# Measuring the impact of your publications using metrics

Publishing Power Hour 7

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Curtin University acknowledges the traditional owners of the land on which Curtin Perth is located, the Wadjuk people of the Nyungar Nation; and on our Kalgoorlie campus, the Wongutha people of the North-Eastern Goldfields.

# Session outline

Why metrics?

Telling your story

Key resources and examples

- Incites
- Scopus and Web of Science
- Altmetric Explorer

# Why metrics?

# Metrics can provide supporting evidence of claims:

- Research performance
- Track record
- Contribution to discipline
- Contribution to society
- International collaboration
- Benchmarking against peers

**HOWEVER:**

Metrics are meaningless without context

# Responsible use of metrics

Several key points:

- Account for variation by field in publication and citation practices.
- Eliminate use of journal based metrics. Promote the use of article-level metrics and indicators.
- Consider the value and impact of all research outputs including datasets, software and Non-Traditional Research Outputs (NTROs).
- Consider a broad range of impact measures including qualitative indicators, such as influence on policy and practice.

San Francisco Declaration on Research Assessment (DORA)
https://sfdora.org/read/
Leiden Manifesto
http://www.leidenmanifesto.org/

DORA

https://sfdora.org/read

About Communities Meetings Grants Contact

The Declaration Signers Project TARA News and Resources

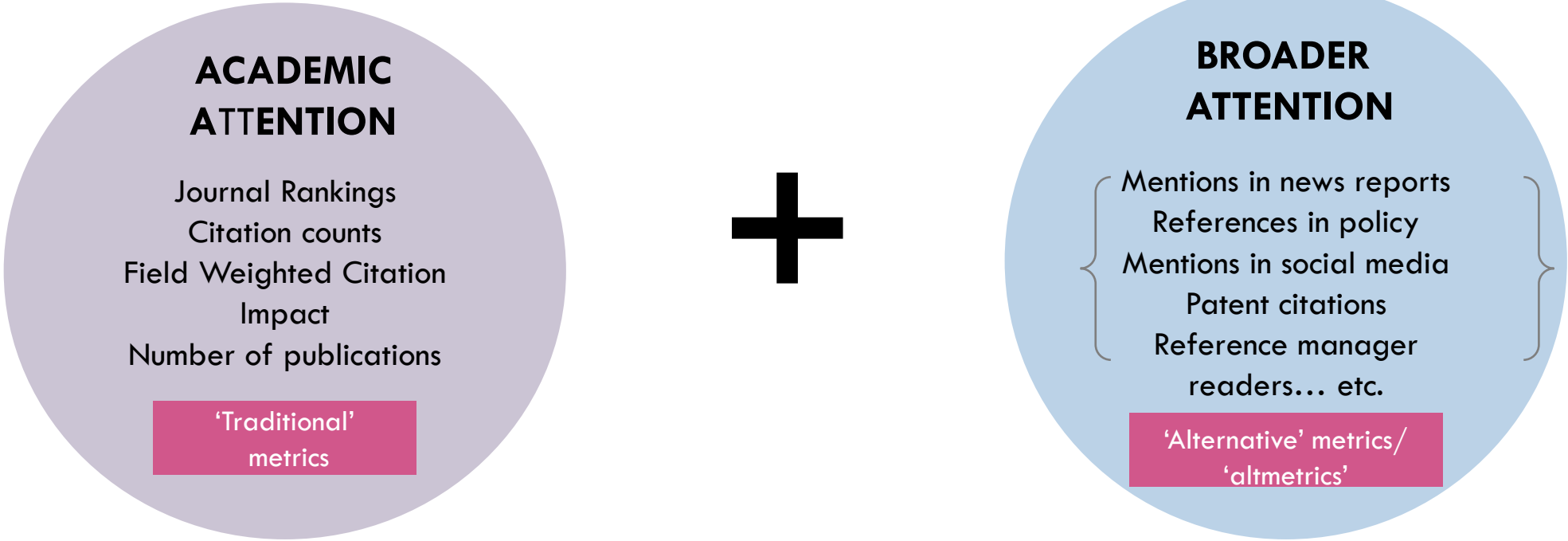
22,168 individuals and organizations i
countries have signed DORA to date.

IARS' Press
Exon Publications
Royal Geographical Society of South Australia, Inc.
Asia-Pacific Applied Economics Association Australia
The University of Melbourne Australia
The GrantEd Group Australia
Tour de Cure Australia
Orygen Australia
Design Out Crime and CPTED Centre Australia
Vascular Cell Australia
National Health and Medical Research Council Australia
Australasian Neuroscience Society Australia
Victor Chang Cardiac Research Institute Australia
The Macfarlane Burnet Institute for Medical Research and Public Health (Burnet Institute) Australia
The Bionics Institute Australia
The Association of Australian Medical Research Institutes Australia
Neuroscience Research Australia Australia
Garvan Institute of Medical Research Australia
Australian Academy of Science Australia
Association of Australian Cotton Scientists Australia
Institute for Molecular Bioscience, Brisbane Australia Australia

# Telling your story

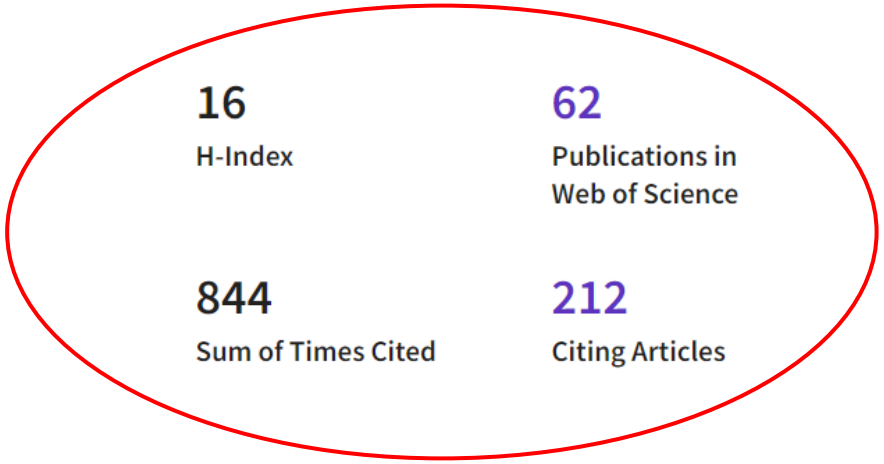
# What story do you want to tell?

