TEMPLETON WORLD
CHARITY FOUNDATION

FAIR WORKFLOWS

Implementing FAIR Workflows along the research lifecycle

A Story about Despair vs. the Magic Powers of FAIR

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FAIR Workflows Project

Potential workflow

1. Grant Application

Researcher registers grant proposal in the TWCF system

2. Application Approved

Grant approved and grant ID assigned

3. Submit Data Management Plan

Researcher submits DMP

4. Research

Research conducts the research study

5. Protocols and research methods

Researcher shares and deposits protocols

6. Research data, instruments deposited

Researcher deposits data and instruments

7. Research article published

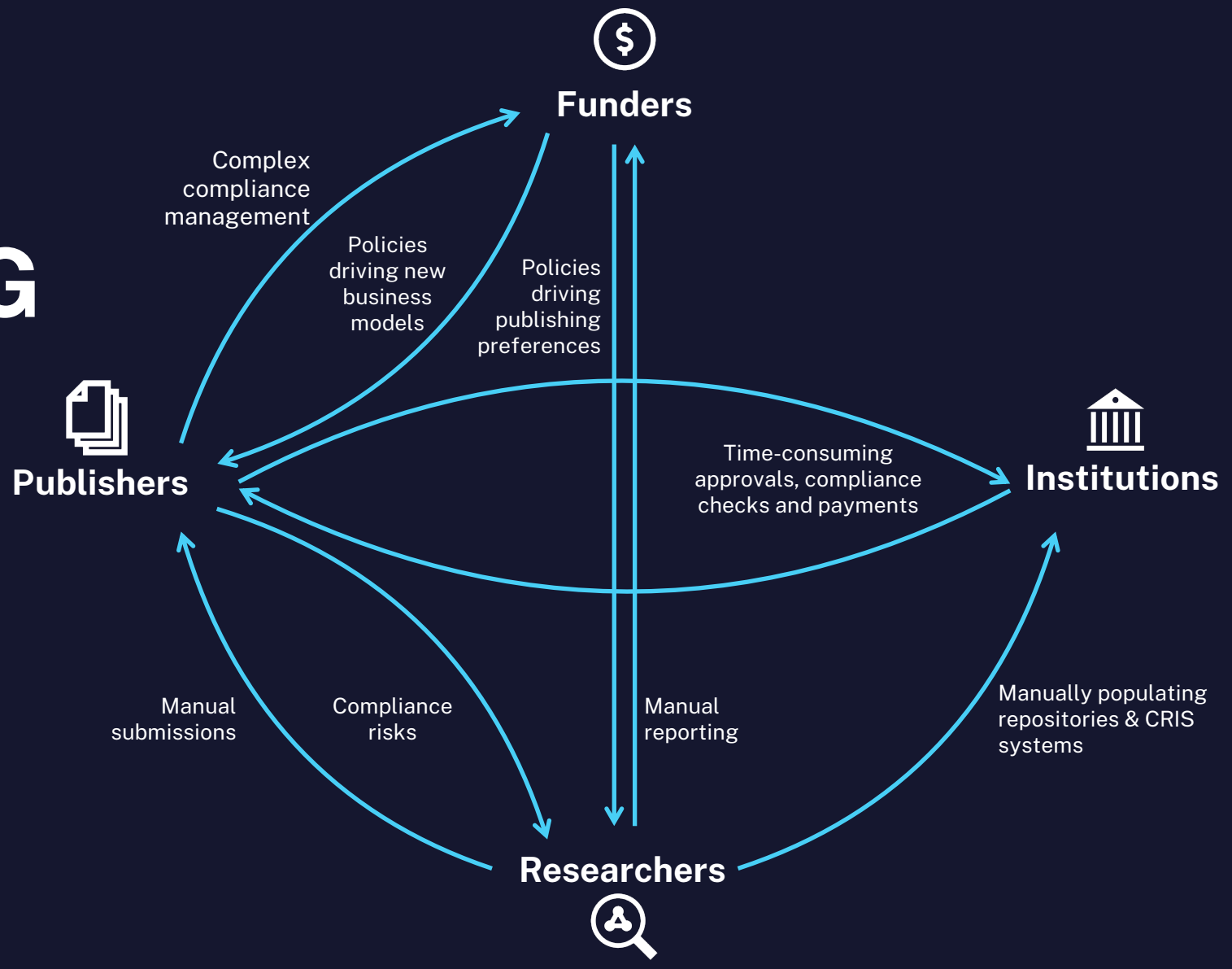
Select suitable journal and submit article as per funder policy

