H2020

- 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%
- 'Early days' for the ORD Pilot, but initial data on uptake in the proposals for the first calls of Horizon 2020 are encouraging.

ORD Pilot: opt-out reasons among proposals



ORD Pilot: approach to data management among proposals



Open research data: currently ongoing...

- **Analysis of uptake of the Pilot:** in signed grant agreements (versus proposals)
- **Structure and coverage of the Pilot:** to remain the same, at least until mid-term review; small incremental changes possible in 2016-17
- **DMP implementation:** investigating best-practice; tools to be developed
- **Monitoring of OA policies** is crucial for further policy development

Beyond Horizon 2020



Ongoing EU-funded projects

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

PASTEUR4OA (Open Access Policy Alignment Strategies for European Union 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)

New! FP7 post-grant Gold OA Pilot



Infrastructure projects (with OA components)

e.g. GEO/GEOSS, ELIXIR...

The international landscape

Study to measure the growth of OA

- Wide sample of 1 million records for in-depth study of between 2008 and 2013 (Focus on ERA, Brazil, Canada, Japan and USA)
- Global proportion higher than previously assumed:
 - 55% of those published in 2012 are now free (adjusted for precision and recall)
 - Quantity of Gold OA papers increasing by 18% per year
 - Quantity of Green OA papers increasing by 8.8% per year
- OA papers were between 26% and 64% more cited on average
- Backfilling of papers is really important: about 700,000 papers from 1996-2011 became freely available between April 2013 and April 2014, the same quantity as those published 2013

source:



Science-Metrix

The international landscape

Study to measure the growth of OA

- OA availability varies among disciplines: 'tipping point' passed in Biology, Biomedical Research, Mathematics & Statistics and in General Science & Technology. Least open access in SSH, applied sciences, engineering and technology
- The majority of 48 major science funders considers both Gold and Green OA acceptable. More than 75% accepted embargo periods of 6-12 months
- Policies for OA to data not as well developed but increasing

Working with international organisations (OECD, RDA, 'Berlin' conferences and others)

In summary...

- Open access (OA) as part of a **changing scientific system** (Open Science)
- OA as a means to **improve knowledge circulation** and **provide value for the taxpayers' money**
- Horizon 2020 **ambitious yet pragmatic** on aspects of OA
 - Open access to publications mandatory (Green or Gold)
 - Limited pilot for open access to research data (opt-in/opt-out)
- Support from/for H2020: work programmes e-Infrastructure & Science with and for Society
- OA must be effective, affordable, competitive and sustainable for researchers and innovative businesses

Pointers



- Twitter: [@OpenAccessEC](https://twitter.com/OpenAccessEC)
- Mail: RTD-open-access@ec.europa.eu
- Web: <http://ec.europa.eu/research/swafs/>

» Special feature: Open Access in Horizon 2020



- Get support from **OpenAIRE**
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