Apsis - Document Review Platform

Max Callaghan

December 14, 2017

Background

The exponential growth in literature about climate change raises challenges for environmental assessments:

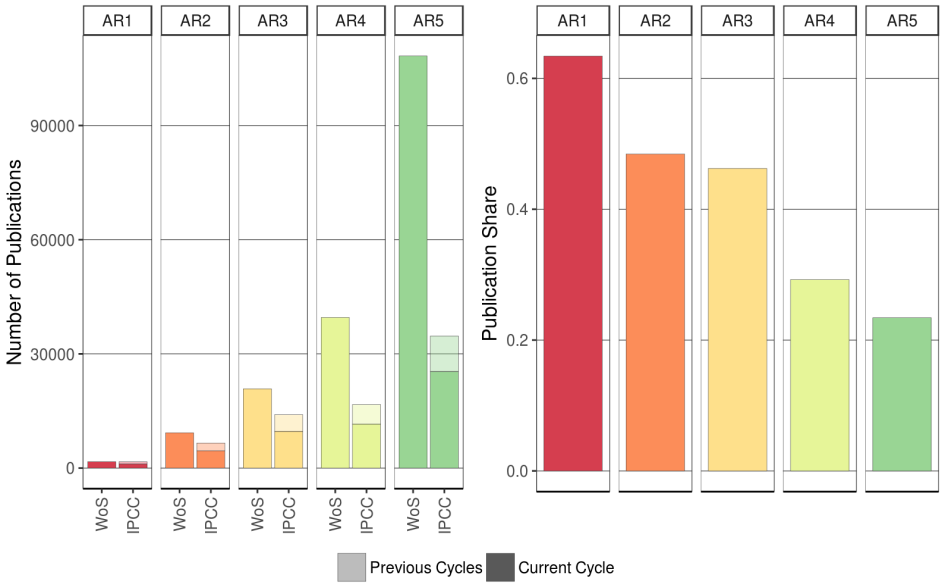

Figure: (Minx et al., 2017a)

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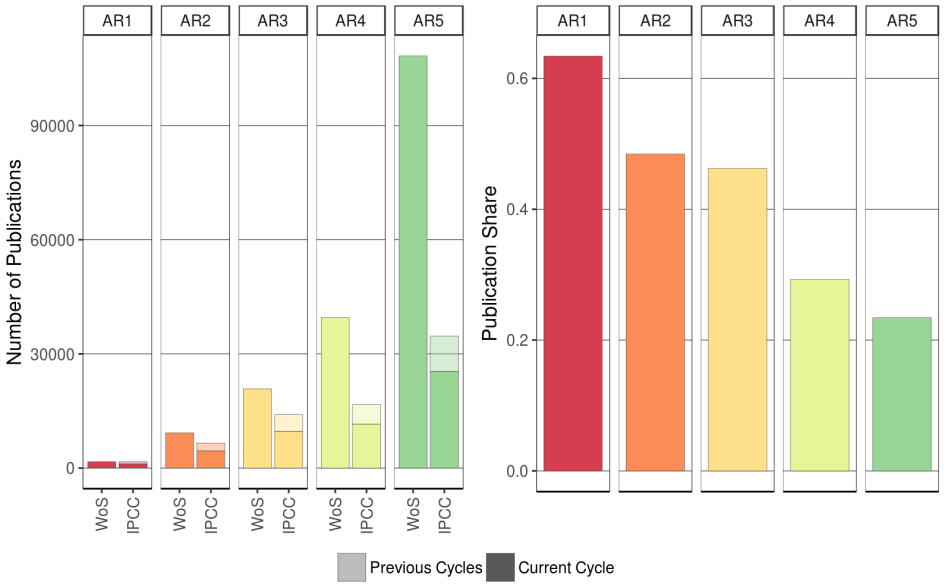

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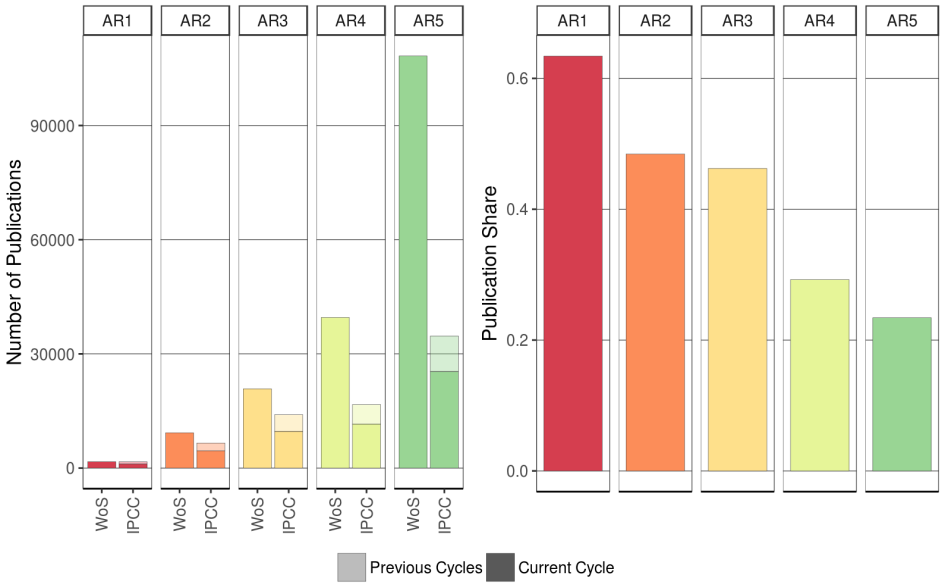

