

FAIR Data Management and Stewardship – A Funder Perspective

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Research. Evidence. Action.

I will discuss

- The ambition
- From ambition to reality
- Facilitating the transition to open and FAIR data – a step-wise approach
- (HRB) FAIR DMP Pilot – building awareness and expertise
- An international collaborative effort: The Funders pilot

The background features three large, abstract, rounded pink shapes. One is at the top, and two are at the bottom, partially cut off by the blue footer. The shapes are solid pink and have soft, curved edges.

The ambition

The ambition

Ensuring that its funded research can have the **greatest possible impact** by having more

- Openness and transparency
- Reproducibility and replicability
- Acceleration of knowledge discovery and its application
- Discoverability and accessibility
- Interoperability across different domains and disciplines
- (Re)Usability

Towards a more open research environment

Many funders and other stakeholders have now embraced

- Open science
- DORA and more holistic researcher assessment
- Open access (moving to Plan S)
- Open data
- Data sharing
- Data management and stewardship as intrinsic to good research practice
- FAIR principles - BUT what do they really mean in practice?

How to align and implement them in practice?

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From ambition to reality!

Challenges and facilitators

Challenges for researchers

- Many researchers are not yet familiar with the FAIR principles, or what they REALLY mean.
- Also the concept of scholarly outputs being machine readable (actionable) is neither well understood, nor are the practices and tools available – for many even achieving FAIR for humans is a challenge!
- Researchers fear that the funders requirements lead to additional costs and therefore a reduction of research budget.
- Researchers perceive the DMP requirements as additional paperwork, from which their research does not directly benefit. What is the real value?
- In some case researchers think they do not need to improve their practices
- There is a lack of incentives for researchers to create FAIR data, share data and achieve societal impact.

Funders are often not ready to turn their ambitions into reality

- Staff lack expertise, skillset and resources to review DMP's and assess their quality and compliance;
- Many funders and research institutions still judge researchers mainly by their publications track record and citations - DORA will slowly change it;
- How to budget for open and FAIR data?
- There is often a gap between creating data policies/statements and their **proper** implementation in practice.

Research institutions are often not sufficiently equipped to support FAIR and data management

- They lack expertise and skillset for the new profession of data stewards to support and guide their research teams;
- Many tools, software, and standards for making FAIR data a reality are still under development, not known, or not widely implemented.
- In general, there is no agreement among the parties about the responsibility for financing data stewardship after the end of a research project to keep data available for reuse;
- What is the cost for FAIR and open data?

The carrot and the stick

- ❖ Integrating FAIR DMP into good research practice requires a joint effort from researchers, their institutions and research communities, service providers and funders;
- ❖ **Funders** in particular can be strong drivers to incorporate tools and standards that fit their research objectives and make their data FAIR
 - ❑ Combine their funding requirements and funding policies ('stick') with guidance and financial support ('carrot') for researchers
 - ❑ Encourage research institutions to improve facilities and support for their researchers to create FAIR data, as they need to comply with the funder's requirements.

How can we use the stick which resembles a carrot?

