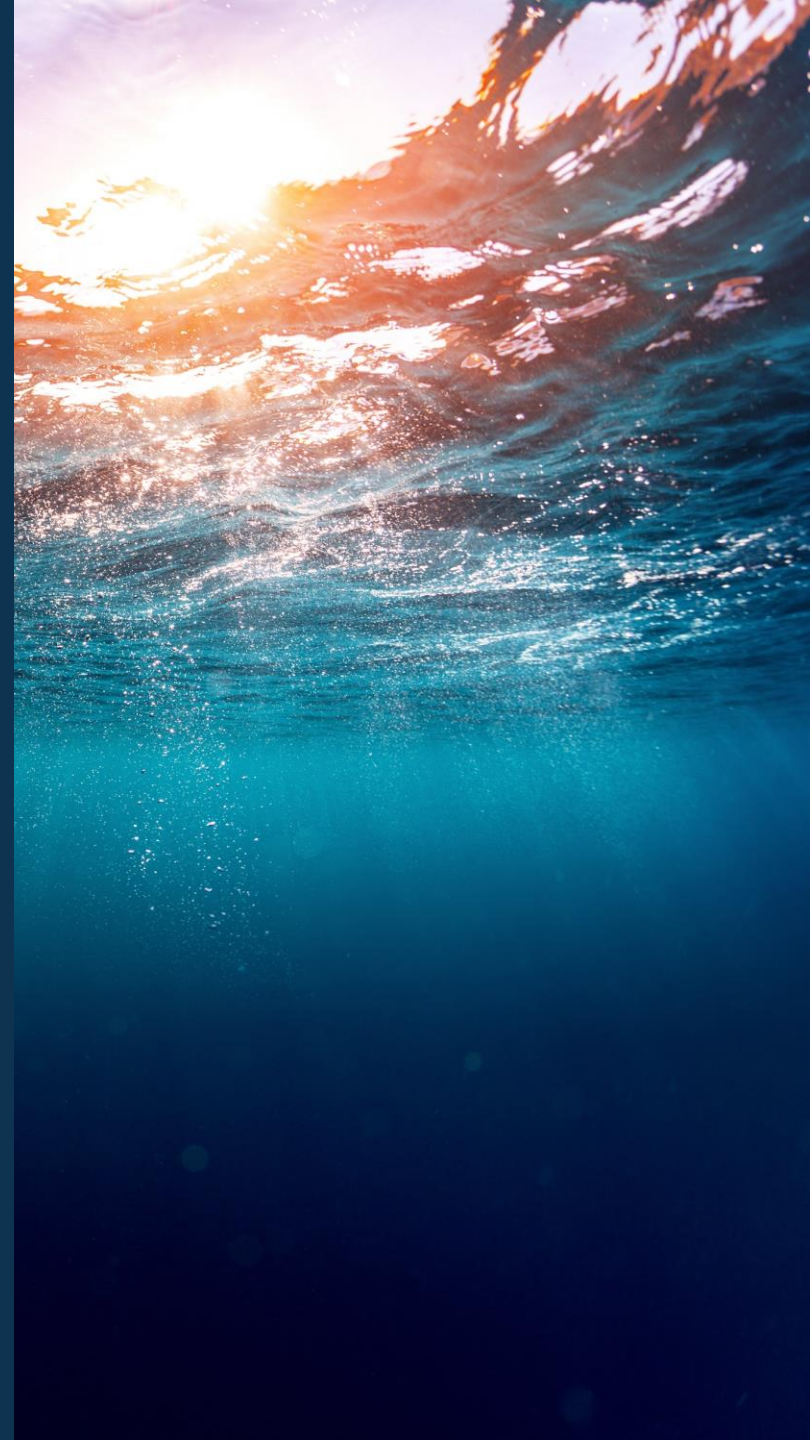


CITATION SOLUTIONS FOR DATA MANAGEMENT



DIGITAL OBJECT IDENTIFIERS (DOIS)

- A DOI is a permanent, globally unique identifier which unambiguously identifies the data resource and so assists with citation.
- A DOI consists of a string of characters divided into two parts, a prefix and a suffix, separated by a slash.

