



"Praxis-Check" Open Science

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**Europäische Kommission
Generaldirektion Forschung & Innovation**

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Commissioner view



*"As I see it, European success now lies in sharing as soon as possible, (...). The days of **open science** have arrived."*

*Speech at "Presidency Conference Open Science",
04 of April, 2016, Amsterdam*

Open Science as part of an Open Approach

Open Innovation
Open Science
Open to the world



Open Science is ...

enabled by digital technologies

changing the way:

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

It's

- a systemic change in the modus operandi of science and research
- affecting the whole research cycle and its stakeholders



Why should Europe embrace Open Science?

- **Economic impact:** economic benefit generated by making scientific information freely accessible
- **Quality of research:** wider analysis, new discoveries, re-use, multi-disciplinarity, research integrity
- **Moral case:** right of the public to see the results of publicly funded research



Main milestones in 2016

- ✓ Launch of Open Science **monitor** (2016 pilot)
- ✓ Gradual set-up of **Expert Groups:**

running	Autumn 2016
Open Science Cloud	Skills
Altmetrics	Alternative business models for OA publishing
Rewards	FAIR open data

- ✓ **Dutch Presidency** Open Science Conference (4-5 April 2016)
- ✓ **'European Cloud Initiative' Communication** (April 2016)
- ✓ **Council conclusions** on Open Science (27 May 2016)
- ✓ **Open Science Policy Platform:**
 - 22/02 – 22/03: call for expression of interest
 - 27 May: appointment of members
 - September 2016: First meeting



First concrete actions

- ✓ make **open research data the default** option in H2020
- ✓ encourage scientific data sharing and the creation of **incentive schemes, rewards systems and education/training programmes**
- ✓ develop specifications for interoperability and data sharing across disciplines and infrastructures
- ✓ federate research data infrastructures and scientific clouds and **develop cloud services for Open Science**



Open Access to Research Data in Horizon 2020





Open access in Horizon 2020

Regulation establishing Horizon 2020

- 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**. [...]."



ORD pilot: state of play

- A **limited pilot**, covering selected areas of Horizon 2020 (2014-2016)
- Targeted primarily towards **data underlying publications** (other data as specified in DMP)
- **Opt outs** are possible for IPR, confidentiality/privacy and security reason as well as if OA runs against the main objective of the project
- **Voluntary opt ins** (in areas not covered by the pilot) are possible on an individual project basis.
- a **Data Management Plan** (DMP) is obligatory for projects participating in the pilot
- Participation or opting out **not part of the proposal evaluation** process