- How well you are progressing compared to your peers?
- An increase in your impact over time?
- Who is citing your work and where?
- Cross-disciplinary influence?
- International or industry collaboration?
- Impact on policy?



# ‘Traditional’ metrics – Author level :

Number of publications, number of citations, average citations per paper, and tracked performance over time.




**Beware the h-index…**

*h = h number of articles being cited h or more times*

Limitations:

- Can be misleading, does not describe the impact, importance or quality of the publication(s).
- Should not be used to directly compare individuals. Can disadvantage ECRs.

# ‘Traditional’ metrics – Journal level :

What is the quality of the journals you are publishing in?
How much impact do they have?


**Beware the Journal Impact Factor…**

*JIF = average number of citations received by articles in a journal within a two-year window.*

Limitations:

- Indicates how well a journal is cited.
- Should not be used as a proxy for quality of individual articles.

# ‘Traditional’ metrics – Article level :

How well cited & how much impact have your individual publications had?

**Normalised indicators recommended…**

- Shows how a paper performs relative to averages or baselines
- Category Normalised Citation Impact (InCites)
- Field Weighted Citation Impact (Scopus)

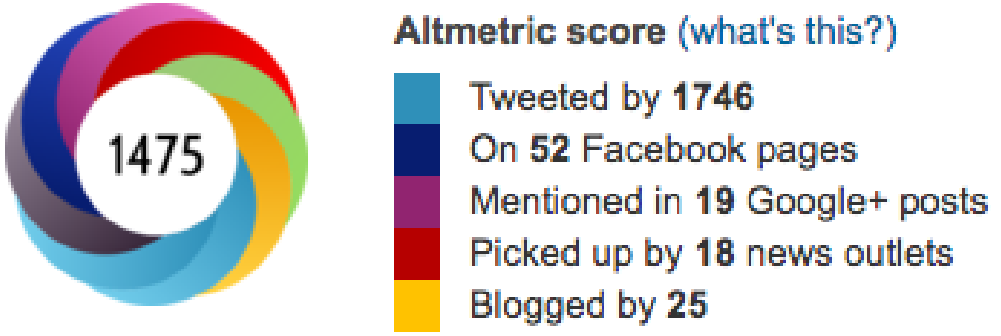
$$\text{CNCI or FWCI} = \frac{\text{Actual citation count of an article}}{\text{Expected citation count based on the average for other outputs of the same subject field, document type, and year of publication}}$$

*CNCI or FWCI = 1 exactly on par with the global average.*
*> 1 more cited than expected according to global average; < 1 cited less than expected.*

# ‘Alternative’ metrics :

- Measures attention garnered based on online activities in social media, mainstream media, online reference management tools, policy documents, patents, and more..

- Less about quantitative metrics demonstrating impact in a particular area and more about using data to tell the story that demonstrates your impact.



# Measures of esteem

- Conference publications
- International reach/collaborations
- Influence on industry/government/public policy/community orgs
- Successfully acquitted research grants/research projects
- Awards and prizes
- Editorships
- Research fellowships
- Membership of learned academies
- Patents and registered designs
- Book reviews, ‘best seller’ lists, editions, translations, publisher-supplied information (eg sales stats, number of downloads, etc)

# Key tools and platforms with examples

Access InCites, Scopus or Web of Science via the Library database listing
https://databases.library.curtin.edu.au/

Access Altmetric Explorer on campus at
https://www.altmetric.com/login.php
Register to access off campus at
http://tiny.cc/curtinaltex

# Key Tools and Platforms

Clarivate™

Web of Science™

Citation database

InCites™

Benchmarking and Analytics

Journal Citation Reports™

Journal information, metrics & rankings

- Publication-level metrics
- Automated Author Profiles
- Journal-ranking metrics
- Benchmarking of authors and institutions.