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- We need more research on research results

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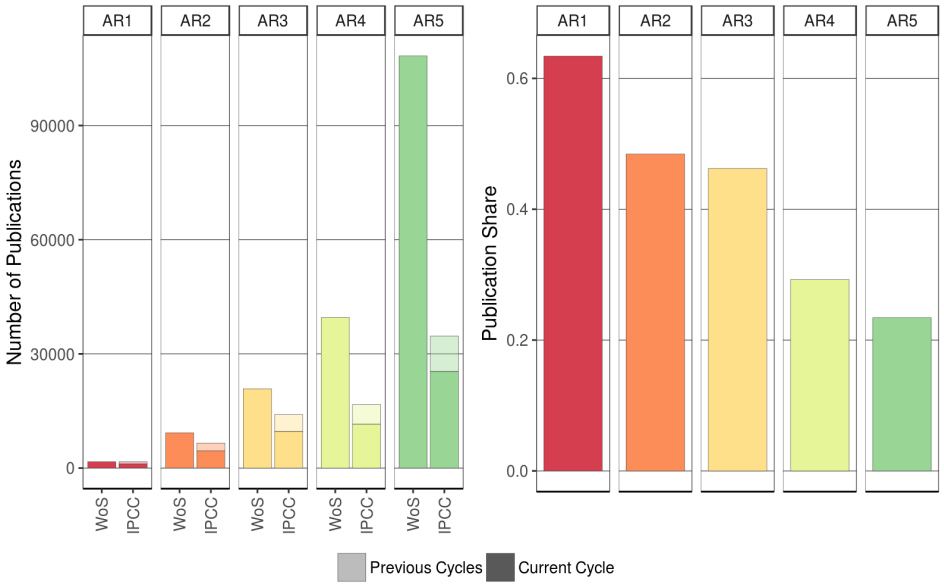
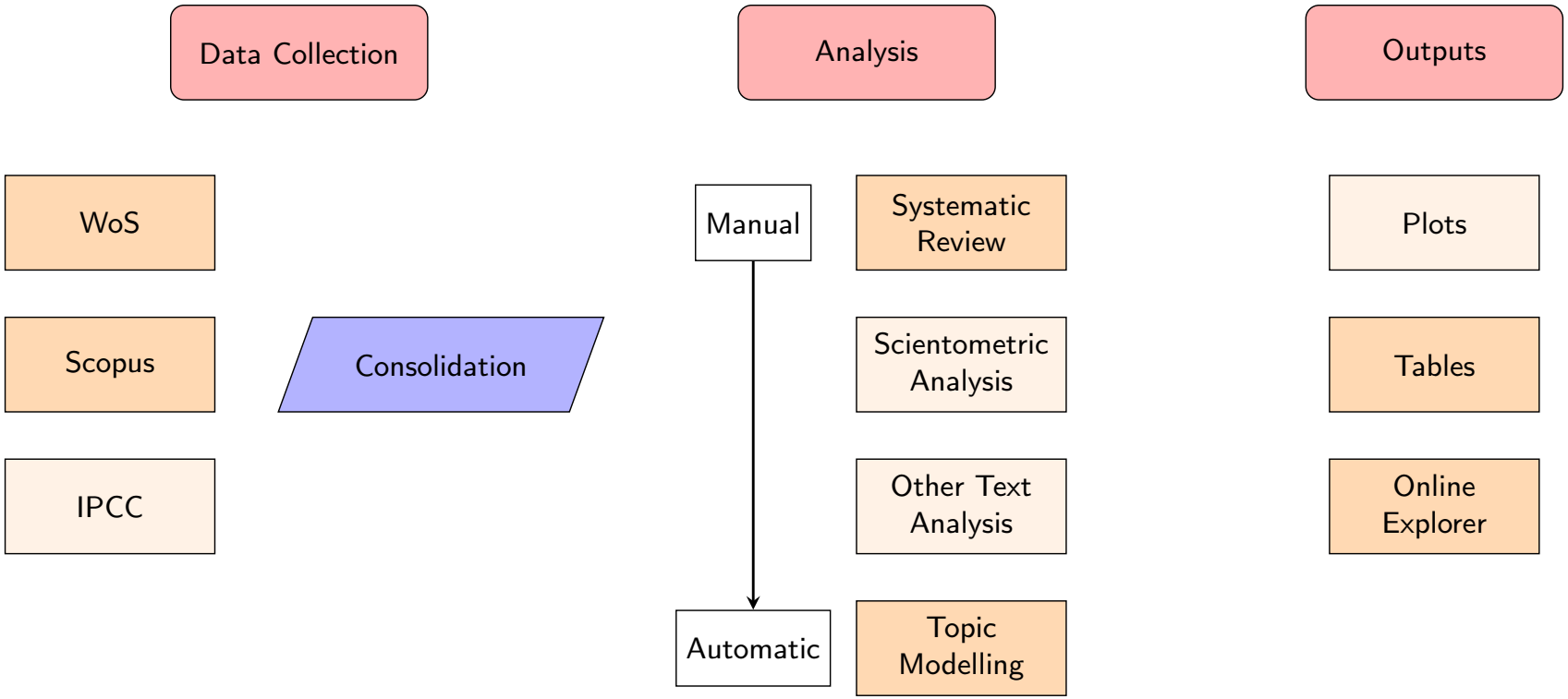


