

# Open and FAIR: building blocks of integrity in scholarship

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# The situation now

- Inequity in access to knowledge occurs everywhere, even in developed countries such as Australia



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- The scholarly ecosystem remains primarily based on a print, subscription model, dominated by a few publishers

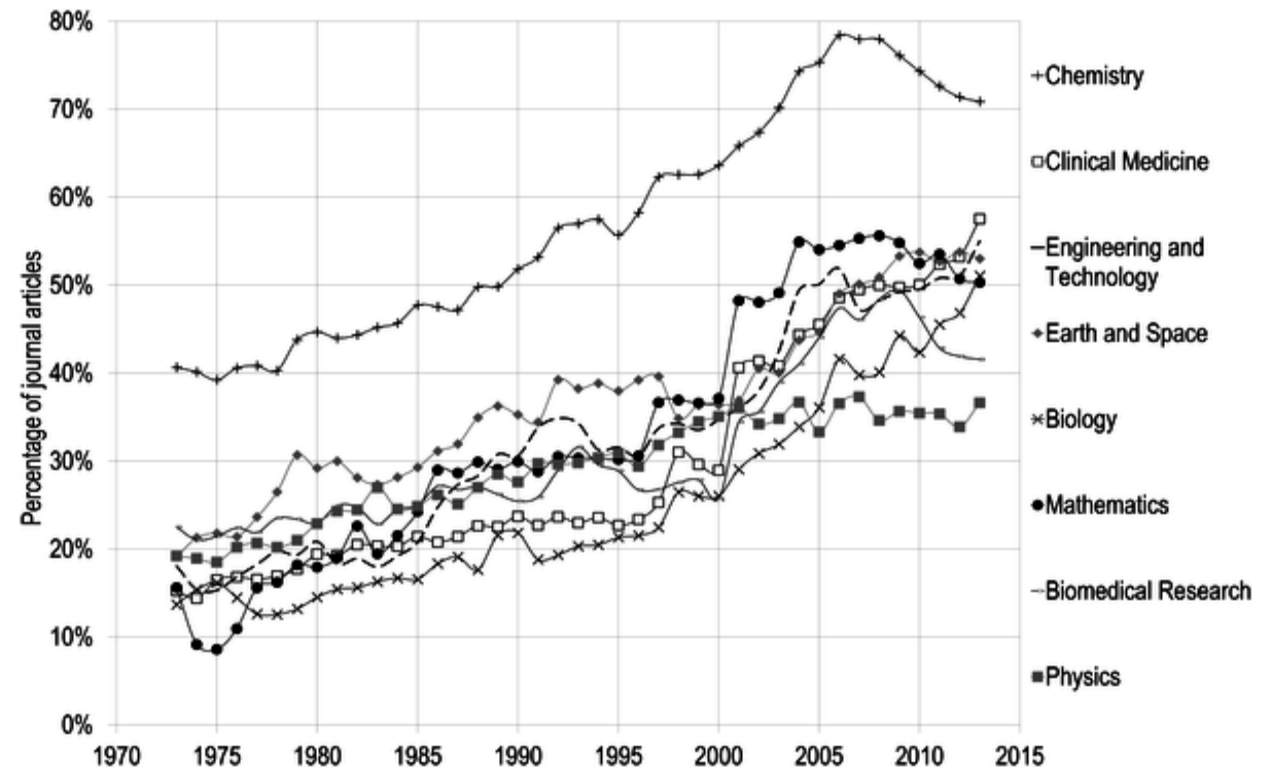
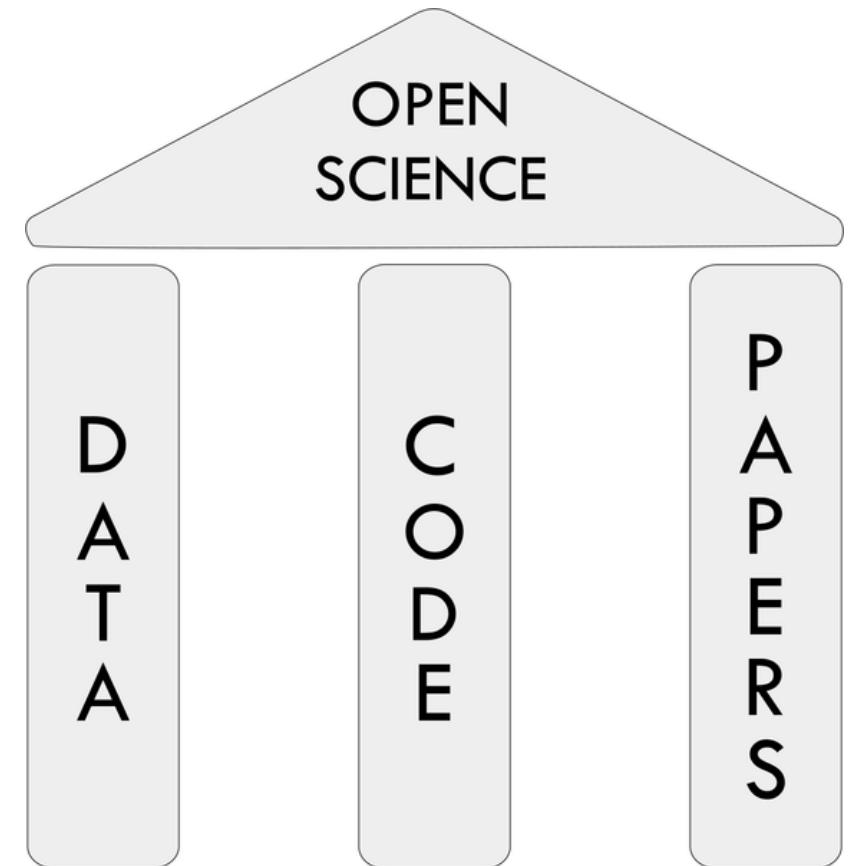