ELSEVIER

Scopus

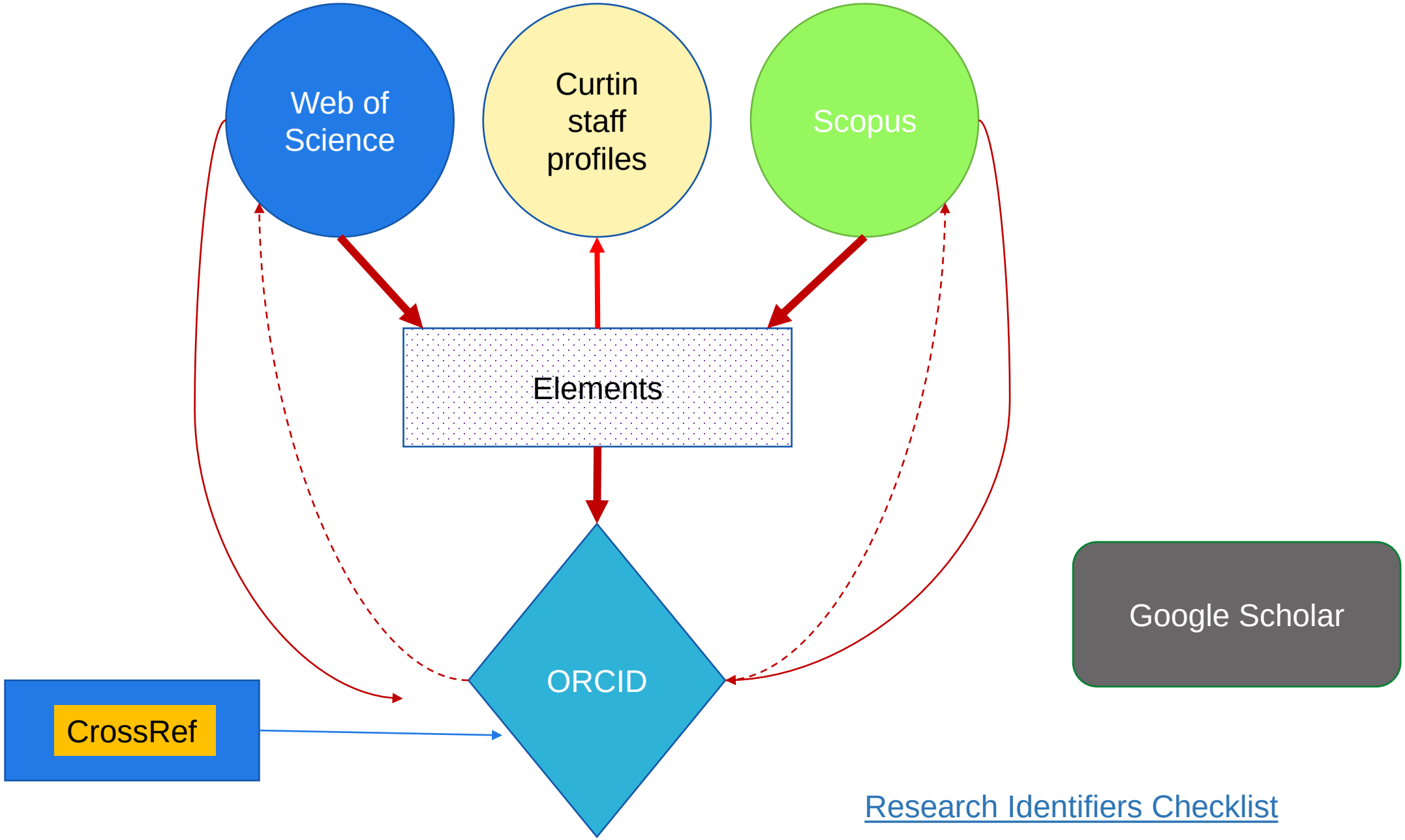
Citation database

Journal information, metrics & rankings

* SciVal

Benchmarking and Analytics

*not available at Curtin




Research Identifiers Checklist

# The standard 5

Author search in Scopus, Web of Science, or InCites.

1. Number of publications
2. Career citation count
3. Citations per paper
4. % cited (or % uncited)
5. H-index (MCR onwards)

Always consult discipline experts and Faculty grant panels for advice on tailoring statements to your discipline's requirements

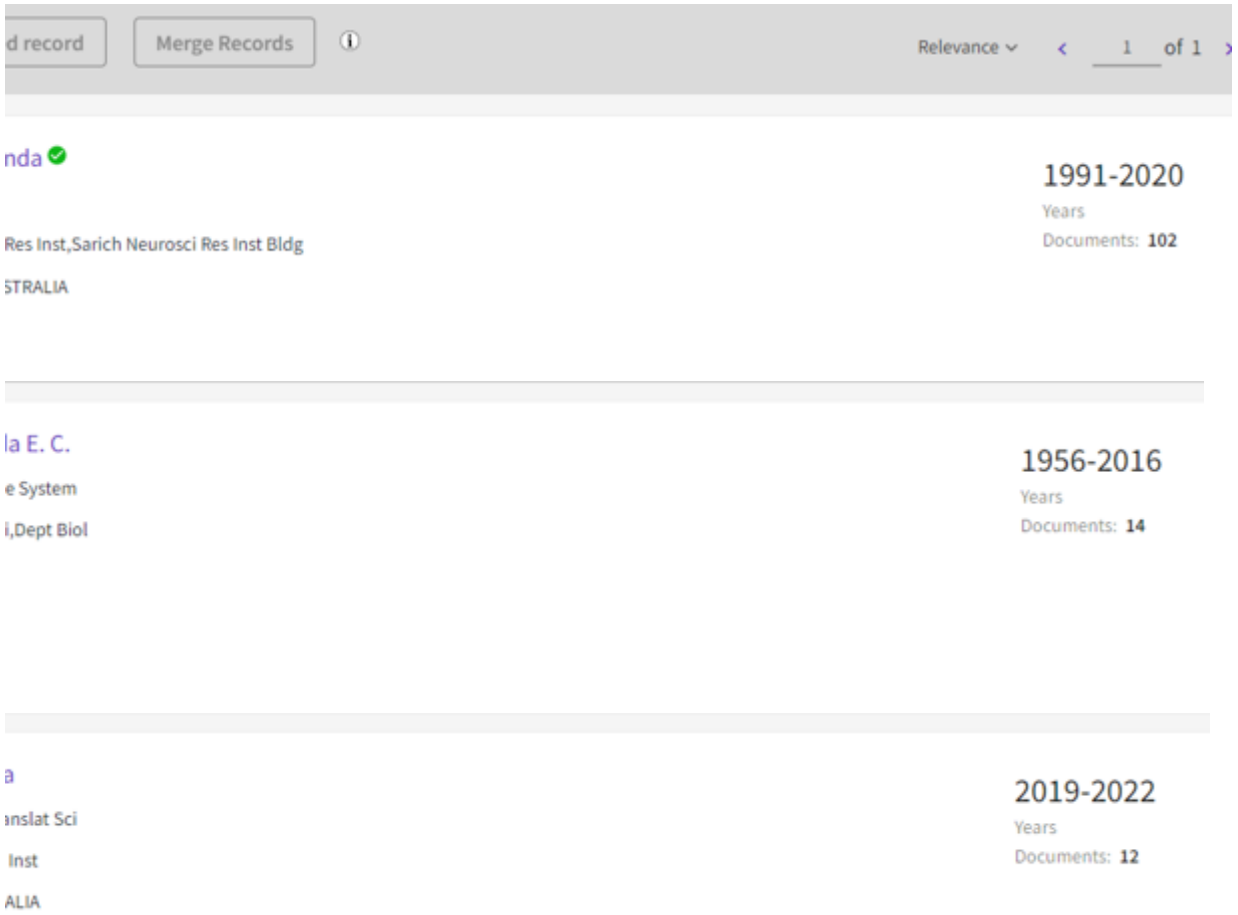
"I have 15 refereed journal articles of which 14 are indexed by Scopus. These articles have received 56 citations, giving the average citation per indexed paper of 4 (Scopus, 28/05/21)."