Figure: (Minx et al., 2017a)

- We need to develop ways of being more systematic in engaging with the literature
- We need more research on research results
- We need ways of engaging with large amounts of text

Infrastructure Overview



Systematic Review - NETs

For our systematic review of NETs, we wanted to be as systematic in our search, selection and treatment of literature as possible. We developed a system to help us

- To search and download (bulk) metadata from Web of Science (WoS) and Scopus
- To combine, compare and manage these queries and the documents associated with them
- To manage (centrally) the screening of documents by internal and external collaborators
- To run analysis based on user-entered tagging of documents and metadata from the WoS/Scopus

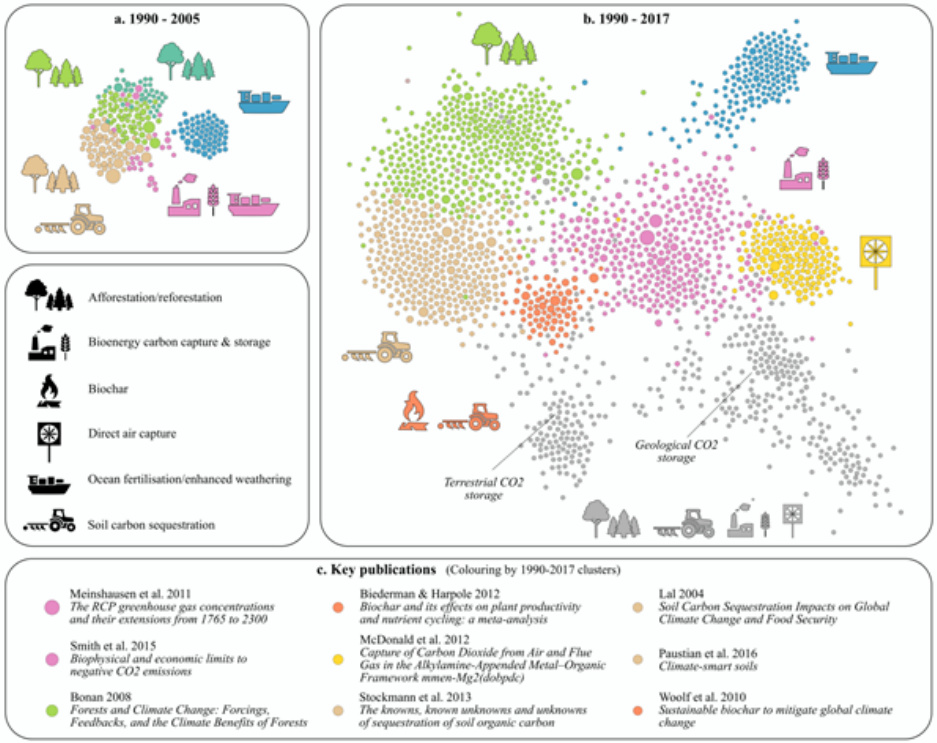
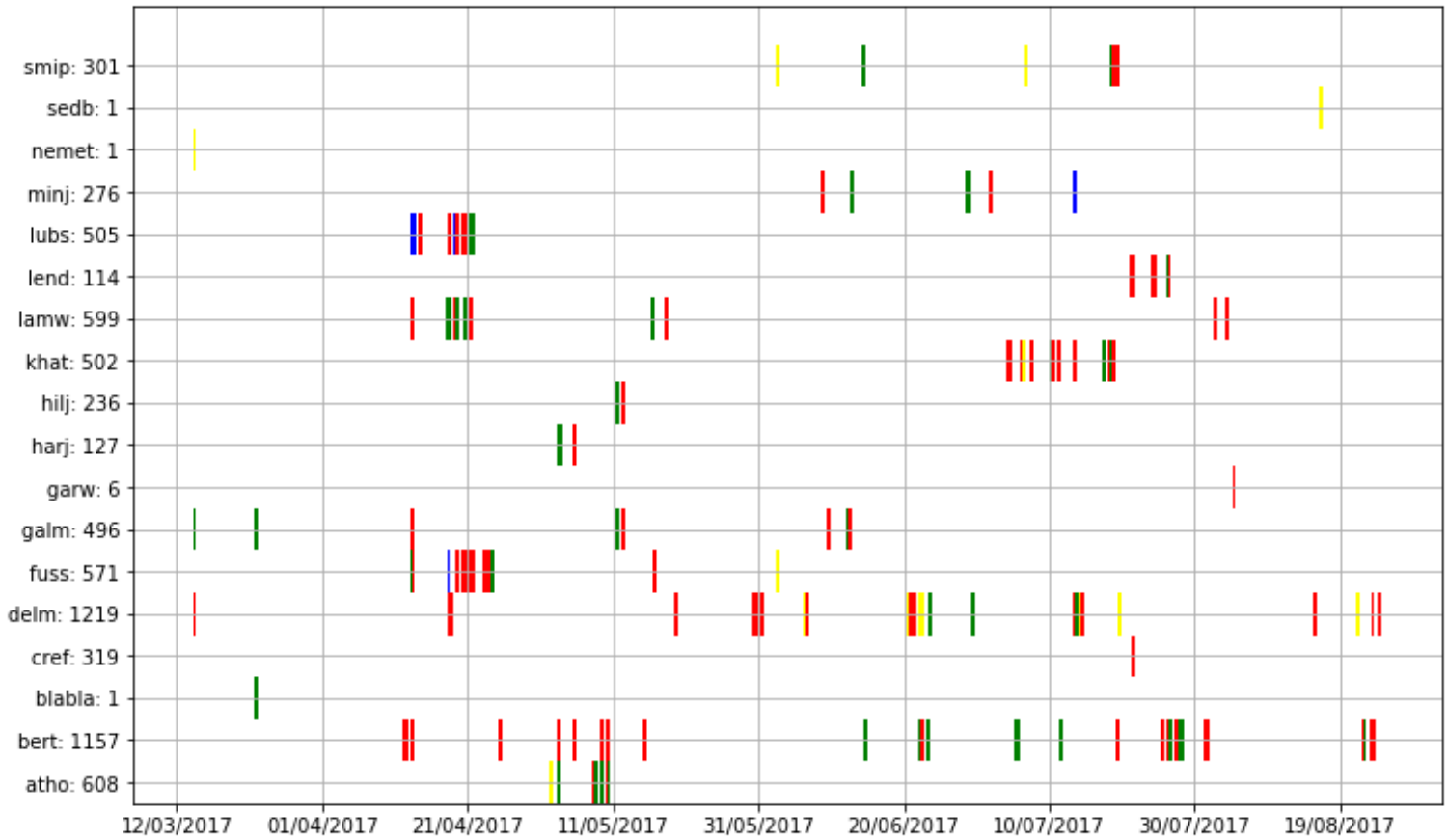