Funders' approaches

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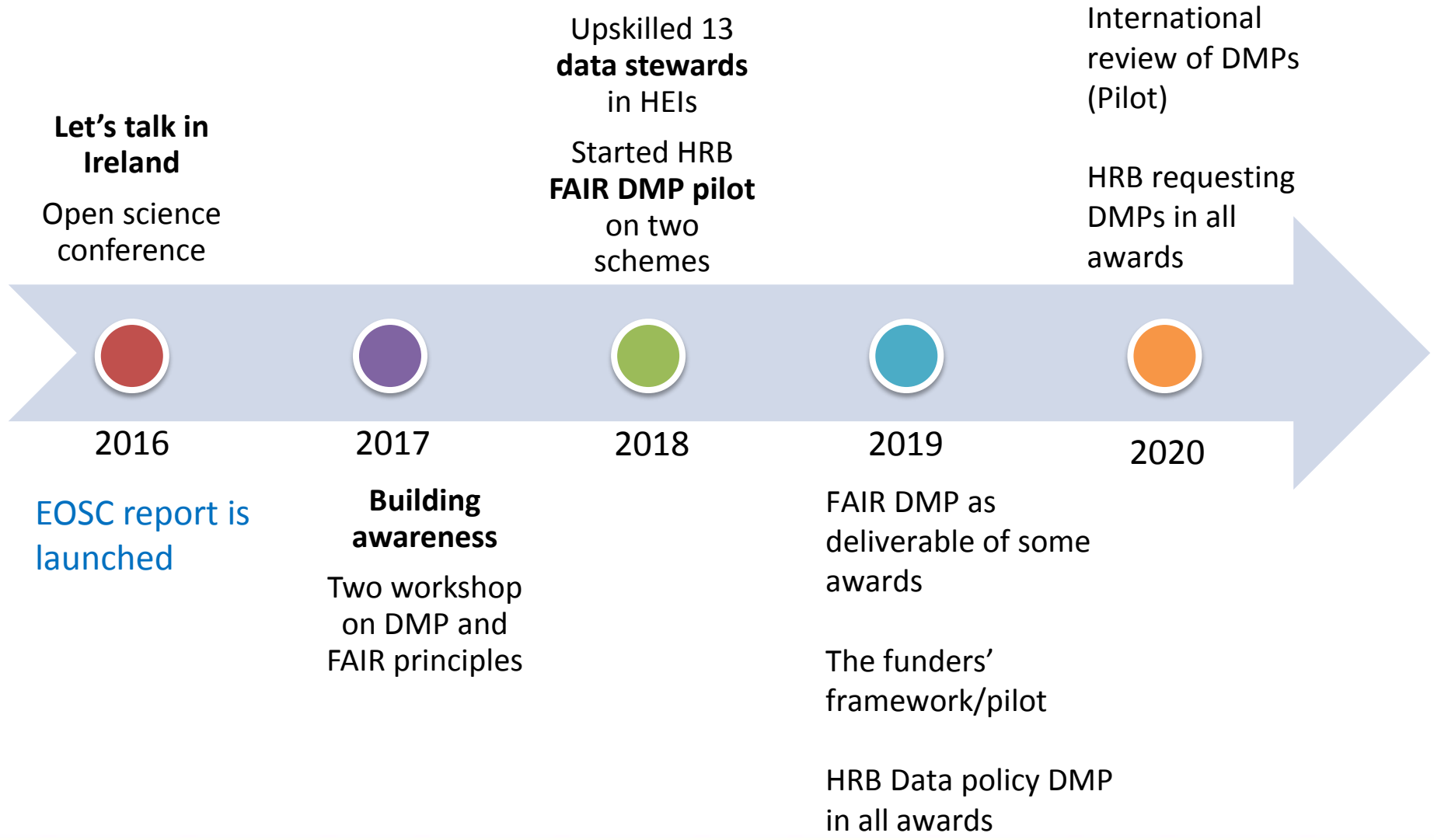


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HRB facilitating the transition to FAIR data in health research

Towards FAIR data management and stewardship in HRB grant funding



Application stage

Lead Applicants liaise with data stewards/expert in Host Institution to discuss the research data of the project

Lead Applicants and data stewards/expert complete the
(1) *Outline for Data stewardship and*
(2) *FAIR Data Management costs*

Main stakeholders

- GFISFO office
- Lead applicants
- Data stewards

Other stakeholders

- VP research
- Research offices
- Other funders
- Science Europe

Review stage

Application unsuccessful

Application successful
Award offered and
Contract negotiated
(DMP submission is a deliverable of award)

Award negotiation

Lead Applicant start working closely with stewards/expert at HI and prepare full DMP

Start of award

Post-Award Management

Data stewards
Provide feedback to HRB on
process and DMP
template

DMP submitted to HRB as
deliverable
after starting the award

International panel to
review
DMPs (submitted from
several awards)