"I have an h-index of 23 from 81 publications from 1998 to the present" (Scopus, 17/02/2021)

# Key tools and Platforms and examples:

## Web of Science

# Verified record in Web of Science



# Verified record in Web of Science - Tips

- Combine your profiles when performing analysis whilst waiting for a merge request

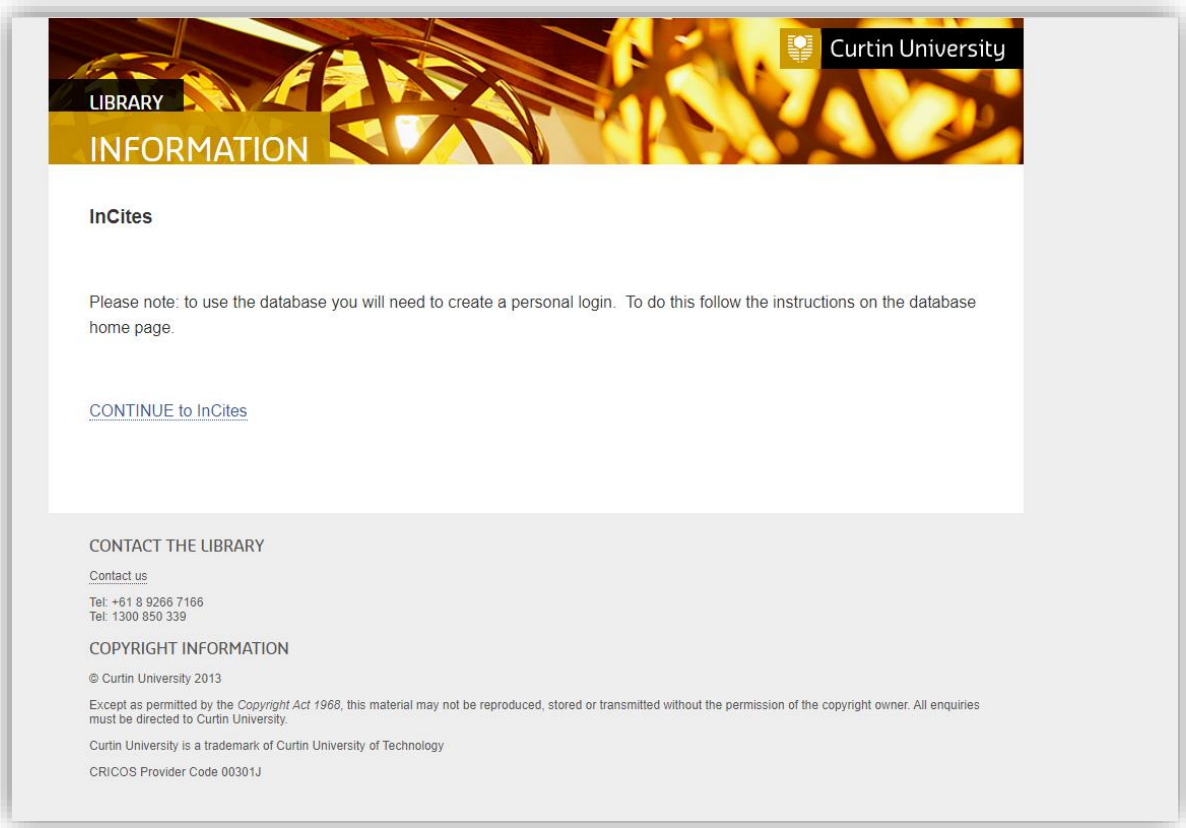
- By clicking on the author name you can see all of the publications assigned to that profile as well as some basic metrics that have been calculated based on the citations to these publications. Publication numbers include non-articles - filter these out by viewing as a set of results

- **View citation report** leads to more more information.