Fig 3. Percentage of papers published by the five major publishers, by discipline in the Natural and Medical Sciences, 1973–2013.

Larivière V, Haustein S, Mongeon P (2015) The Oligopoly of Academic Publishers in the Digital Era. PLoS ONE 10(6): e0127502. doi:10.1371/journal.pone.0127502  
<http://127.0.0.1:8081/plosone/article?id=info:doi/10.1371/journal.pone.0127502>

# The situation now

- Inequity in access to knowledge occurs everywhere, even in developed countries such as Australia
- The scholarly ecosystem remains primarily-based on a print, subscription model, dominated by a few publishers
- There are at best inconsistent connections between published research with its underlying data code and relevant other research leading to questions about the quality and integrity of research.



Gorgolewski KJ, Poldrack RA (2016) A Practical Guide for Improving Transparency and Reproducibility in Neuroimaging Research. PLOS Biology 14(7): e1002506. <https://doi.org/10.1371/journal.pbio.1002506>  
<http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002506>

## A long term aim

A fully **interconnected**, global scholarly ecosystem supported by a **wide variety** of **open** publishing models, underpinned by sophisticated **linking** of well-curated, **interoperable** research **articles** and other outputs, including **data** and **software**.

Despite massive global impetus for change still only around 15-20% full OA **15 years after OA initially defined**

- Most research outputs have no associated license & unclear reuse rights
- Uncoordinated diversity of models
- Still focus on traditional research outputs
- Need for global cooperation often not balanced with local needs

