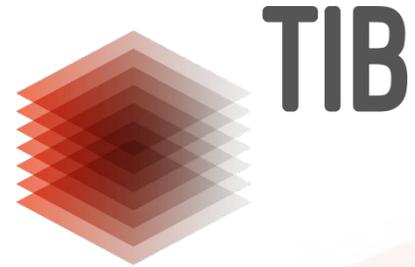


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# **X-Sprint: Climate and migration - Workshop - Infrastructure for the Year to come**

***Summer School 2020***

***#OCK @OCKProject - 10 June 2020***

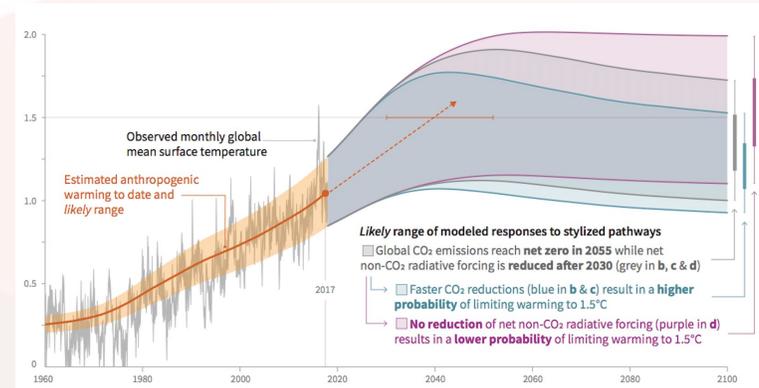
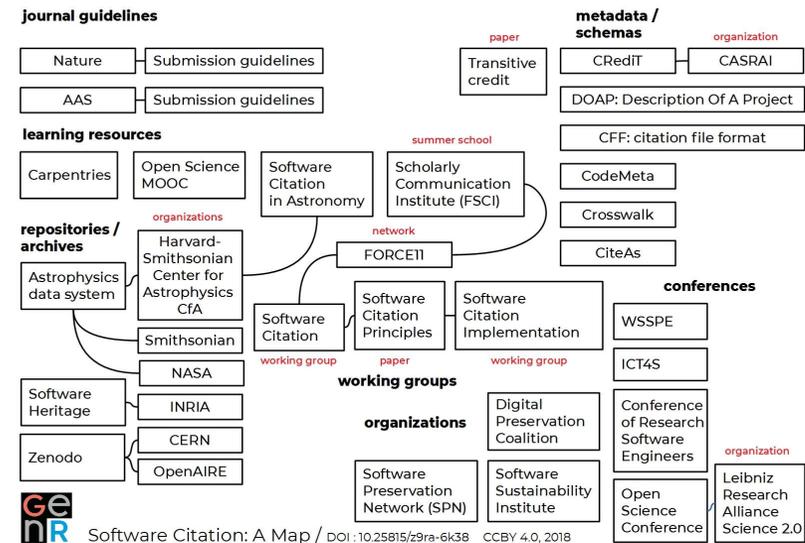
Simon Worthington - Twitter [@mrchristian99](https://twitter.com/mrchristian99), Open Science Lab, TIB

# Generation Research /

## GenR.eu @Gen\_R\_ a needs based approach to researchers

### Software Citation

Imagine if no one had cataloged books for the last 50 years, this is what happened to software!



Climate Change and Open Science - Open Energy Modelling  
Open Science is key to having verifiable energy simulations — essential to planning long term government energy policies