8. FAIR Workflow interface

Interface that enables researchers have greater confidence in scientific studies - linked DMPs, research outputs, instruments, experimental methods and protocols, event data (usage and citations) and visualization

INTRODUCING DESPAIR

Open Access & Open Science is great, but a Pandora's Box leading to increasing complexities, costs and frustrations.



DESPAIR BECAUSE:

Stakeholders act in silos

Funders, institutions and publishers act in siloed systems, with no or limited integration.

Fragmented data and no analytics

With siloed systems, data becomes inconsistent and fragmented in each.

Time-consuming and costly

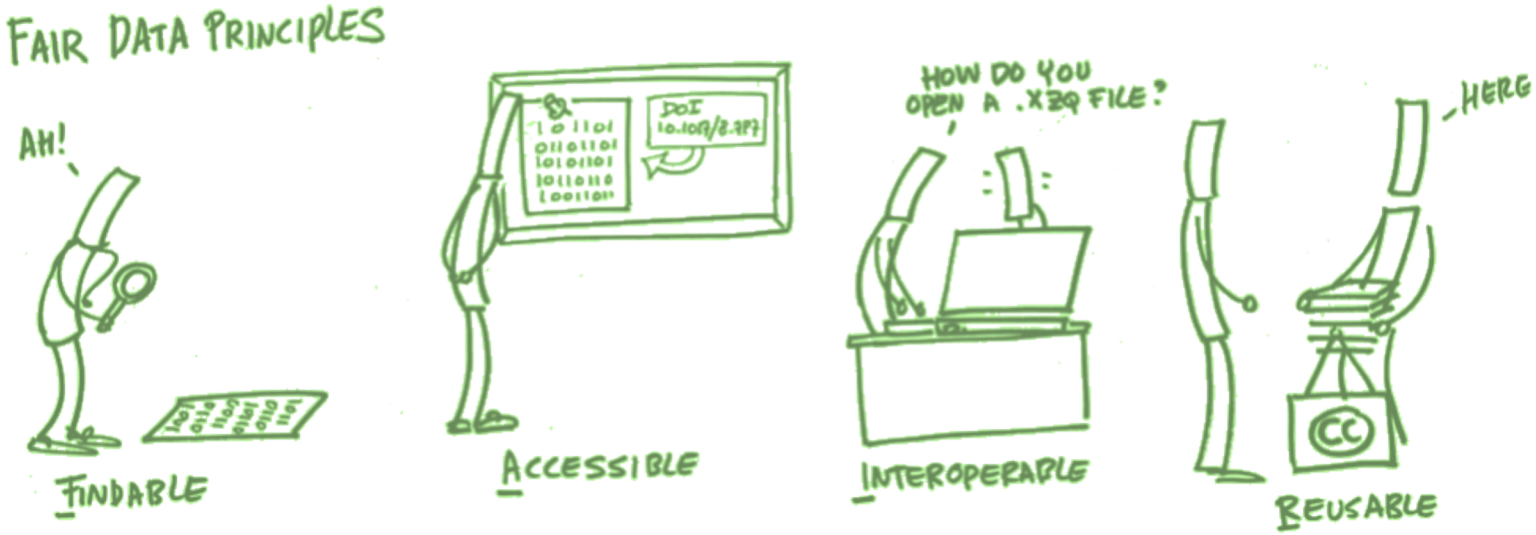
The work is manual and duplicated for everyone along the processes.

Risk of being non-compliant

Increasing risk of being non-compliant due to the complexity.

INTRODUCING FAIR

A set of principles giving us hope to defeat Despair!



A Global Unique Identifier (PID) for every entity!

APIs have been invented!

Structured data formats exist!