Figure: (Minx et al., 2017b)

Systematic Review - NETs

We downloaded over 400 queries, and a team of 18 users reviewed hundreds of documents each.



We used the results to automatically email all authors of relevant documents (over 1000 emails) from which we have received over 100 new documents

Website

https://apsis.mcc-berlin.net/scoping

Caveats

Data Collection

Each time we download a query, we go through a tunnel to PIK (where we have access as Guest Researchers to WoS and Scopus) and instruct the computer to perform a search, and download the results in the maximum chunk size you are allowed (500 or 2000). Both companies prefer that only humans use their website.

Please therefore do search online, and only download what you need

Longer-term workarounds:

- Go through a tunnel to IIASA
- Upload Web of Science files directly

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In development

This is lots of pieces of work tied together, written as a side-project to my PhD. I like improving it, and adding more features, but I sometimes break it by accident, and I don't always have time or ability to fix it.

Structure

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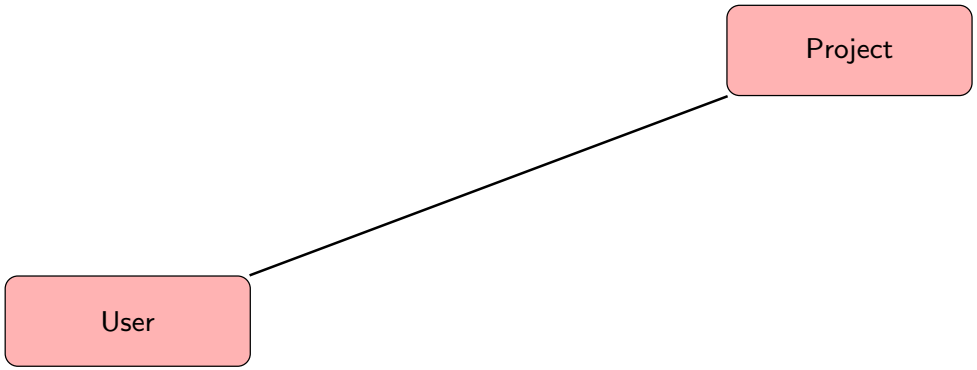