## Budapest Open Access Initiative



### Barriers to change

- Incentives
- Costs
- Publisher resistance to change

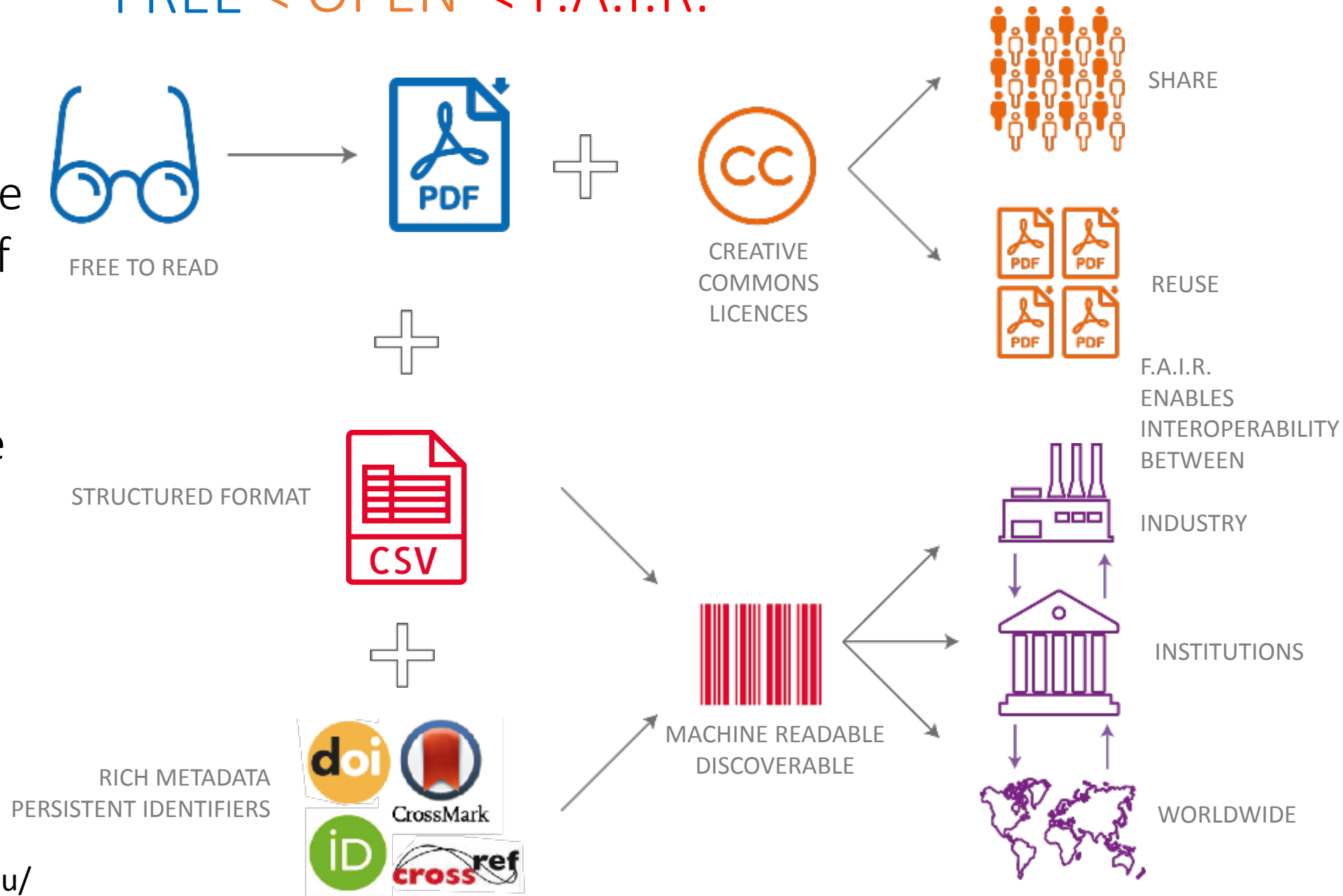
To support integrity and interoperability we therefore need to think beyond free/open:

## F.A.I.R

- |               |          |                 |   |
|---------------|----------|-----------------|---|
| Findable      | <b>F</b> | ➤ FINDABLE      | associated with rich metadata (e.g. identifiers, DOIs)    |
| Accessible    | <b>A</b> | ➤ ACCESSIBLE    | available in a public repository or open journal site     |
| Interoperable | <b>I</b> | ➤ INTEROPERABLE | in a format that allows it to be exchanged and integrated |
| Reusable      | <b>R</b> | ➤ REUSABLE      | has a licence that allows reuse                           |

# FREE < OPEN < F.A.I.R.

“The F.A.I.R. principles are a more explicit definition of the requirements that are needed to ensure that anyone can find, read, use and reuse research outputs”





# The nuts and bolts of F.A.I.R.



FOR A GLOBALLY INTERCONNECTED SCHOLARLY ECOSYSTEM WE NEED

PERMANENTLY IDENTIFIED OBJECTS 

LINKED TO THE RESEARCHERS 

IN OPEN SITES    - etc

IN HUMAN AND MACHINE READABLE FORMATS  

LINKED TO RELATED OBJECTS  

WITH CLEAR REUSE RIGHTS 

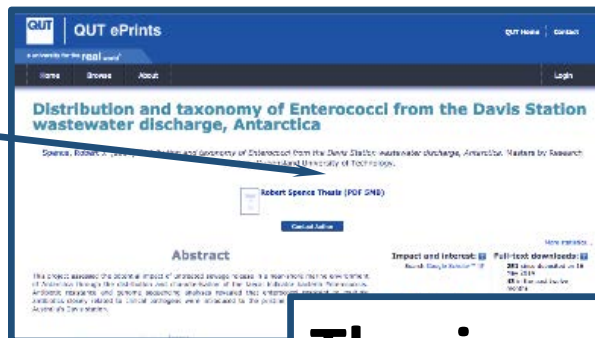
Paper



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Thesis

FAIR in practice



Data

genome Announcements  
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Draft Genome Sequence of *Enterococcus faecalis* Strain PF3, Isolated from Adélie Penguin Feces from Antarctica