# Key tools and Platforms and examples:

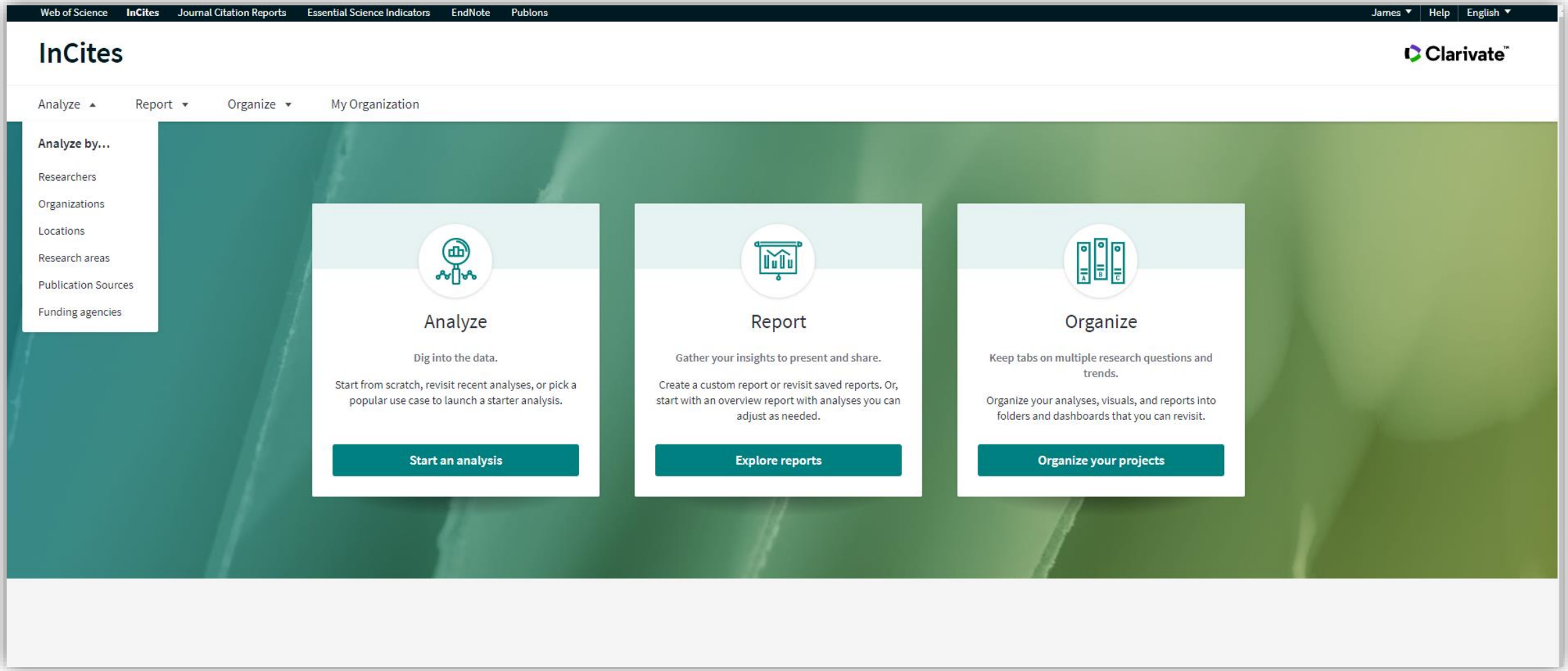
## Incites

# Incites




To access the InCites Platform you will need to register through InCites or Web of Science if you have not done so already. To access either go to http://databases.library.curtin.edu.au