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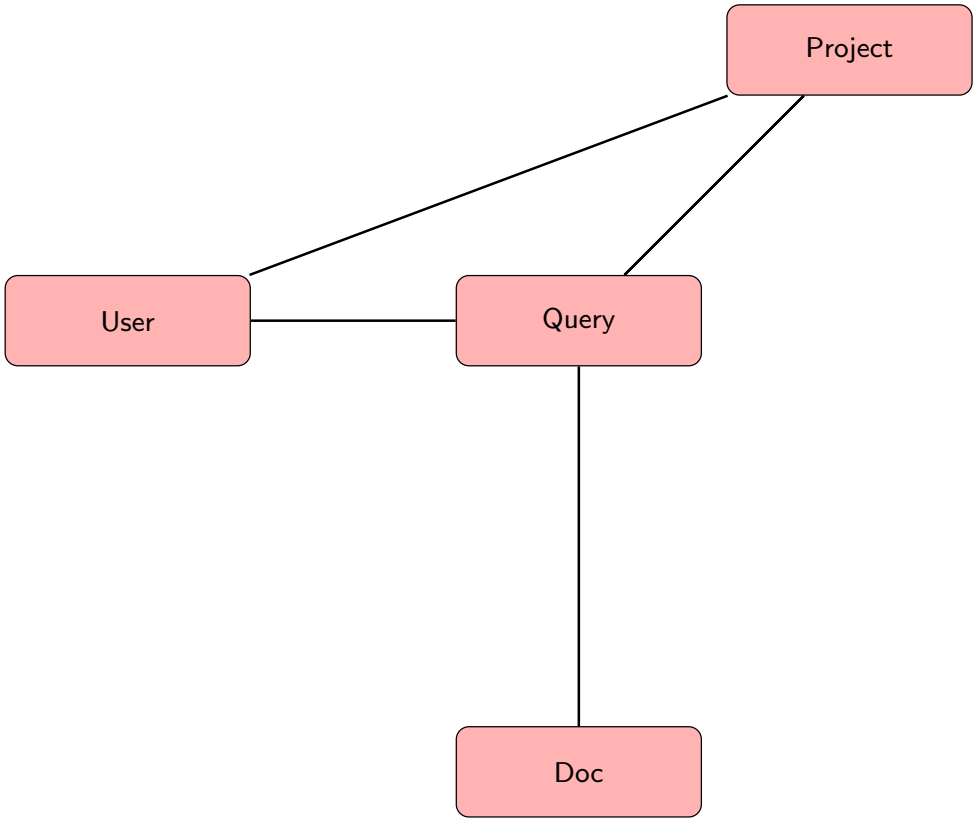

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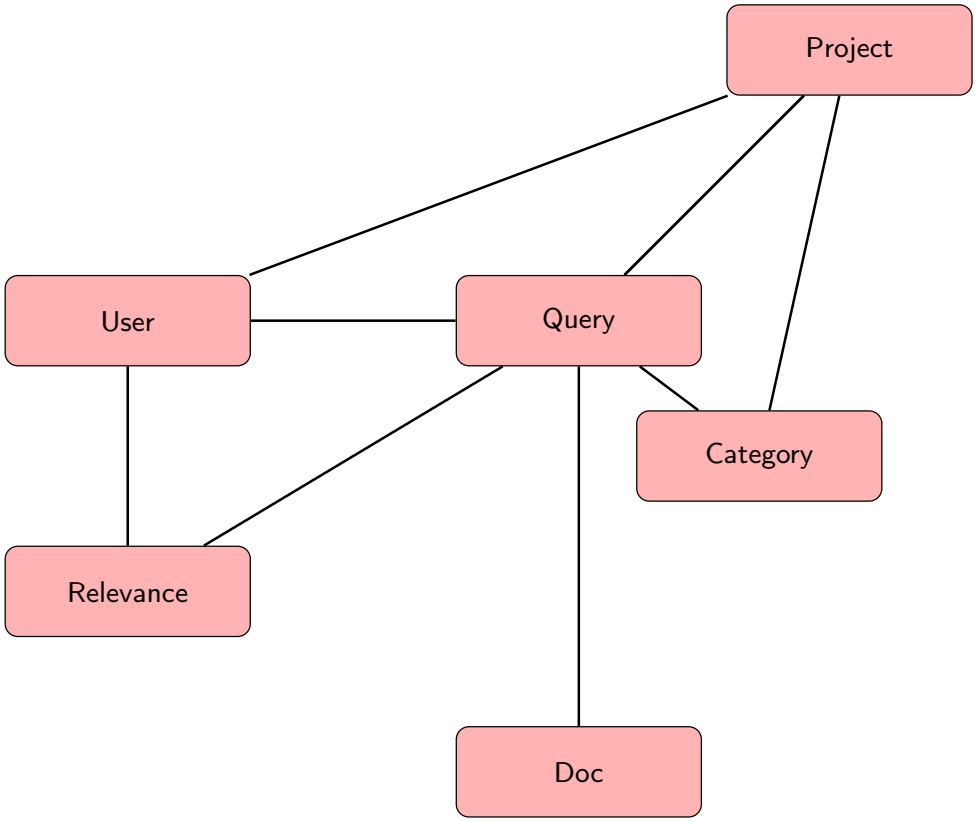