Robert J. Spence<sup>a</sup>, Ana Pavasovic<sup>b</sup>, James J. Smith<sup>a</sup>, Peter J. Prentis<sup>a</sup>

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<sup>a</sup>Science and Engineering Faculty, Queensland University of Technology, Brisbane  
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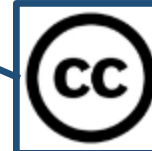
ABSTRACT

*Enterococcus faecalis* is one of the leading causes of nosocomial infections and a common commensal organism in humans and other animals. In this study, a draft genome sequence for the *E. faecalis* strain PF3, isolated from Adélie penguin feces collected from Warriner Island, Antarctica.



### Cite this collection

Spence RJ, Pavasovic A, Smith JJ, Prentis PJ. 2014. Draft genome sequence of *Enterococcus faecalis* strain PF3, isolated from Adélie penguin feces from Antarctica. *Genome Announc.* 2(1):e01209-13. [10.1128/genomeA.01209-13](https://doi.org/10.1128/genomeA.01209-13)



# Major recent regional updates



- 2016 ORCID Australian consortium launched
- 2017/8 ARC and NHMRC revise OA policies; both mention F.A.I.R. & need for licencing
- 2016 Productivity Commission Inquiry into Intellectual Property Arrangements recommends national and states and territories OA policies

- **August 2017 Australian Government supports recommendation**

- 2017 National Science Statement notes OA policy
- 2017 Innovation and Science Australia launch 2030 Strategic Plan (**no OA mention**)
- CAUL “Fair, affordable and open access to knowledge” program
- ARDC formed from ANDS, Nectar and RDS





# Overarching themes from past year

- Maintaining **quality and integrity** of research outputs remains critical
- We have moved from *whether* OA is needed to *how* to how much re-engineering of other aspects of scholarly publishing is needed e.g. **assessment**
- Need to plan and implement specific, concrete steps that advance OA and scholarly innovation e.g. **F.A.I.R.**
- Increasing importance of **metadata** and related infrastructure
- Need better **transparency** of the costs of publishing - OA Article processing charges *and* costs of subscriptions and infrastructure



# The opportunity now: to purposefully design a global open ecosystem

- Data



- Preprints



- Journals



- Archiving



- Book & monograph publishing



- Grey literature



To change the system we need:

- Planning and support of high level needs – the **infrastructure**
- Support for diversity of solutions – the **ecosystem**
- Collaboration regionally and globally – the **community**



creative commons australia

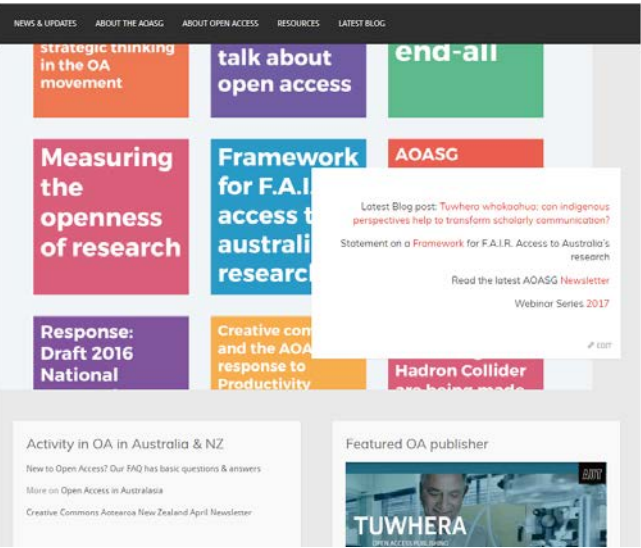
Griffith  
QUT

Charles Sturt  
Newcastle  
UNSW  
Macquarie



creative commons AOTEAROA NEW ZEALAND

Council of New Zealand University Librarians - CONZUL



**Advocacy**

Policy advice  
Responding to national consultations

**Collaborations**

National - especially CAUL  
International – SPARC, OA2020, SCOAP3

**Raising awareness**

The Conversation  
Webinars  
Talks, newsletters, blogs, twitter

**Building capacity**

Communities of practice



Webinar #6 From open access to access to knowledge: connecting movements to democratise knowledge

Friday 22nd September

Presented by **Amanda Lawrence** - Research and Strategy Manager at APO

(Please note: There were a few occasions during this webinar where Amanda's line dropped out, we have edited those breaks out of this broadcast)

Listen here:

