Outcomes of FAIR incentives study and expected impact

Josefine Nordling, CSC – IT Center for Science, Finland (WP4, task lead for FAIR incentives task)
EOSC-Nordic Final Event, Tallinn, 5 October 2022
Ambitions of FAIR incentives task

- Encourage researchers to comply with FAIR data practices in their research
- Demonstrate the perceived benefits and existing incentives in place for FAIR compliance
- Ultimate goal is to reach policy harmonisation in the region
Approach used in gathering input

Mapping exercise of already established FAIR policy incentives and any gaps impeding FAIR adoption

Literature review

Qualitative study approach using semi-structured interviews. N= 29

Six stakeholder groups: researchers, research support, university management, RFOs & ministries of education and research, national data service providers, legal advisor
Respondents by country

- Sweden: 13.8%
- Norway: 10.3%
- Estonia: 13.8%
- Lithuania: 13.8%
- Latvia: 6.9%
- Iceland: 6.9%
- Denmark: 10.3%
- Finland: 24.1%

Respondents by stakeholder group

- Ministries and funders: 17.2%
- Management in HEIs: 6.9%
- Research support: 10.3%
- National data services: 6.9%
- Legal advisors: 3.4%

Researchers by OECD Field of Science

- 1.6 Biological sciences: 6.7%
- 5.4 Sociology: 6.7%
- 6.2 Languages and Literature: 13.3%
- 1.3 Physical sciences: 13.3%
- 1.4 Chemical sciences: 13.3%
- 5.8 Media and communications: 6.7%
- 5.2 Economics and Business: 6.7%
- 1.5 Earth and related Environm...: 33.3%
Input to activities and deliverable

Contributing Stakeholders
- Researchers
- Funders - Research support - Research administration - Policy makers

T4.3.1 Landscaping analysis of policy implemented incentives
T4.3.2 Identifying incentives - interviews with researchers and other stakeholders
T4.3.3 Feedback from stakeholders - stakeholder workshop (MS34)

D4.4 Final report
Dedicated recommendations for stakeholders
FAIR archetypes

Impact
All research is one step closer to sharing FAIR data as a normal part of responsible data management

Draft report for D4.4

Input from EOSC documents and other sources
A call for a Cultural Change

- Following the analysis of the interviews, it was discovered that there is a need for a cultural shift in research regarding FAIR data.
FAIR data

Regulation Policies

- Harmonise policies
- Make clear requirements

Benefits Rewarding

- Develop metrics and rewards
- Benefits Rewarding

Communication issues

- Foster cultural change

Allocation of funding

- Support services issues

Lack of resources

- Support and training
- Additional resources

Sustainable infrastructure

- Communicate best practices
Seven FAIR incentives themes

1. Offer additional resources for data curation and sharing (money and time)
2. Have a sustainable infrastructure in place for sharing and publishing data
3. Improve research support services and offer training
4. Develop data sharing metrics and a system based on merits
5. Develop clear requirements for data sharing and FAIR compliance
6. Foster a cultural change towards FAIR research
7. Communicate best practices
Analysis example (Atlas.ti)

In case of open science the payer is usually taxpayer, not a commercial organization. Openness is not always free, it requires funding to be open. Open is not open when someone is willing to pay for it. Financing always helps but there isn’t enough of it. Even internally there are payment requirements for the sensitive data storage, so there is need for better funding solutions.

The University does not provide any special funding or training for open science / FAIR.

Yes, resources are planned but not through the approach that adding additional funds for data management - this is not sustainable.

Funding body to allocate money / earmarked money for publishing data: e.g. number of months to support the publication of data or for example, an outside person to support publishing/ opening or a part-time person who handles data issues for several projects (e.g. 2 months of the year would look after your project data issues).

Researchers don’t know about all the associated and estimated costs of RDM and cannot easily put them into a plan.

Main issue is the financial part of it, as in a lot of other countries. Data stewardship is expensive and the government is oftentimes a bit vague on the implementation part. Government seems to be hoping that the institutions take care of the financial issue themselves.

The funders should not fund the infrastructure. The main costs should be covered by the universities for equality purposes (such as data storage).

University needs to sponsor this (storage) infrastructure.

Critical of the gap in between the requirements of EU or funders to keep your data for a long time, but without the willingness to fund data curation after publication.

Infrastructure that seeks to support research and on the other hand we also need funding to maintain the infrastructure.

With regards to OA, it is trickier to make data freely available - Elsevier agreement makes Gold OA possible, but everyone wants to publish in Nature and Science because it translates into a high Impact Factor, but it is expensive and there is no funding available for that.

The Research Council expects this for the funding decisions and include it in the overhead, but they are expecting many other things to belong to this overhead, so it is not that clear.

The incentives: FAIR incentives

challenges: lack of training

support: organizational support

challenges: resourcing issues

incentives: key drivers

data sharing: help and facilitation of sharing

challenges: technical challenges in service development

neoactivities: political

service&infrastructure issues

RDM: agreements

RDM: has it been easy to publish data

service&infrastructures support services
FAIR is a requirement coming from outside the research community.

No-one knows FAIR principles.

No-one can understand or use my data.

I need clear guidance, more support, and money.

I have not used data created by others.

I have no idea how opening data could benefit me.

FAIR is an integral part of good research practice.

I have utilized existing services for data management.

Research articles without underlying data cannot be trusted.

I have used data created by others.

I have my own experience of benefits of opening data.

FAIR Newbie

FAIR Master
Expected impact of increased FAIR uptake

**Organisational FAIR data policies**
- Increase in motivation to conduct qualitative, transparent research
- Increase in scientific impact

**Properly funded RDM**
- Improved effectiveness of research
- Increased awareness of FAIR data management and skills development
- Trustworthiness of research outputs

**Machine-actionable DMPs**
- Easy and seamless information workflow between systems (RPOs—service providers—RFOs)
- Supporting FAIR adoption in everyday research work
- Enhances communication between the researcher and support staff. Facilitates planning and risk management

**Monitoring mechanisms for FAIR research**
- Enables following up on how publicly funded research is being used
- Has a positive effect on compliance levels
Expected impact of increased FAIR uptake

Organisational FAIR data policies
Increase in motivation to conduct qualitative, transparent research

Machine-actionable DMPs
Easy and seamless information workflow between systems (RPOs–service providers–RFOs)
Supporting FAIR adoption in everyday

To significantly increase the uptake of FAIR, we need to take the next step from raising awareness and promoting understanding to start acting towards an environment that makes it easy and rewarding for researchers to comply with the FAIR principles

Properly funded RDM
Improved effectiveness of research
Increased awareness of FAIR data management and skills development
Trustworthiness of research outputs

Monitoring mechanisms for FAIR research
Enables following up on how publicly funded research is being used
Has a positive effect on compliance levels