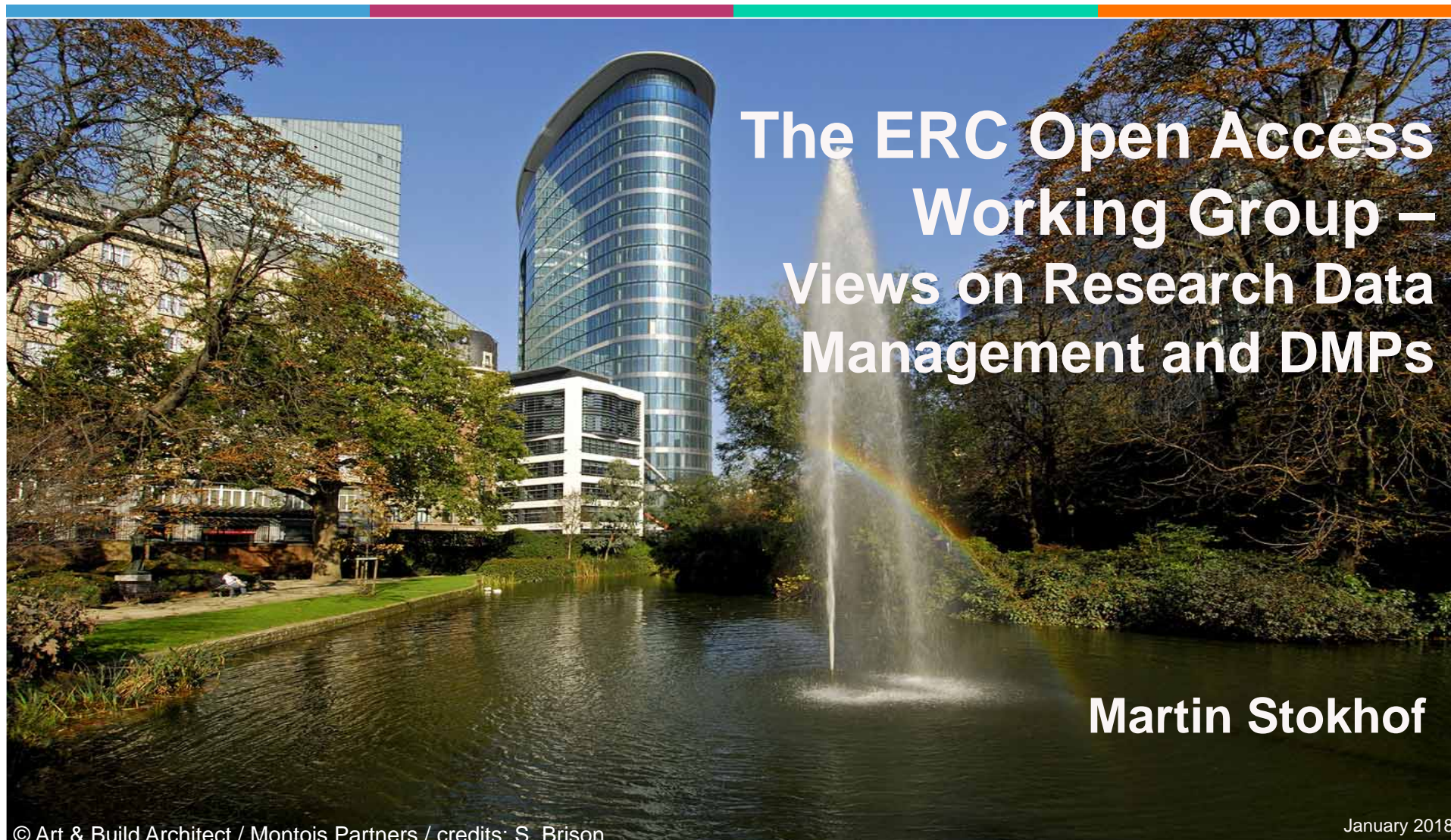


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## The ERC Open Access Working Group – Views on Research Data Management and DMPs

**Martin Stokhof**

# ERC Open Access Strategy



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- ❑ The ERC supports the principle of open access to the published output of research, including peer-reviewed articles, monographs, data and data related products such as computer codes, *as a fundamental part of its mission.*
- ❑ The ERC considers that providing free online access *can be the most effective* way of ensuring that the results of the research it funds:
  - can be accessed, read and used as the basis for further research,
  - is conducted in a transparent and accountable way, and thus maintains public trust in science.