10.5285

/

1c44ce99-0a0d-5f4f-e063-7086abc0ea0f

Prefix

Suffix

- You can resolve and validate a DOI via <https://www.doi.org/>



CITATION

- What is Citation?
 - “a quotation from or reference to a book, paper, or author, especially in a scholarly work”
[Google: Oxford Languages]

Example: Derwing, T. M., Rossiter, M. J., & Munro, M. J. (2002). Teaching native speakers to listen to foreign-accented speech. *Journal of Multilingual and Multicultural Development*, 23(4), 245-259.
<https://doi.org/10.1080/01434630208666468>

Authors | Year | Title | Journal | Issue | Pages | DOI



CITATION

- What is Data Citation?
 - “Data citation means references to data, in the same way researchers routinely provide a bibliographic reference to other scholarly resources.” [DataCite]

Example: Mahaffey C.; Lohan M.; Woodward E.M.S.; Davis C.; Wyatt N.J.; Kunde K.; Wrightson L.; González-Santana D.; Shelley P.D.; Johnson L. (2024). Temperature, salinity, alkaline phosphatase activity, phytoplankton abundance, chlorophyll a, inorganic nutrients, dissolved organic phosphorus, and dissolved zinc concentrations from towed fish surface samples in the subtropical North Atlantic during summer 2017 on cruise GApr08/JC150. (Version 1) [Dataset]. NERC EDS British Oceanographic Data Centre NOC. <https://doi.org/10.5285/284a411e-2639-93de-e063-7086abc0e9d8>

Authors | Year | Title | Publisher | Version | ResourceType | DOI



WHY HAVE CITATION

Data citation is important because it facilitates access, transparency and reproducibility, reuse, credit for researchers and visibility for the repositories that share data.



WHY HAVE CITATION

Data citation is important because it facilitates **access, transparency** and **reproducibility, reuse, credit** for researchers and **visibility** for the repositories that share data.

[MEDIN Webinar Series](https://www.youtube.com/watch?v=vdPUV1tn3Ps)

<https://www.youtube.com/watch?v=vdPUV1tn3Ps>



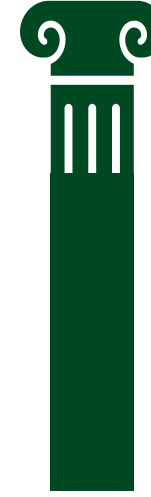
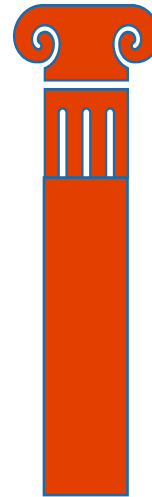
THREE PILLARS: TRACEABILITY, TRANSPARENCY AND CREDIT



Traceability

Transparency

Credit





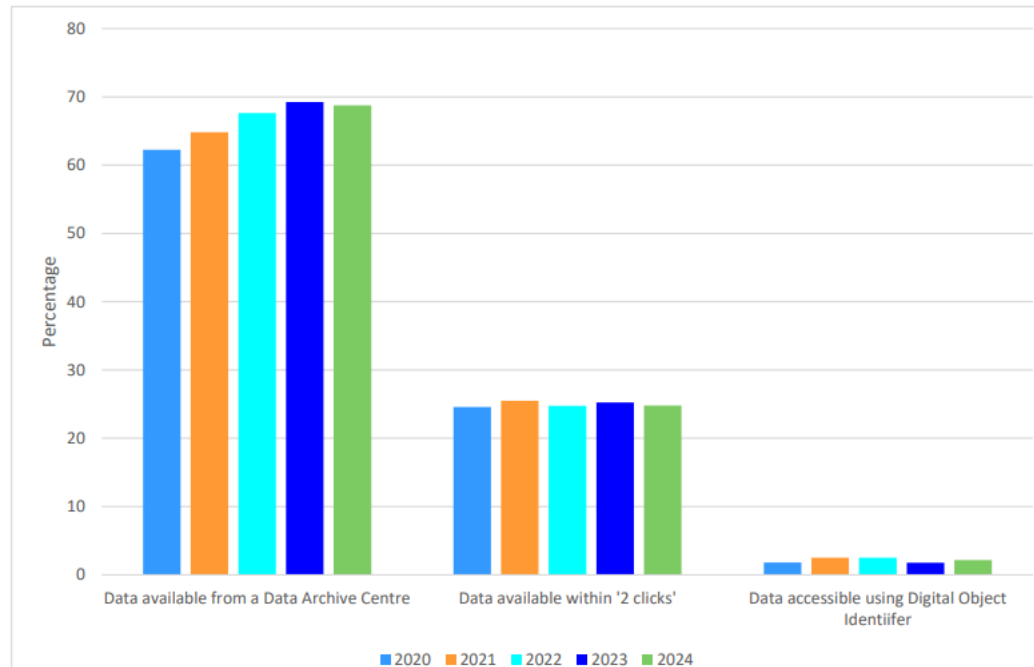
- Findable (DOI is a globally indexed and searchable element)
- Accessible: (Meta)data are retrievable by their identifier [DOI]
- Interoperable: (Meta)data use vocabularies that follow the FAIR principles i.e. DataCite
- Reusable: (Meta)data are richly described [DataCite schema] and include qualified references to other (meta)data