# InCites: Analyse and report

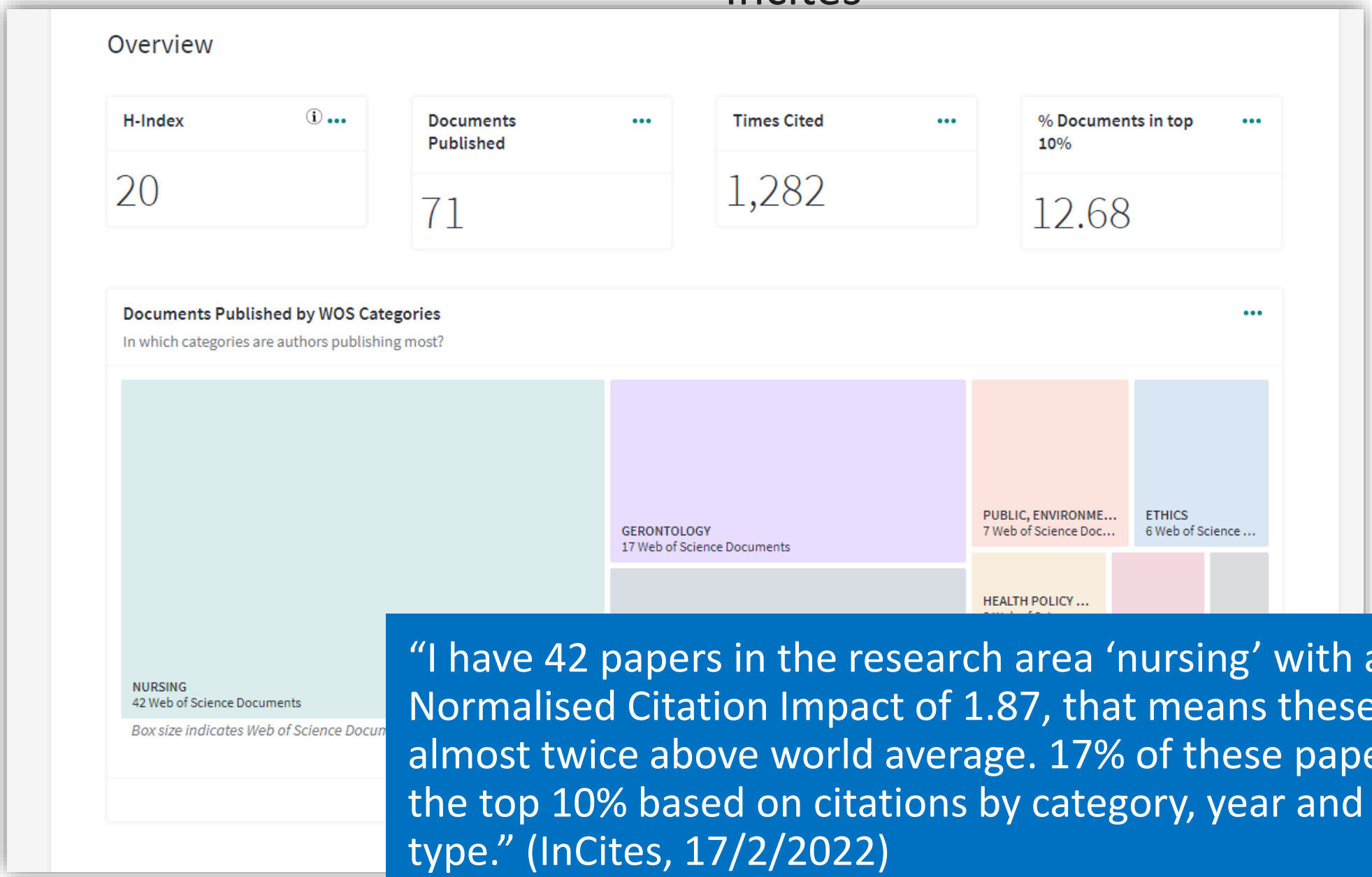


# Incites

$$CNCI = \frac{\text{Count of citations}}{\text{Expected count of citations for documents of the same type, year of publication and subject area}}$$

- CNCI = 1  exactly on par with the expected count of citations for documents of the same type, year of publication and subject area.
- CNCI > 1 Above than the expected count
- CNCI < 1 Below the expected count
- When a document is assigned to more than one subject area an average of the ratios of the actual to expected citations is used

# Incites




"I have 42 papers in the research area 'nursing' with a Category Normalised Citation Impact of 1.87, that means these papers are almost twice above world average. 17% of these papers are in the top 10% based on citations by category, year and publication type." (InCites, 17/2/2022)

# I have productive international collaborations…

Analyse your co-author network by country and/or institution.

What % of your Web of Science indexed articles have an overseas co-author?

"48% of my journal articles have international co-authors, including 5 papers with University College London based co-authors…" (InCites, 25/05/2022)

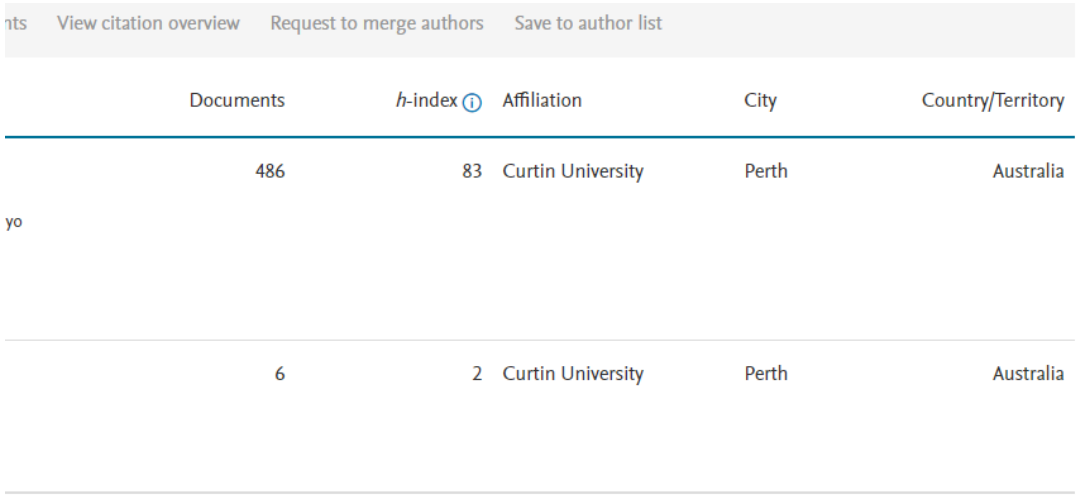
# Key tools and Platforms and examples:

## Scopus

# SCOPUS – Field Weighted Citation Impact (FWCI)


"My best performing article has a Field Weighted Citation Impact of 7.27 which means my article is cited more than 7 times the expected level of citations for articles of that year of publication, document type and for disciplines associated with its source" (Scopus, 17/02/2022)

# Scopus Metrics- Tips




Combine your profiles when performing analysis whilst waiting for a merge request

Scopus contains comprehensive author metrics and visualisations which can be accessed through:

- Analyse author output
- Citation Overview

Publication numbers include non-articles - filter these out by viewing as a set of results

# Key tools and Platforms and examples:

## Altmetric Explorer

# How does Altmetric Explorer aggregate online attention?

Follow a list of sources.

*E.g. blogs, news, policy documents, social media.*

Search for links to papers.

*Automatically link searching and text mining.*

*Collecting attention data*

*Reporting attention data*

Collate attention.

*Disambiguation of mentioned items across different versions.*

Display data in “Altmetric details pages”.

# What sources does Altmetric track?

### News outlets

- Over 1,300 sites
- Manually curated list
- Text mining
- Global coverage

### Social media and blogs

- Twitter, Facebook, Google+, Sina Weibo
- Public posts only
- Manually curated list

### Post-publication peer review

- Publons
- PubPeer

### Reference managers

- Mendeley, CiteULike
- Reader counts
- *Don't count towards the Altmetric score*

### Other sources

- Wikipedia
- YouTube
- Reddit
- F1000
- Pinterest
- Q&A

### Policy documents

- NICE Evidence
- Intergovernmental Panel on Climate Change
- Many more…

Altmetric Details Page


About this Attention Score

In the top 5% of all research outputs scored by Altmetric

MORE...