Enabled through OA & CC-BY!

SOURCE: Image: https://book.fosteropenscience.eu/

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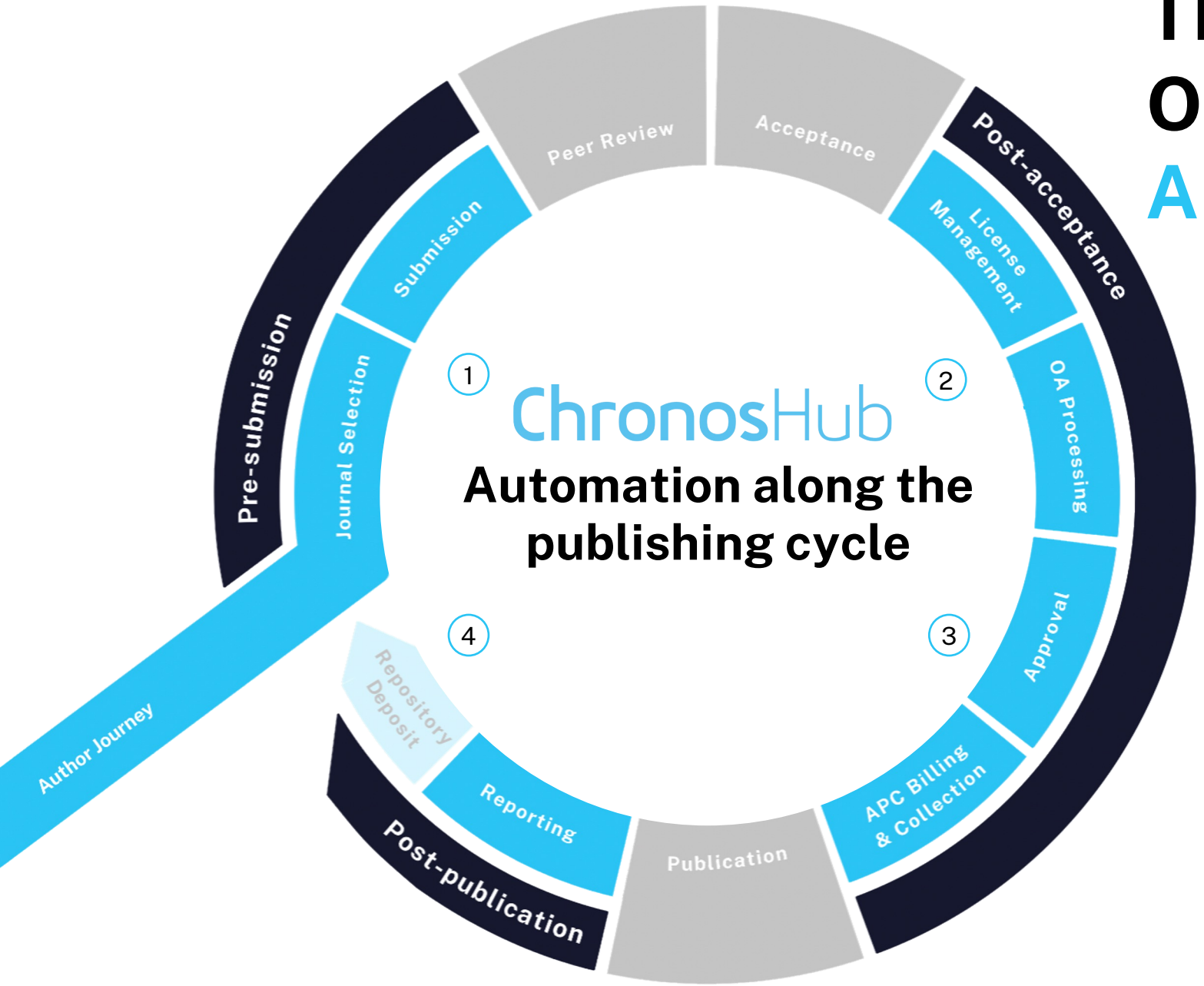
THE MAGIC POWERS OF FAIR ENABLE AUTOMATION