CITATIONS SOLUTIONS: REUSE OF DATA

- [“90% of Science Is Lost”](#) Frontiers
- Vine *et al.* 2014 “The odds of a data set being reported as extant fell by 17% per year”
<https://doi.org/10.1016/j.cub.2013.11.014>

MEDIN 2024 Report

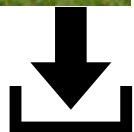


CITATION SOLUTIONS: METRICS

Views



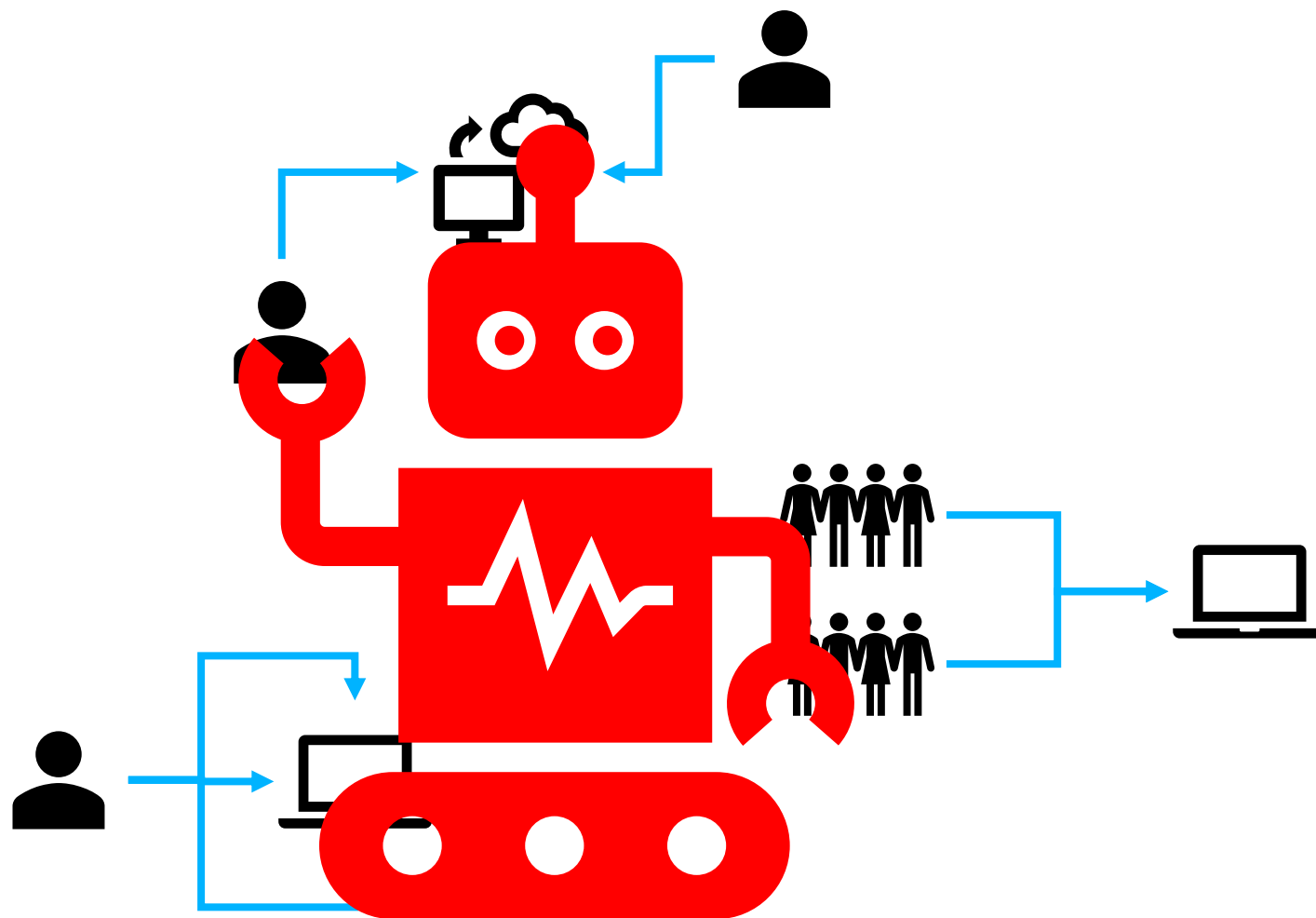
Downloads



1K
👁️ VIEWS

1K
⬇️ DOWNLOADS

▶ Show more details



CITATION SOLUTIONS: METRICS

Published Data Library

GEBCO_2024 Grid

The latest version of the dataset may be accessed here [GEBCO 2025](#)

These data are made available under [GEBCO 2018 Licence](#).

Data access



4 citations

811 views

[Cite these data](#)

Title The GEBCO_2024 Grid - a continuous terrain model of the global oceans and land.

4 Citations

Title	Citation Text
Tracking pygmy blue whale diving behaviour and validation of foraging defined from horizontal movement data	Thums, M., Ferreira, L.C., Davenport, A., Jenner, M., Möller, L., Russell, G., McCauley, R.D. & Jenner, C. (2025) Tracking pygmy blue whale diving behaviour and validation of foraging areas defined from horizontal movement data. <i>Global Ecology and Conservation</i> 57, e03362. https://doi.org/10.1016/j.gecco.2024.e03362
Quaternary and Pliocene sea-level changes at Camarones, central Patagonia, Argentina	Rubio-Sandoval, K., Ryan, D.D., Richiano, S., et al. (2024) Quaternary and Pliocene sea-level changes at Camarones, central Patagonia, Argentina. <i>Quaternary Science Reviews</i> 345, 108999. https://doi.org/10.1016/j.quascirev.2024.108999
GDEM2024: Global Digital Elevation Merged Model 2024 for surface, bedrock, ice thickness, and land-type masks	Ince, E.S., Abrykosov, O. & Förste, C. (2024) GDEM2024: Global Digital Elevation Merged Model 2024 for surface, bedrock, ice thickness, and land-type masks. <i>Scientific Data</i> 11. https://doi.org/10.1038/s41597-024-03920-x
Late Quaternary glacial maxima in southern Patagonia: insights from the Lago Argentino glacier lobe	Romero, M., Penprase, S.B., Van Wyk de Vries, M.S., et al. (2024) Late Quaternary glacial maxima in southern Patagonia: insights from the Lago Argentino glacier lobe. <i>Climate of the Past</i> 20, 1861–1883. https://doi.org/10.5194/cp-20-1861-2024