Experts' feedback
provided to
HRB, data
stewards/expert
and PIs

Interim report in 2020

Reflections and
revisions

The FAIR funder pilot

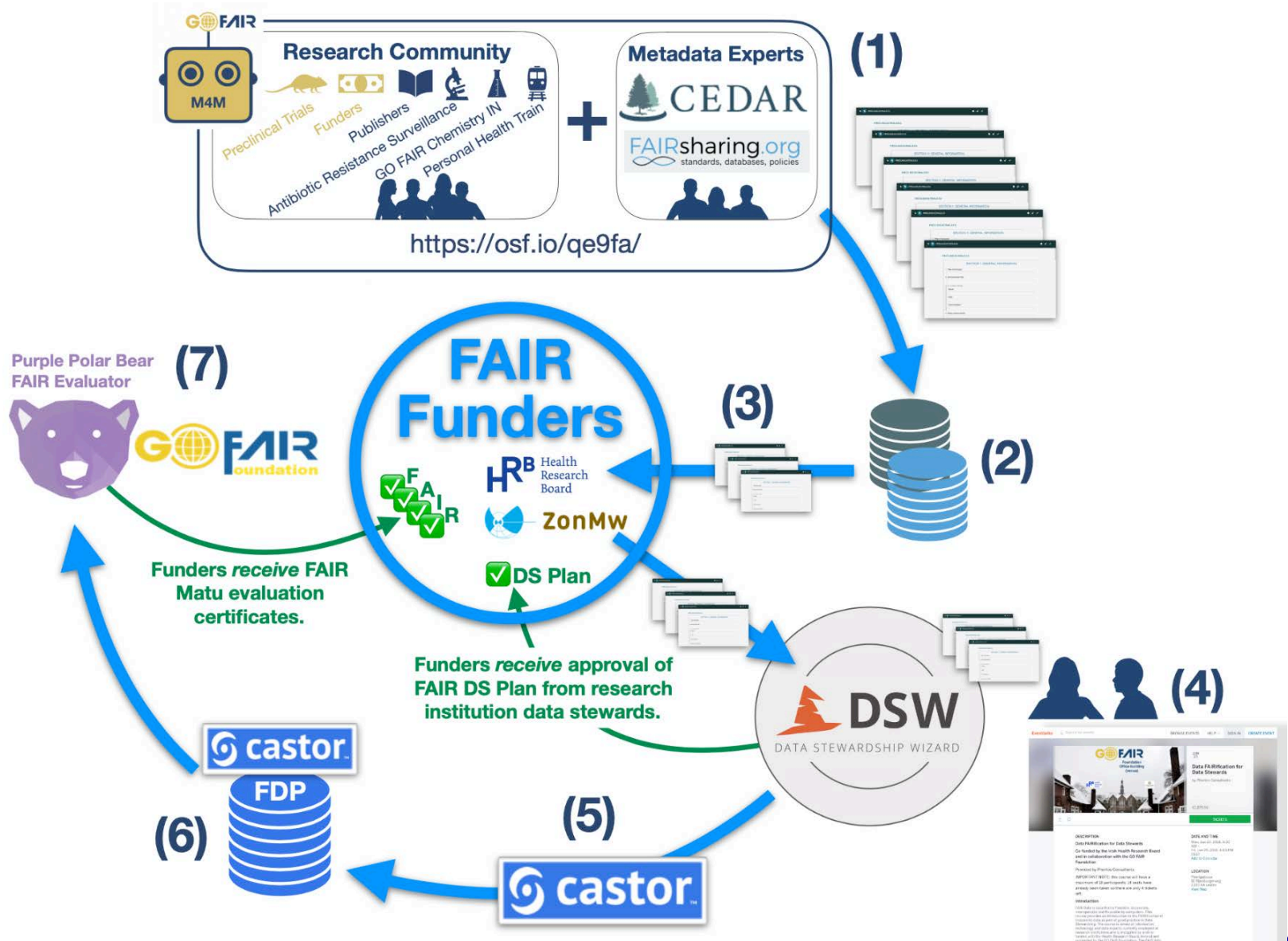
- ❖ In 2018 The GO FAIR International Support and Coordination Office, brought together a number of pioneering research parties and service providers to design the FAIR funding model [<http://arxiv.org/abs/1902.11162>];
- ❖ HRB (Ireland) and ZonMw (the Netherlands) are currently the main participating funders in this initiative but the ambition is to increase the number of participants soon;

The FAIR Funder is a bottom-up community driven Implementation Study that assembles the **minimal services needed to realistically produce and assess FAIR research outputs**.

Funders widely endorse:

- (1) good data stewardship planning
- (2) FAIR research outputs

- Both objectives require advanced skills, usually lacking for both Funder and Grantee.
- Advanced levels of FAIRness can not be achieved in isolation but require researchers to access services (e.g. indexing) provided by other stakeholders (e.g. search engine providers).
- It is currently difficult for the funder to realistically **require** FAIR data stewardship planning, and likewise difficult for the grantee to comply



Participating to the Funder Pilot

- Open to any Funder
- Open to any Service Provider
- Voluntary
- Low barrier to join:
 - GO FAIR Rules of Engagement <https://www.go-fair.org/resources/rules-of-engagement/>
 - ✓ Commitment to FAIR Principles
 - ✓ No Vendor lock in

Resources at: <https://osf.io/b9fz4/>

Lessons learnt so far

- Importance of having the “buy in” from the researchers as domain expert in creating FAIR data;
- Importance of educating the researchers and other stakeholders on the end goal of FAIR and DMP practices – create advocates and not tick boxes exercise;
- Institutional resources are slim so this need to be factored in: who is going to guide and assist the researchers? Who is going to learn the new tools? Who is going to make data FAIR
- Progressing steadily: Achieve discoverability for humans while transitioning towards machine actionability;
- The “stick” needs to be used in order to see some progress otherwise the different stakeholders will not be incentivised to change.

To summarise....

- We need to continue to advocate and educate the stakeholders;
- We need to understand the value of FAIR data and open data – what is the end goal?
- Difference between human and machine FAIRness but any progress towards more FAIRness is still a progress;
- The “stick” is necessary and effort are necessary from all stakeholders involved;
- It is work in progress – keep up to date and let’s work together.



Thank you for listening

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