1. Journal Assessment & Submission
2. OA Agreement Monitoring
3. APC Management
4. Automated CRIS & Repository Deposits

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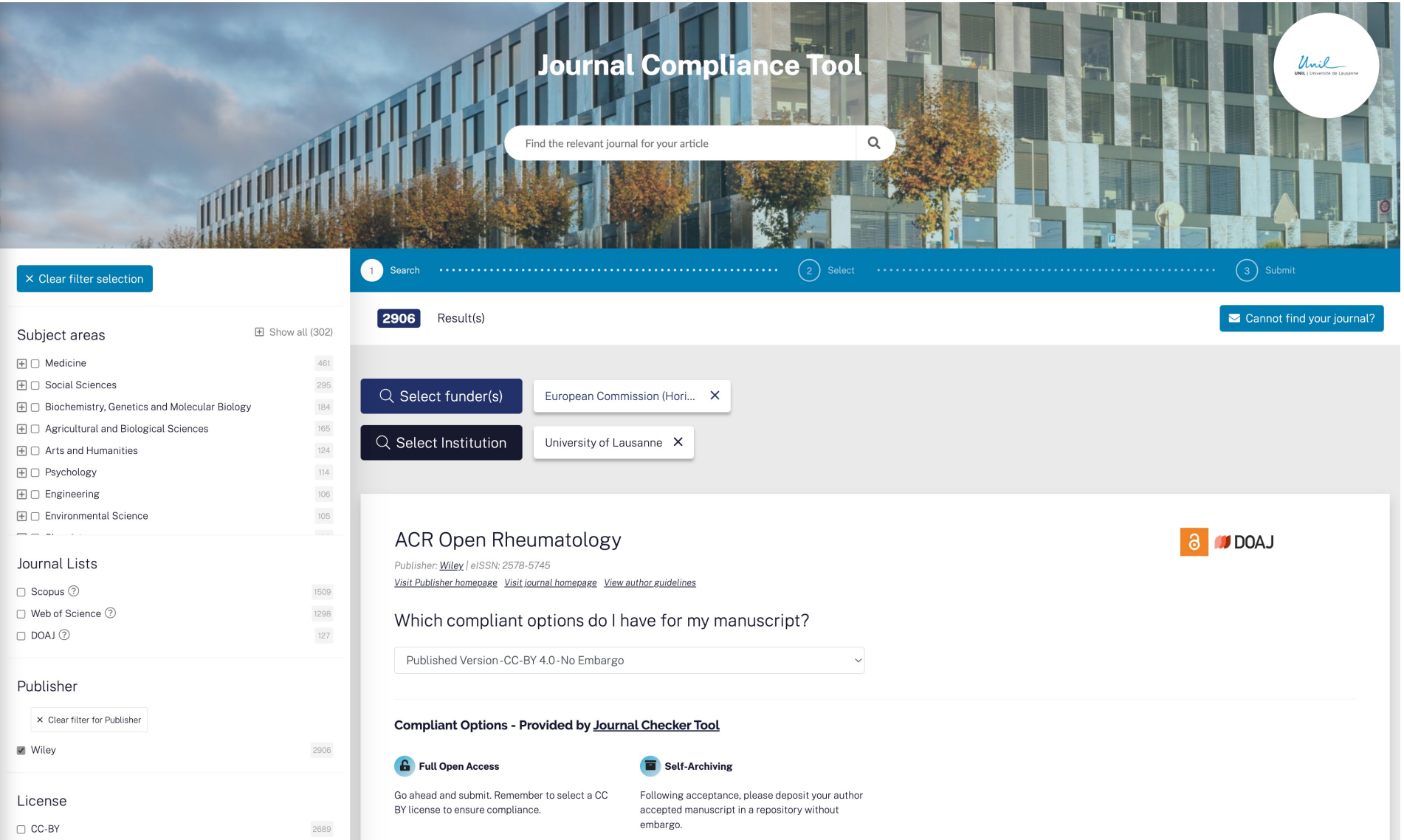
DOAJ