Source: *Open Access Guidelines for research results funded by the ERC*





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# Working group Open Access

## Working group Open Access:

- ❑ Monitoring developments, informing Scientific Council
- ❑ Formulating and adapting policies and guidelines
- ❑ Informing applicants and grantees; monitoring compliance

## Examples of activities:

- ERC Workshop on Research Data Management & Data Sharing
- Exchanges with stakeholders and commercial and non-commercial parties (Figshare, Dryad, Knowledge Exchange, Research Data Alliance, OAPEN, STM, ...)
- Major study on open access to publications and research data management and sharing within ERC projects is underway (first results Spring 2018)

# Open Research Data Pilot (1)



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- As of 2017, all grantees are by default in the "Open Research Data Pilot" but can opt out at any time (application stage, granting stage, or during the project).
- Open Research Data Pilot:
  - involves a mandatory data management plan, mandatory deposit and (when justified, delayed) open access to research data that underlie publications
  - other (research) data to be treated as specified in the DMP.
- DMPs do not play a role in the evaluation process, but have to be submitted within six months from the start of the project.



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# Open Research Data Pilot (2)



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- DMPs for ERC projects must provide information on five points:
  1. Data set reference and name
  2. Data set description
  3. Standards and metadata
  4. Data sharing methodology
  5. Curation and preservation methodology
- Grantees are provided with a template.



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# Main challenges



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## Challenges:

- Data sharing is not yet a part of the **research culture** in all disciplines – awareness raising and skills development are needed
- **Incentives and rewards** are not clear – is there enough support by host institutions?
- Availability of **trustworthy** infrastructure: how can it be identified?  
Limited in certain areas
- Potentially significant **costs**, also after the end of the project
- Issues with regard to **privacy, security, copyrighted** material need to be resolved



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# Raising awareness, providing information



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The ERC Wg on Open Access provides information for ERC grantees on:

- Infrastructure: trusted data repositories (general or discipline-specific)
- Data protocols, meta-data specifications
- Examples of DMPs for specific disciplines
- How to deal with issues concerning privacy, copyright, security

Inventories are ready for three domains (PE, LS, SH), and will be published in the coming month.



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# Providing information: PE domain

## Characteristics:

- Disciplines with large datasets (astronomy, high-energy physics, geography) & well-established practices
- Other disciplines still in development

## Repositories:

- Specialized, discipline-specific repositories for astronomy (ADS), high-energy physics (CERN), software development (GitHub), ...
- General data-hubs (MPGDL, [datahub.io](https://datahub.io), ..)

## Metadata:

- Various discipline-specific meta-data standards

## Open issues:

- Role of commercial partners



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# Providing information: SH domain

## Characteristics:

- Rapid development, also due to increased importance of 'big data'
- Diversity: in scale, nature of data, need for preservation, ...

## Repositories:

- CESSDA as main non-commercial infrastructure; Figshare, Dryad, Zenodo as alternatives; discipline-specific repositories (CLARIN, DARIAH)

## Metadata:

- Variety of discipline-specific meta-data standards

## Open issues:

- Copy-righted material as (part of) datasets
- Privacy-sensitive material



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# Providing information: LS domain



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## Characteristics:

- Large diversity of practices across disciplines with varying stages of maturity
- Very well established core databases in some areas (Protein Data Bank (PDB), UniProt, GenBank), but absence of adequate infrastructure in others
- Images are a particular challenge



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The ERC recognises the crucial role of the European Open Science Cloud for the realisation of open science goals.

In particular:

- Providing necessary physical infrastructure
- Providing necessary computational infrastructure
- Awareness-raising among scientific communities
- Awareness-raising among funders and governmental actors

# Concerns



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## Concerns:

- **Diversity** between disciplines, both w.r.t. “awareness and abilities”, but also w.r.t “needs and notions
- The **commercial** dimension:
  - parity between commercial actors and publicly funded actors
  - parity between governmental actors w.r.t. IPR, security & privacy
- Transparency, accountability, **trust**: the move to open science creates significant opportunities that need to be capitalised on



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