Close



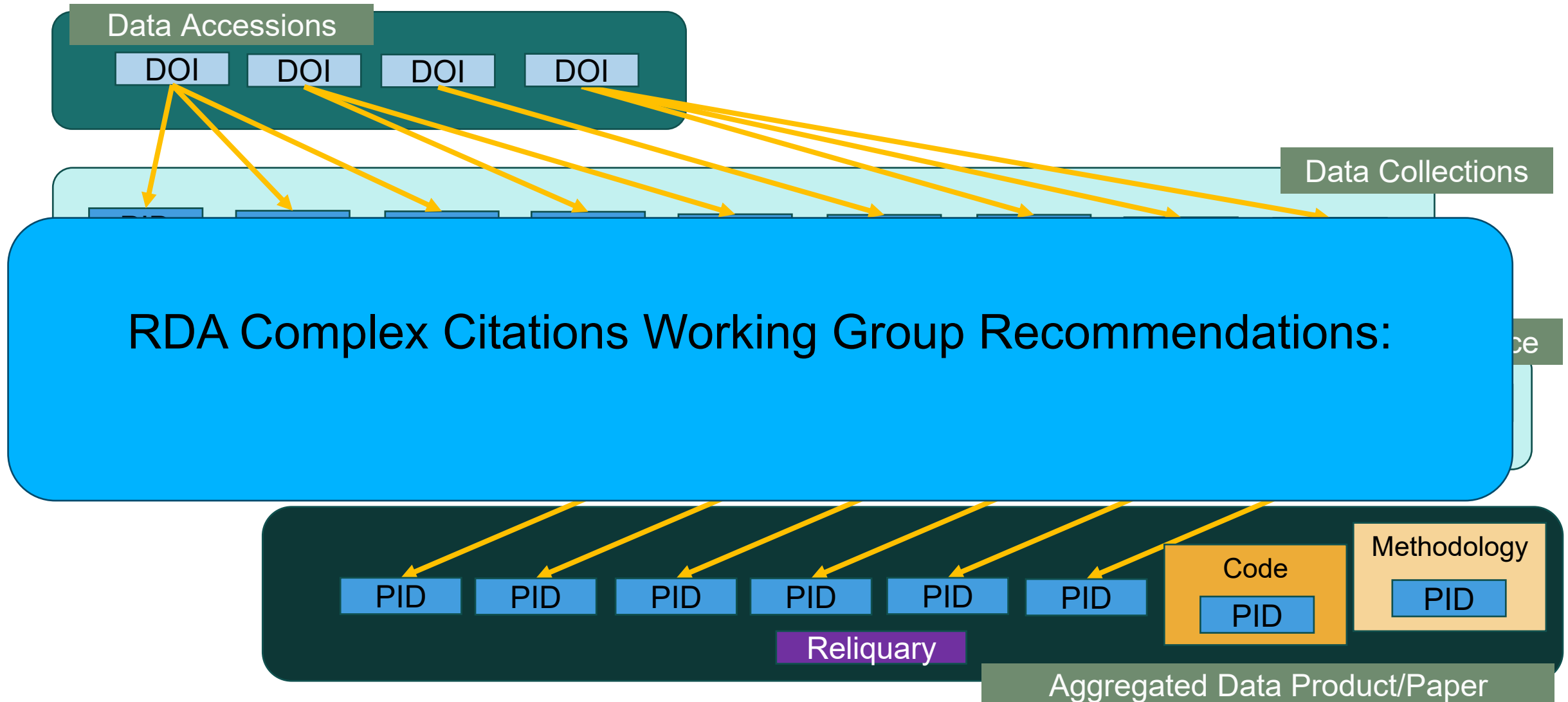
CITATION SOLUTIONS: METRICS

- Remove duplicates
- Remove preprints
- Remove social citation
- Remove Wikipedia
- Source inputs
 - Crossref (now removed), DataCite Event, Scholix
- Initiatives
 - E.g. [Make Data Count](#)

<https://github.com/NERC-EDS/citationNotebook>
<https://www.bodc.ac.uk/eds-citation/docs#/>



“COMPLEX” CITATIONS



“COMPLEX” CITATIONS

The findings of the Complex Citations Working Group have produced key requirements (R1 -R10) for Complex Citation Objects (CCOs) to achieve our goals. In summary:

1. CCOs capture enough detail to ensure proper credit, traceability, and transparency of cited materials (R1), supporting machine-actionable attribution for each referenced object (R2).
2. CCOs do not accrue credit themselves but simply list data and digital identifiers that require citation tracking (R3).
3. CCOs are stable, identifiable, versioned, resolvable, and persistent (R4, R5).
4. CCOs use standardized structures, limited to two PID graph levels, with a strong preference to utilize persistent identifiers (R6, R6.1, R7).
5. CCOs remain open, accessible, and flexible for various use cases, with an open license, and sufficient metadata (R8-R10).



THANK YOU

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