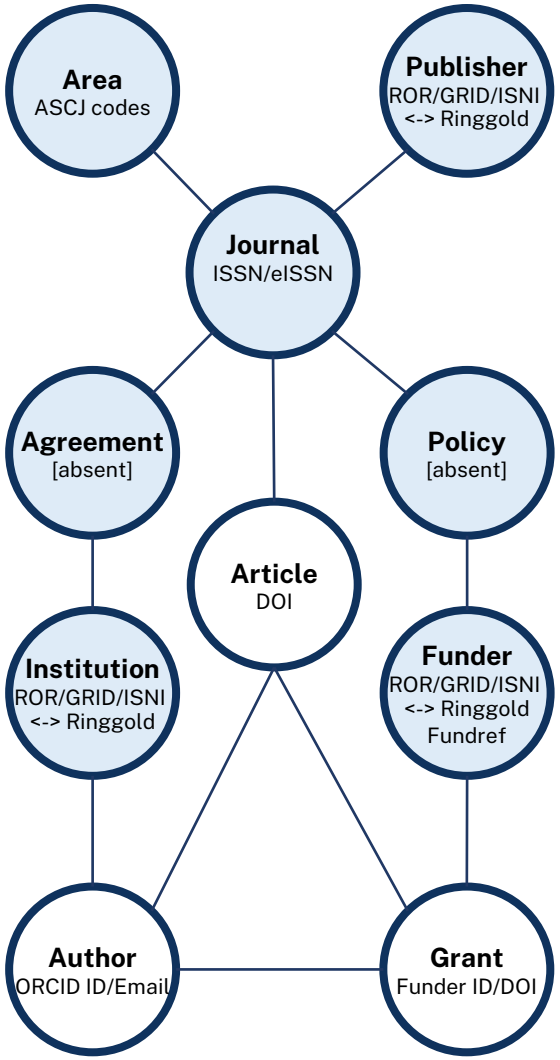
JOURNAL CHECKER TOOL

Sherpa Romeo

Scopus

1 Check journals against funding policies and publisher agreements





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Manuscript submission & upon acceptance

Data directly to & from publisher systems, or upon acceptance via email (AI-driven invoice scanning).

Checking the institution's funding eligibility criteria.

2

Invoice form 742124

Fill in the blank fields

Titel
Performance of goats in a detour and a problem-solving test following long-term cognitive test exposure.

Journal
Royal Society Open Science

Funding acknowledgment
Swiss National Science Foundation (SNSF)

Publisher
The Royal Society

Eligibility 5/7
- [x] Grants
- [x] Policy
- [x] Funding Scheme
- [ ] Grant Authors
- [x] Acknowledgement
- [x] OA status
- [ ] License

Price
APC 1200 GBP
VAT 240 GBP
Total 1440 GBP

Grant
Grant: Performance of goats in a detour and...

Article type

Submit

After pressing submit your invoice will be sent automatically

3 4

	Publisher	Title	Author(s)	Requirements	Date Received	Date Accepted	Due Amount	Invoice Number
⌄	American Chemical So...	Mapping out the aqueous surface ch...	Jonathan De Roo, Hala Helmy	4 of 5	17.02.2022	15.02.2022	US$5,000.00	APC600287889
>	Royal Society of Chemi...	Nanosegregation in Arene-Perfluoro...		3 of 5	17.02.2022	12.02.2022	CHF 0.00	Rejection: Hybrid journal
>	MDPI	Evaluation of an Active LF Tracking Sy...	Michael J. Toscano, Michael Gantner, ...	4 of 5	18.01.2022	13.01.2022	CHF 1,895.52	1441836

Publisher, Title, Author(s)

Mapping out the aqueous surface chemistry of metal oxide...
American Chemical Societ...
JACS Au
Date received: 17.02.2022

Jonathan De Roo
First Author
University of Basel

Hala Helmy
Corresponding Author
Univ Basel

Requirements

Grants	182895
Grant Authors	Hala Helmy, Jonat...
Acknowledg...	-
OA Status	GOLD OA
License	CC-BY 4.0

History Log

Date	Action	Person
17.02.2022	Pending approval	Laura Davidson

Due Amount Specifications

Fees	
APC	US$5,000.00
Sub Total	US$5,000.00
VAT	US$0.00
TOTAL	US$5,000.00

Choose action...