---

# Open Climate Knowledge

## #OCK

**100% open collaborative research  
for climate change knowledge**

**Peter Murray-Rust, ContentMine  
Simon Worthington, TIB  
FORCE11 Working Group**

**Join us!**

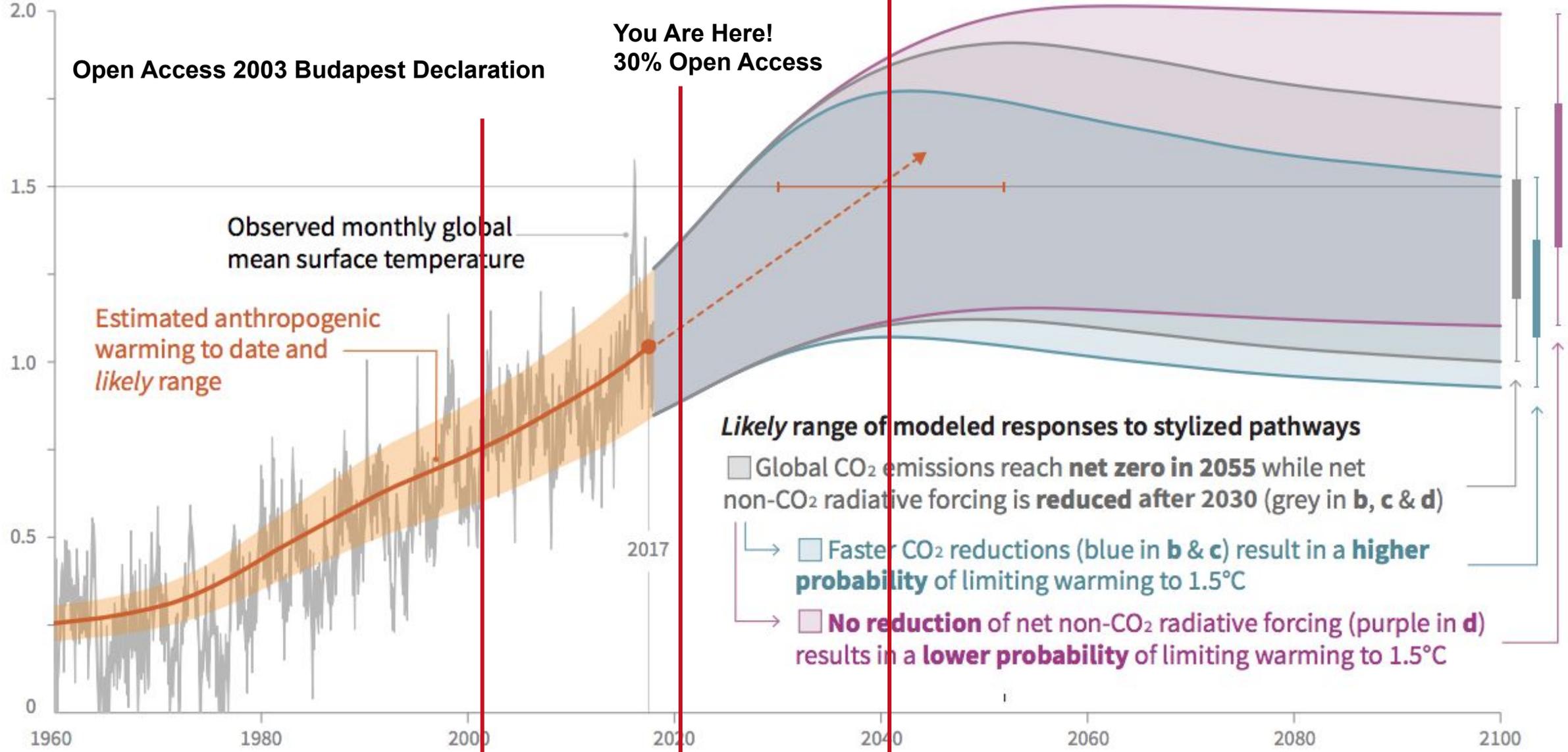
**<https://www.force11.org/group/open-climate-knowledge>**

# Motivation

**Knowledge liberation.** Currently Open Access rates for climate change research publishing are possibly less than 30%. (Tai and Robinson 2018. **We aim to change that!**)

Reference: Tai, Travis C., and James P. W. Robinson. 'Enhancing Climate Change Research With Open Science'. *Frontiers in Environmental Science* 6 (2018). <https://doi.org/10/gf64mq>.