Mentioned by

- **7** news outlets
- **21** blogs
- **1** policy source
- **1174** tweeters
- **10** Facebook pages
- **3** Wikipedia pages
- **4** Google+ users
- **1** Redditor

Citations

- **105** Dimensions

Readers on

- **262** Mendeley
- **5** CiteULike

Tools

SUMMARY | News | Blogs | Policy documents | Twitter | Facebook | Wikipedia | Google+ | Reddit | Dimensions citations

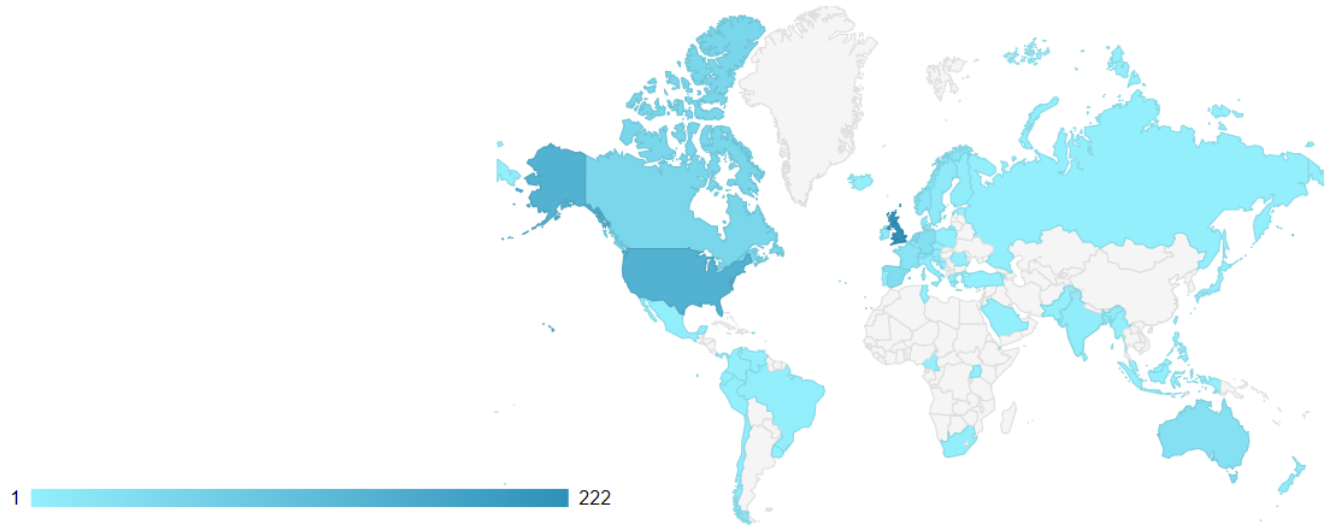
| | |
|---|---|
| **Title** | "Excellence R Us": university research and the fetishisation of excellence |
| **Published in** | Palgrave Communications, January 2017 |
| **DOI** | 10.1057/palcomms.2016.105 |
| **Authors** | Samuel Moore, Cameron Neylon, Martin Paul Eve, Daniel Paul O'Donnell, Damian Pattinson |

View on publisher site

Alert me about new mentions

TWITTER DEMOGRAPHICS | MENDELEY READERS | ATTENTION SCORE IN CONTEXT

The data shown below were collected from the profiles of **1,174** tweeters who shared this research output. Click here to find out more about how the information was compiled.




**Geographical breakdown**

| Country | Count | As % |
|---|---|---|
| United Kingdom | 222 | 19% |

**Demographic breakdown**

| Type | Count | As % |
|---|---|---|
| Members of the public | 677 | 58% |

# My work has influenced public policies…
# My work has led to new inventions in industry…

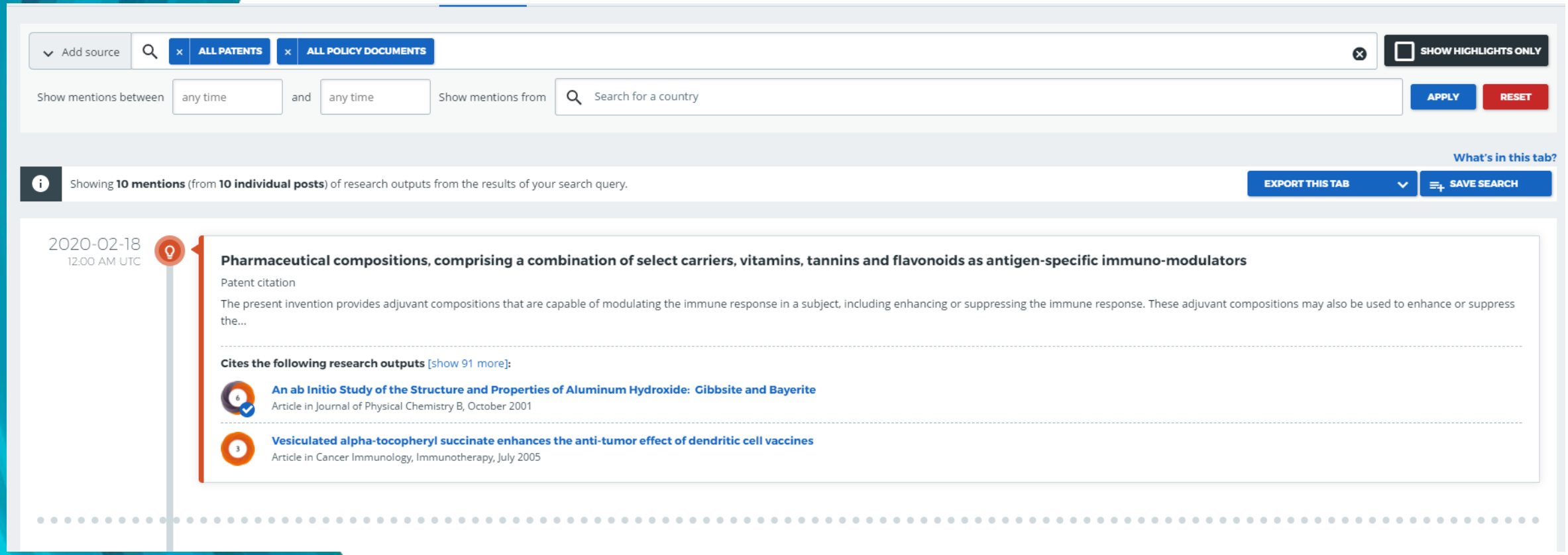
Altmetric Explorer

- Policy mentions
- Patent mentions
- Mass media mentions (demonstrate reach to practitioners and industry)