Notes...

Confirm

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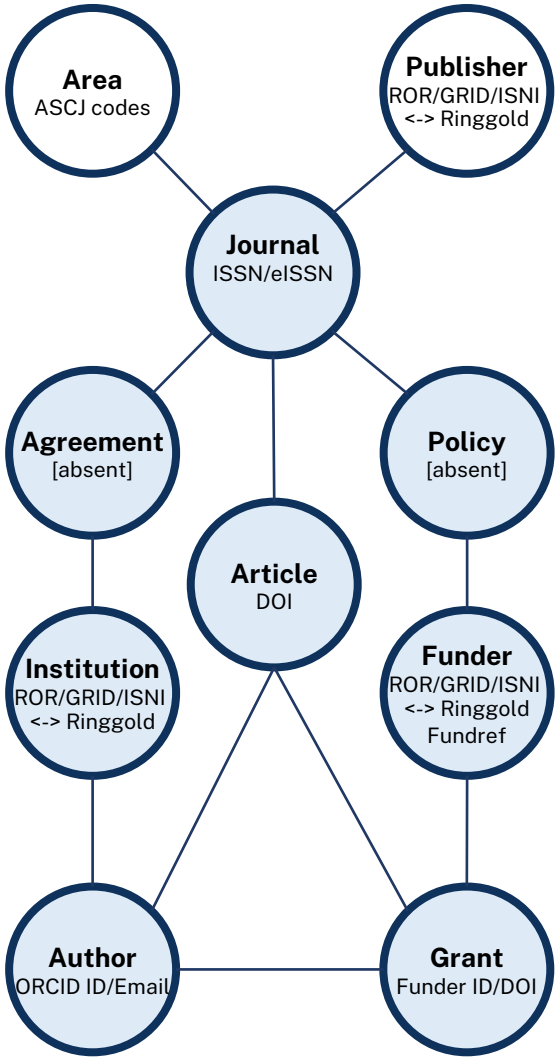
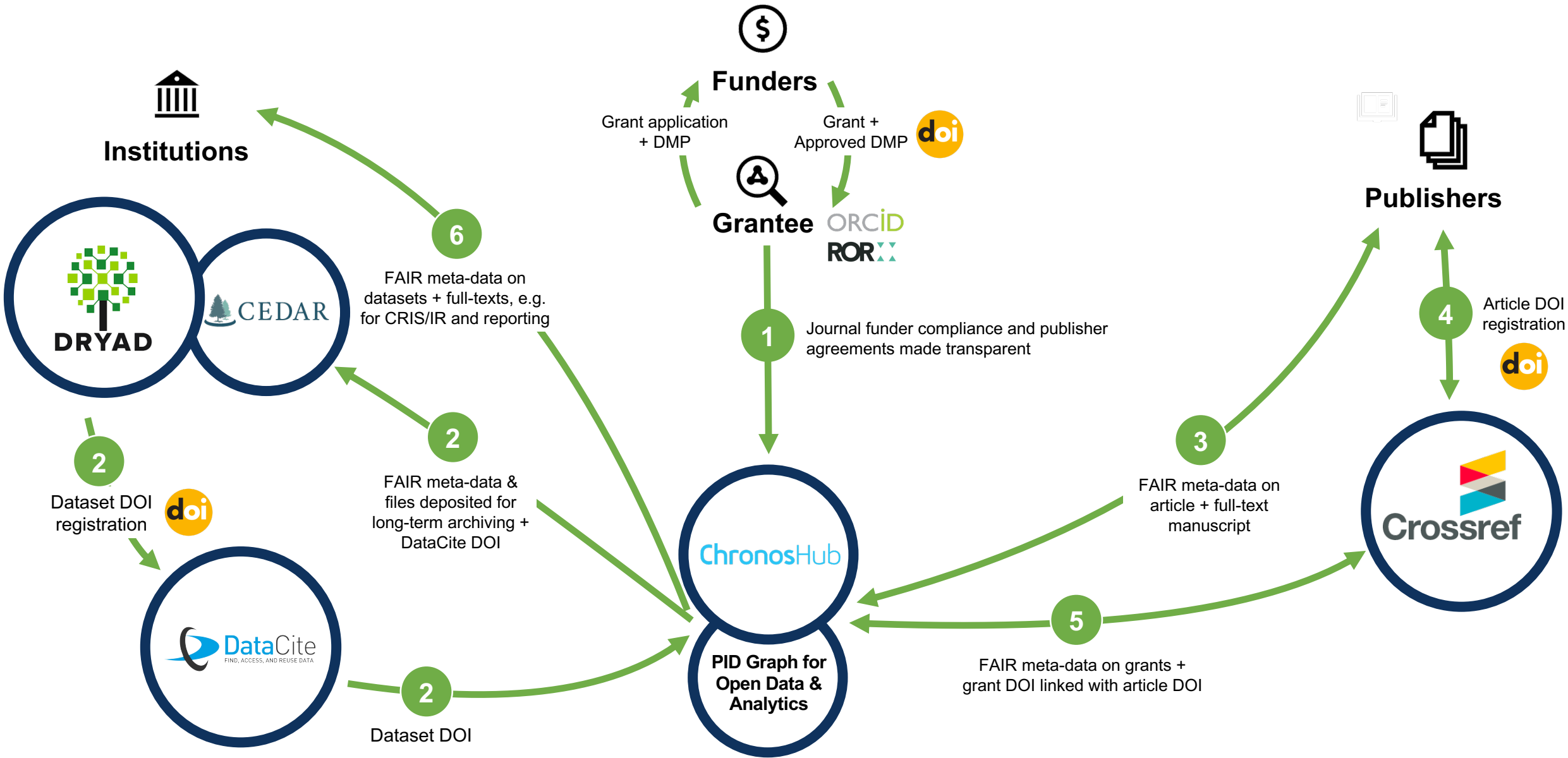