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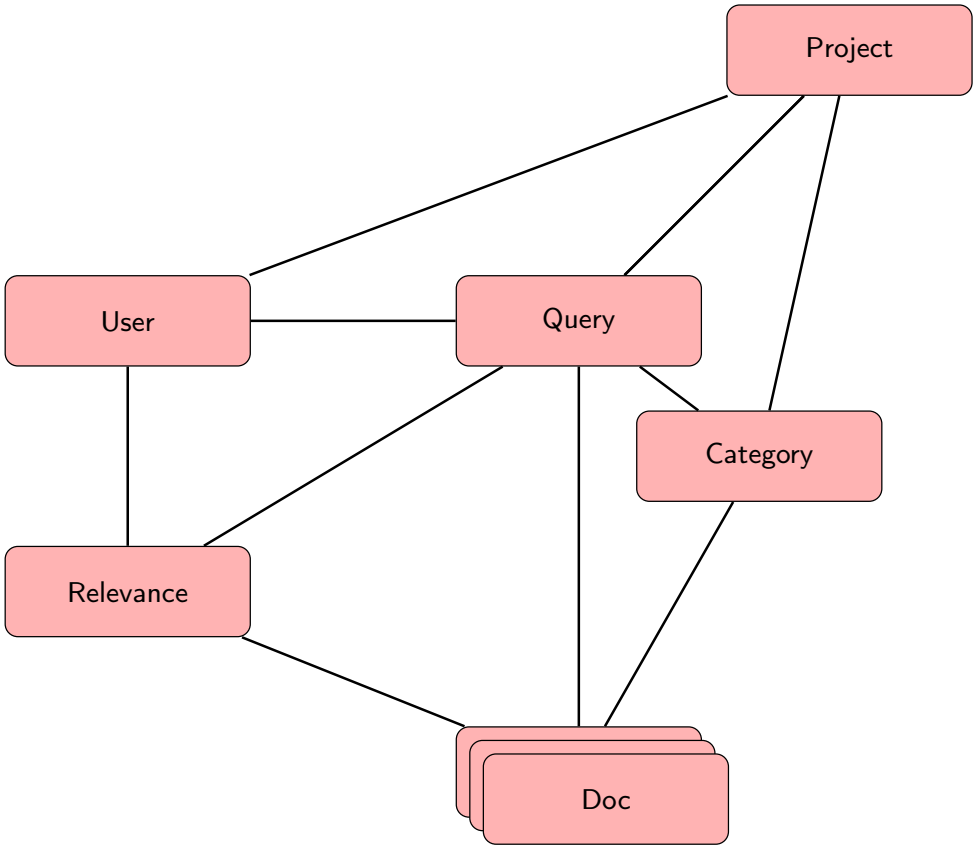

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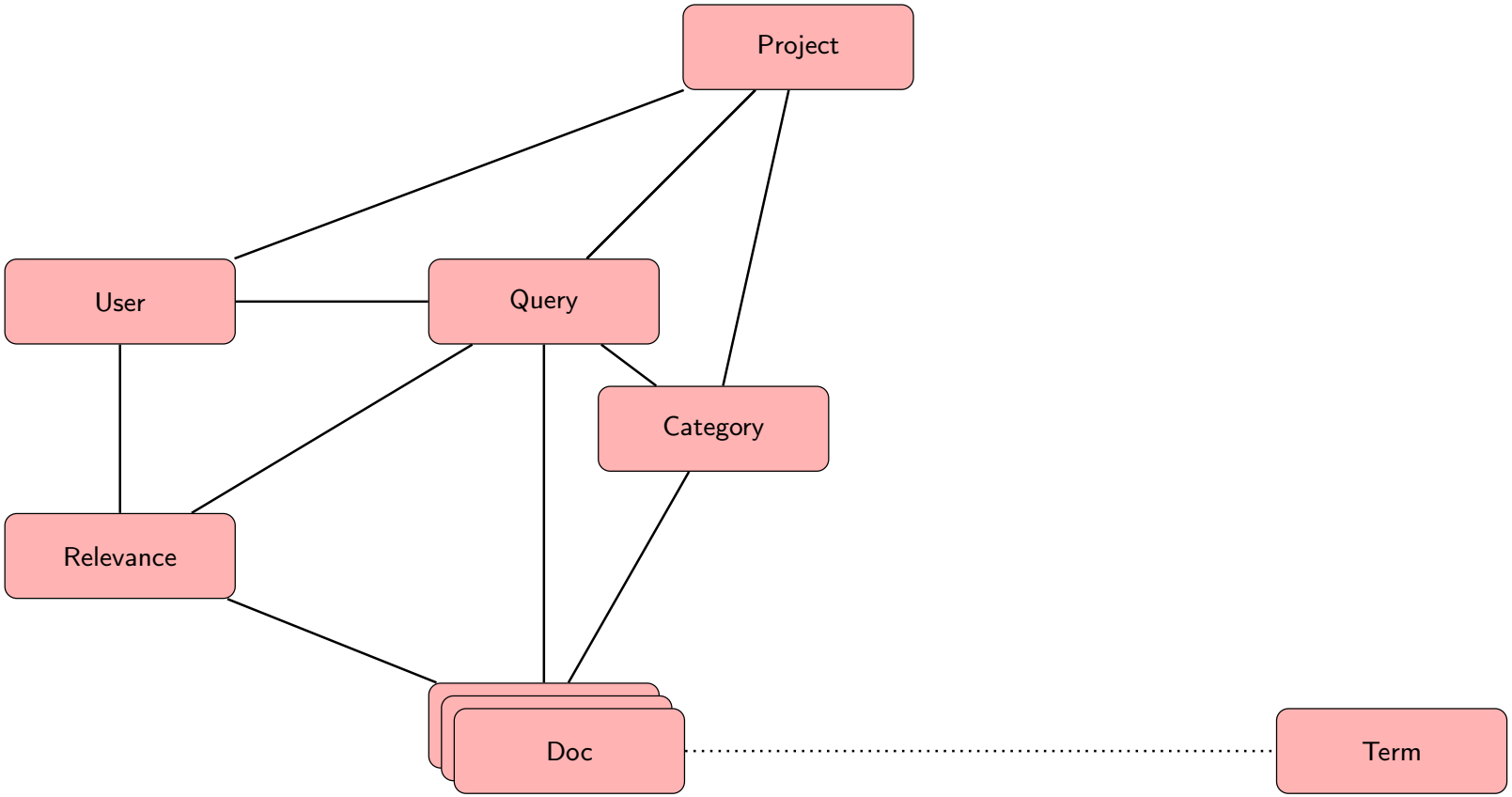