General approach: as open as possible, as closed as needed



ORD Pilot: take-up in first calls of H2020

Basis: Horizon 2020 signed grant agreements

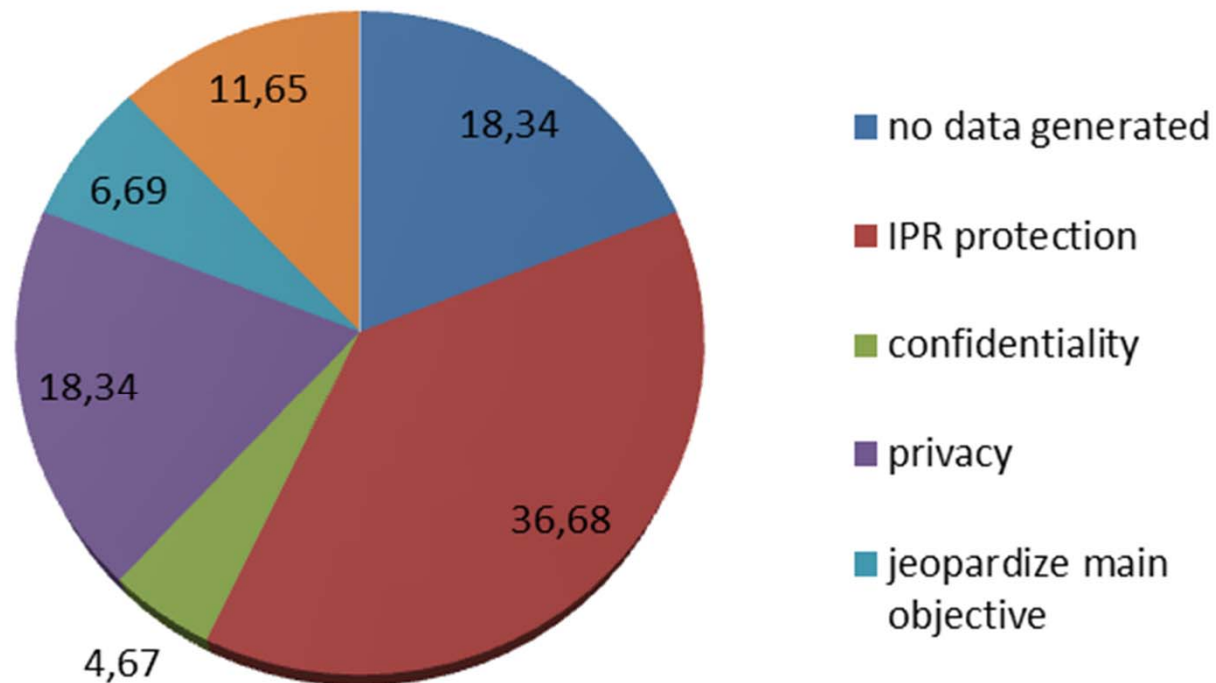
Calls in core-areas:

- **Participation rate: 65,4%**
- **Opt-out 34,6%**

Other areas: voluntary opt-in 11,9%

ORD Pilot: opt-out reasons among proposals

Graphic 1: Data pilot opt-out reasons





ORD Pilot: experiences

- Explanation is paramount!
- Misperception that 'open' bias is evaluated positively
- Emphasise flexibility (many opt-out/opt-in mechanisms)
- It helps to re-frame ORD Pilot as Data Management Pilot / not everything must be open
- Need to stress that excellent research must include excellent data management.
- Questions about eligibility of data management costs
- Emphasise importance of feedback for policy the next Framework Programme
- Underline overall aim: kick-starting a virtuous circle and change of culture.



ORD pilot extension: political decision

The Commission will make open research data the default option, while ensuring opt-outs, for all new projects of the Horizon 2020 programme.	As of 2017
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Brussels, 19.4.2016
COM(2016) 178 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**European Cloud Initiative - Building a competitive data and knowledge economy in
Europe**

{SWD(2016) 106 final}
{SWD(2016) 107 final}



ORD pilot extension: legal base

1. Horizon 2020 refers to the **MGA** as the appropriate document to regulate open access to research data. **Article 29.3.** already exists (for the ORD pilot) and will be made the default.
2. The **Work Programme 2017** is being updated to reflect this change: introduction, thematic WPs and general annex L



ORD pilot extension: implementation

Extension of limited Open Research Data (ORD) **whilst retaining its key characteristics:**

- **Robust opt outs** options for IPR, confidentiality/privacy and security reason as well as if OA runs against the main objective of the project
- Targeted primarily towards **data underlying publications** (other data as specified in DMP)
- a **Data Management Plan** (DMP) is obligatory for projects that do not opt-out
- Open access **costs fully eligible**
- Whether projects opt-out or not does **not affect the evaluation**

General approach: as open as possible, as closed as needed



Political Support

Council Conclusions 27 May 2016

OA data

the underlying principle for the optimal reuse of research data should be: "as open as possible, as closed as necessary".