FAIR's Magic Powers

https://datacite.org/fair-workflows.html



Select the National Research Fund Luxembourg (FNR) grant(s) that funded the research in this article (select at least 1 per funder) *

ABC123456: COVID-19 Test Grant ×

If your Grant does not appear on the list, you can add it manually by clicking the button below.

CREATE NEW GRANT HERE +

Enter the article title *

A new article

Add authors connected to this article *

FIND AUTHORS

Jane Demo Doe

Select the article type *

research-article

Select the main subject category(s) *

Computer Science ×

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Running head

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Format

This is the abstract.

Paragraphs: 1, Words: 4/500

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DataCite
FIND, ACCESS, AND REUSE DATA

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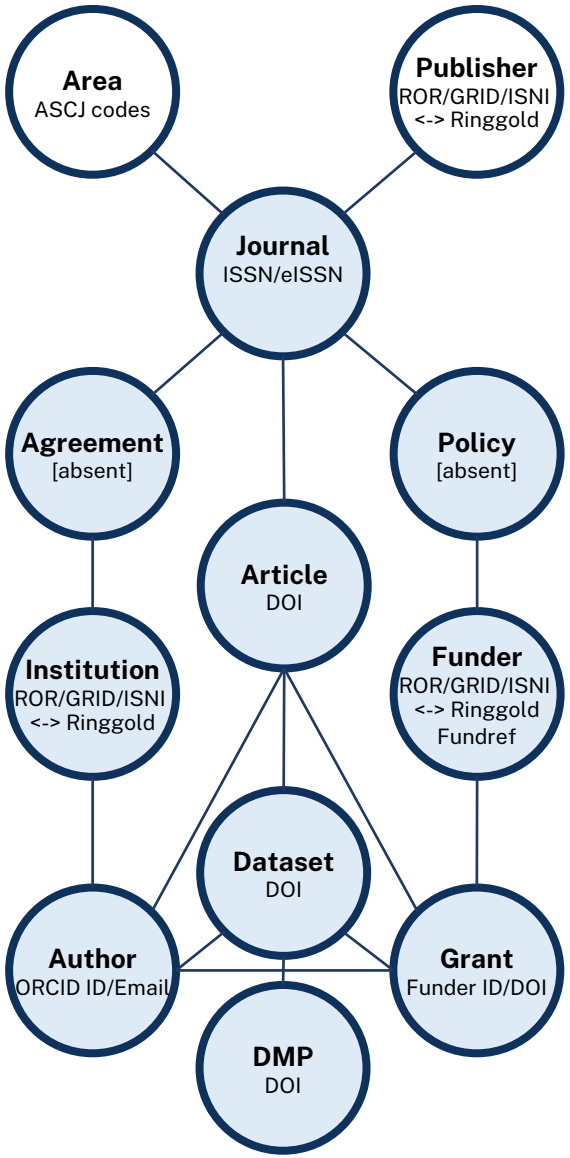
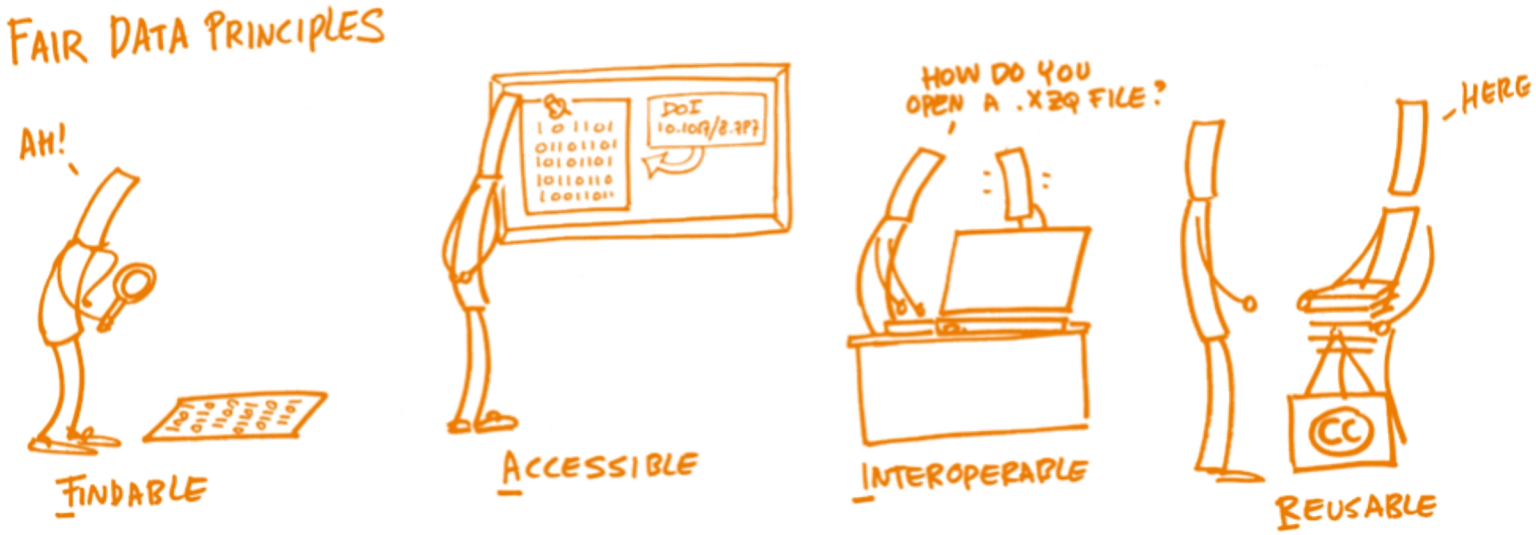
DRYAD



BUT...

Not everyone using the Magic Powers of FAIR!



A Global Unique Identifier (PID) missing for many entities and items!

APIs have often not been set up or made available!

Many data formats exist, no given standard!

A lot of content not with a CC-BY or similar license!

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How do we get organisations to apply the FAIR PRINCIPLES?

1. Mandate the use of Global Unique Identifiers (PIDs, PIDs, PIDs)?
2. Establish a standard data exchange format?
3. Certification of systems' FAIRness?
4. Incentivize organisations to provide APIs for others to integrate with?
5. Ensure data becomes FAIR upon inception?

THANKS!

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