"This work has been established as foundational knowledge regarding robotics sensors, as evidenced by citations in 2 international patent documents." (Altmetric Explorer, 28/05/2021)

"This report has been influential in shaping international policy with 4 citations shared between the United Nations, The European Union and World Bank ." (Altmetric Explorer, 28/05/2021)

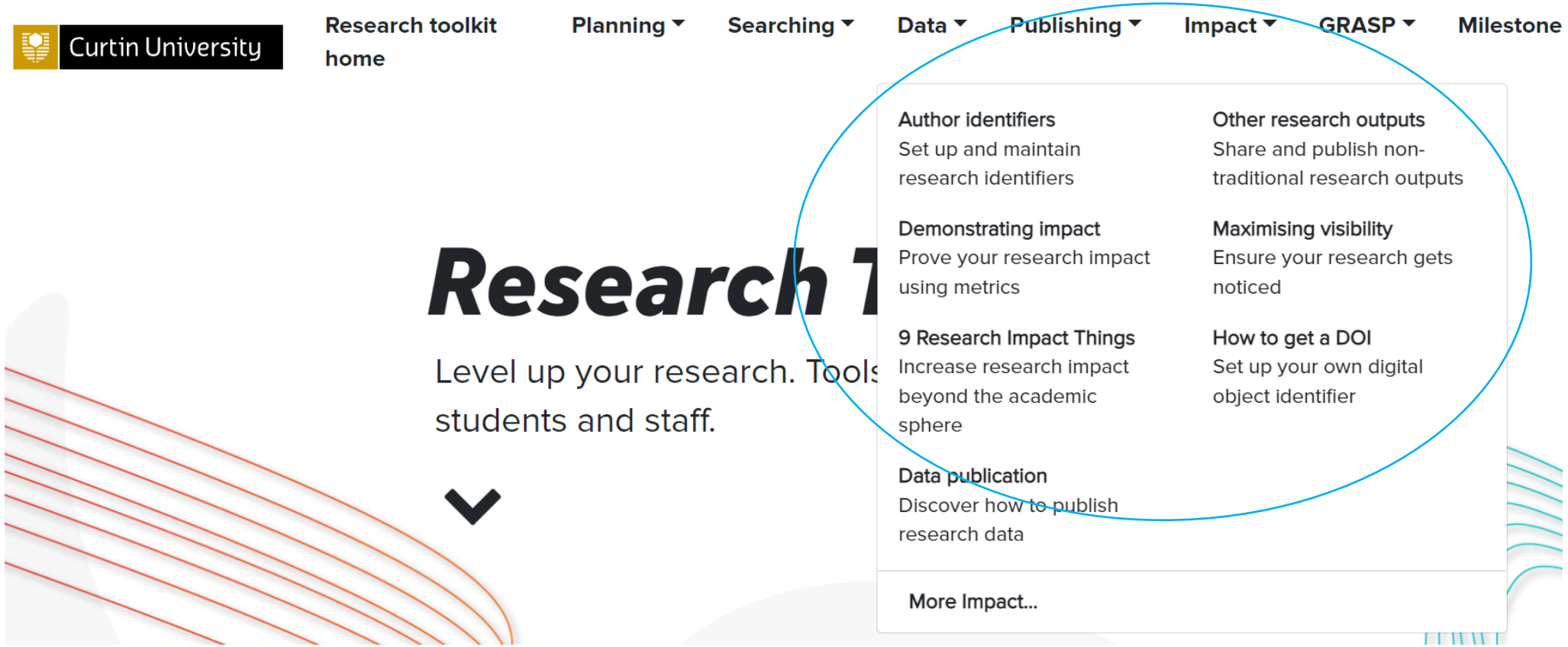
# Altmetric Explorer – Patents and Policy Documents



# Points to remember:

- Metrics - traditional and alternative - can be used to tell a story or support a claim. **Context is always key**.
- **No one database** will provide a comprehensive measurement of impact.
- The results between citation databases are **not comparable** as coverage varies.
- When using any metric - explain exactly **what** it is, what the **source** is and the **date** you retrieved it. We recommend keeping a screenshot of data.
- **Setting up Researcher Identifiers** (e.g. ORCID, Researcher ID or Author ID) is important to keep track of your publications and for generating analytical reports.
- When promoting an referring to your research in sources tracked by Altmetrics always provide a DOI or espace handle link to ensure tracking

# Research Toolkit – Relevant Guides



# Publishing Power Hours 2022

| | |
|---|---|
| **1: Publishing in quality journals** | Tuesday 13 September \| 12 – 1pm |
| **2: Predatory journals and unethical publishing** | Tuesday 20 September \| 12 – 1pm |
| **3: Publishing your research data** | Friday 23 September \| 12 – 1pm |
| **4: Publishing your software code** | Tuesday 4 October \| 12 – 1pm |
| **5: Publishing copyright essentials** | Friday 7 October \| 12 – 12.30pm |
| **6: Getting your article published** | Tuesday 11 October \| 12 – 1pm |
| **7: Measuring the impact of your research publications** | Tuesday 18 October \| 12 – 1pm |
| **8: Open Access publishing** | Tuesday 25 October \| 12 – 1pm |
| **9: Using the institutional repository (espace) to make your research open access** *For academic staff only.* | Thursday 27 October \| 12 – 1pm |
| **10: Making EndNote work for you and your publications** | Thursday 3 November \| 12 – 1pm |
| **11: Preprints** | This is a pre-recorded workshop available at this link. |

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