...welcomes ORD extension

...calls on EC to promote data stewardship and to implement DMPs

...encourages action on MS level

...emphasises the importance of FAIR principles: including long term preservation and curation

.... acknowledges that Europe may benefit from a **European Open Science Cloud**



The European Open Science Cloud

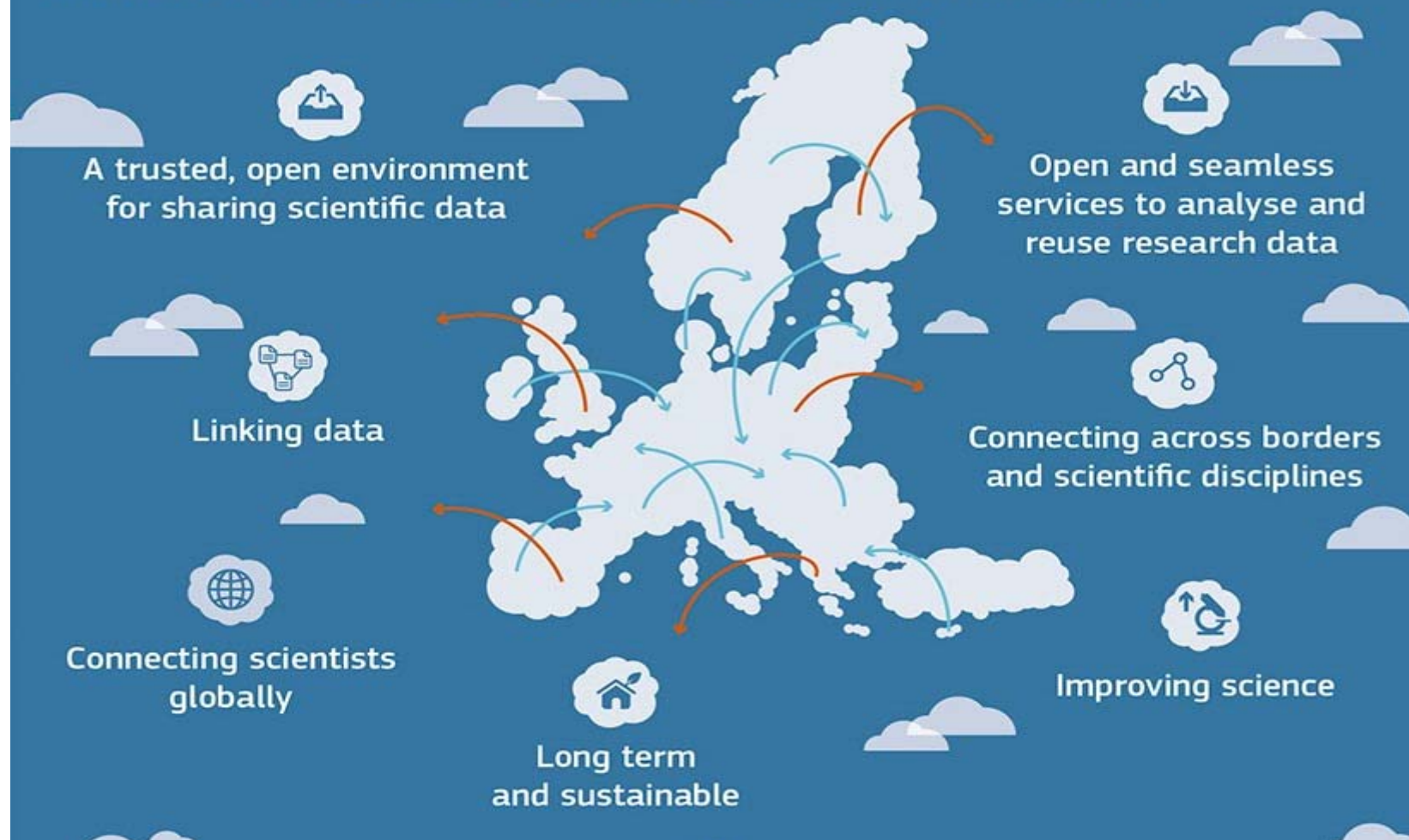




European
Commission

EUROPEAN OPEN SCIENCE CLOUD

BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES





Where do main challenges lie?

- Still a lack of widespread **awareness** of the value of data and of **incentives** for data sharing.
- Lack of common standards to ensure **inter-operability** of data.
- **Not enough hardware capacity** for a particular technical enabler.
- **Fragmentation and lack of coordination** over different scientific communities and countries.
- Need to translate recent **changes in privacy, data protection and copyright rules** to the research data domain.



Thank you!



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