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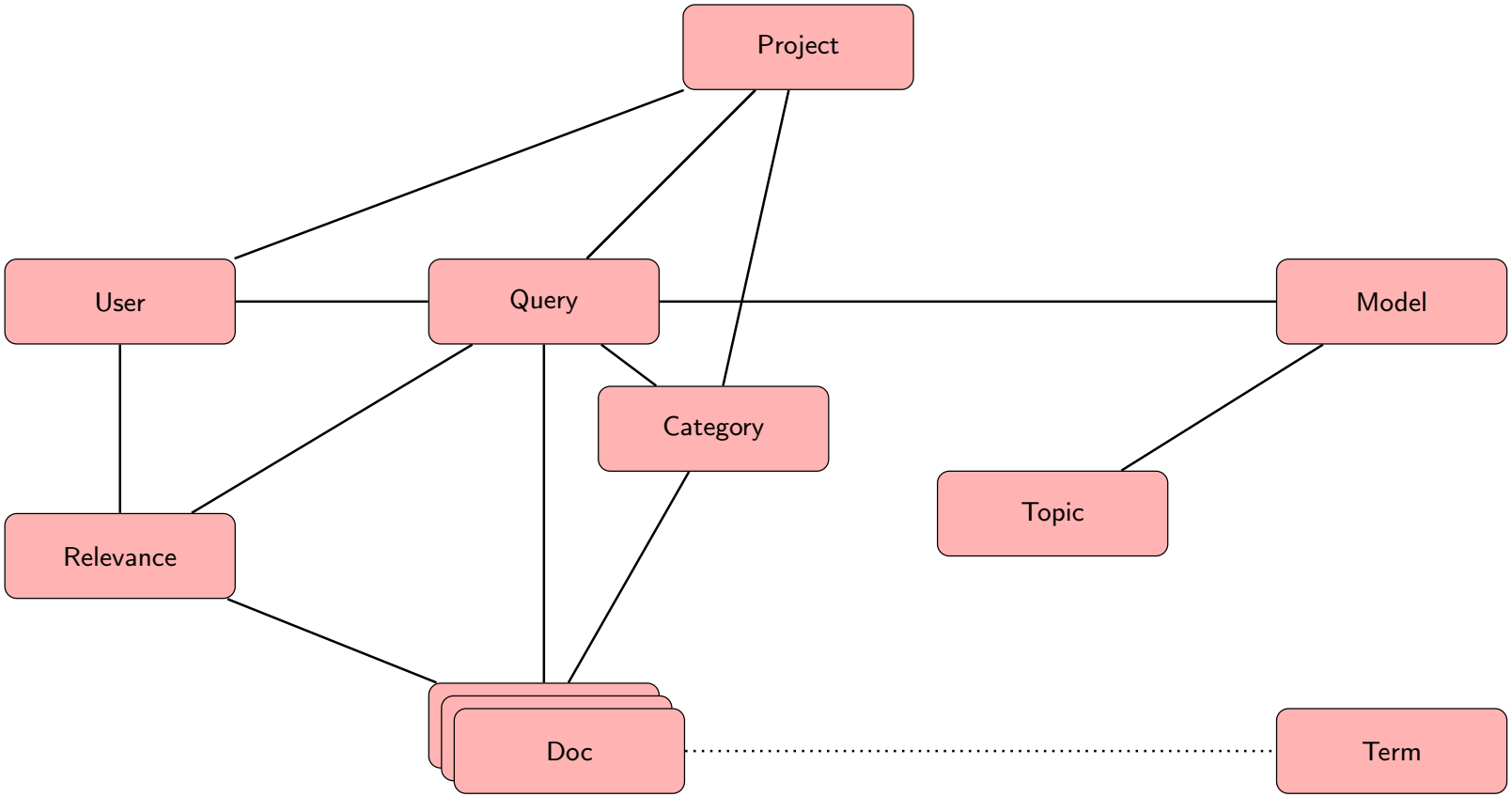
Project
User
Query
Model
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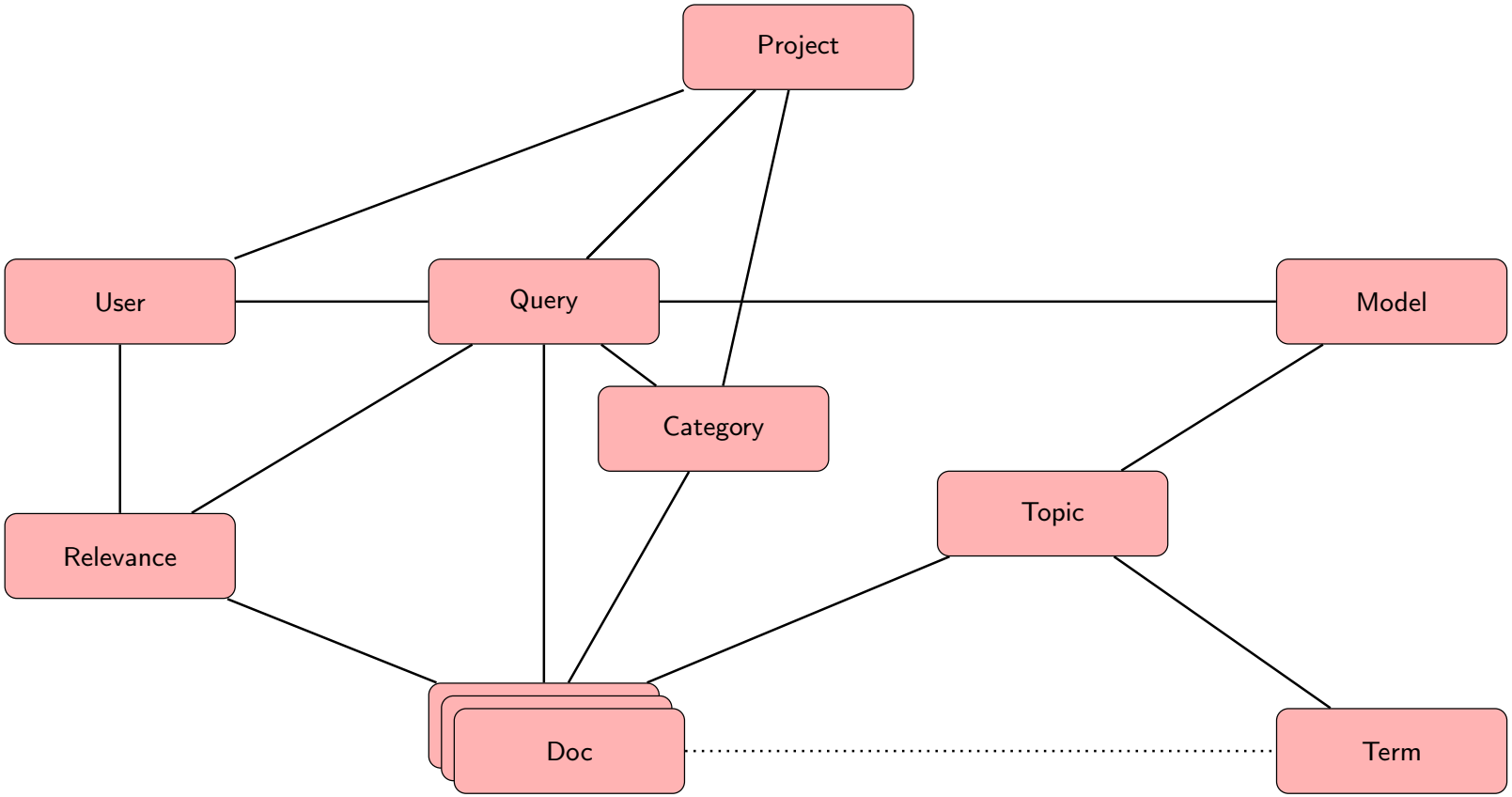
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Discussion Points

- Is this useful as is?
- What features can make it more useful?
- Access to MCC hosted site, or package and self-host?
- What to do about WoS data access?

References

Code: `https://github.com/mcallaghan/tmv`

Documentation:
`https://github.com/mcallaghan/tmv/wiki/Scoping-Documentation` (fairly comprehensive but out of date as of December 14, 2017)

Minx, J. C., Callaghan, M., Lamb, W. F., Garard, J., and Edenhofer, O. (2017a). Learning about climate change solutions in the IPCC and beyond. *Environmental Science & Policy*.

Minx, J. C., Callaghan, M. W., Creutzig, F., Fuss, S., Hilaire, J., and Lamb, W. F. (2017b). Negative emissions: Part 1 âĂŞ research landscape and synthesis. *Environmental Research Letters*.