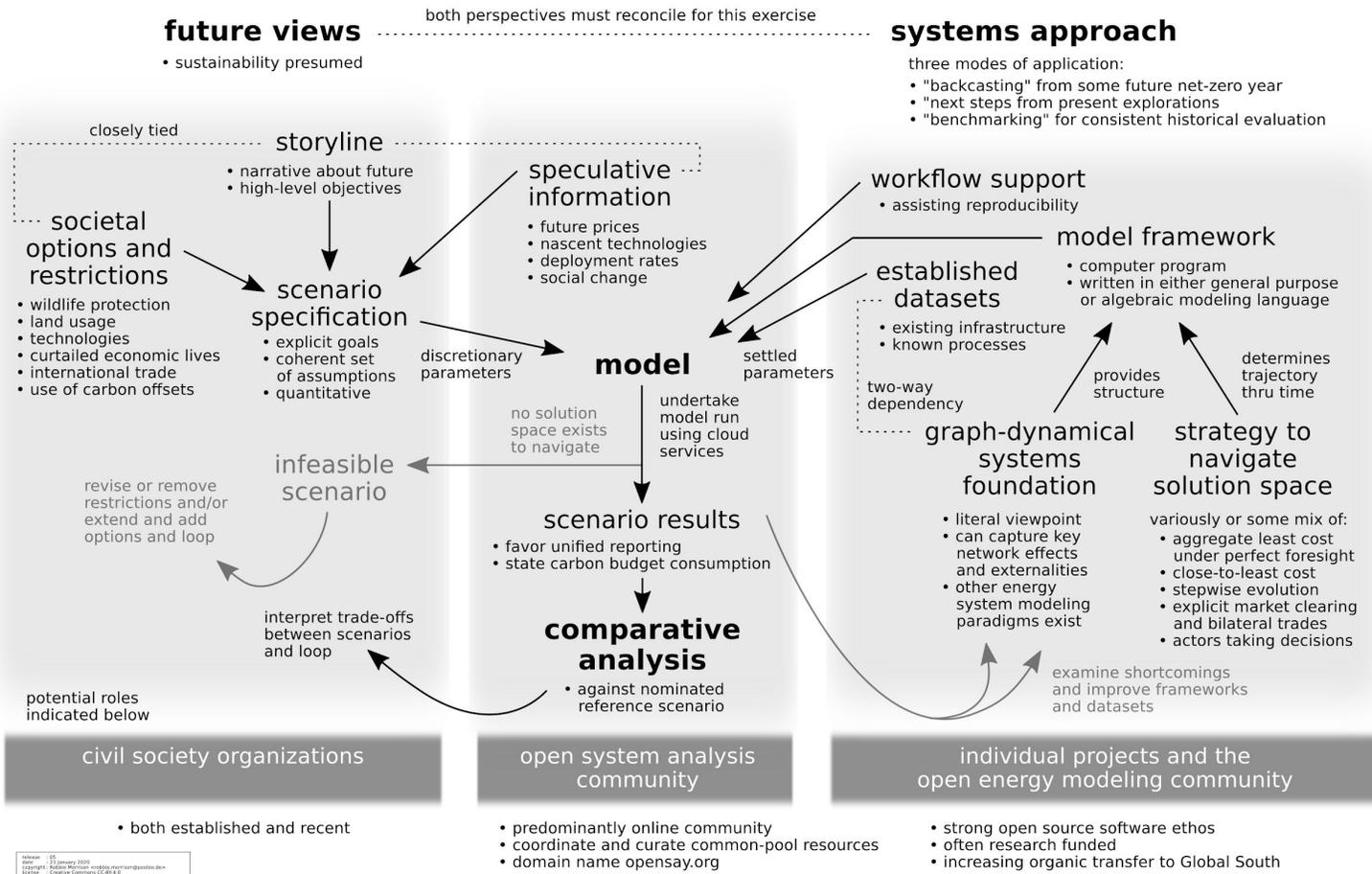
Global warming relative to 1850-1900 (°C)





# Open Science / Research / Scholarship

# Open Energy Modelling and OpenSay



## Two communities:

- **Open Energy Modelling Initiative:**  
<https://openmod-initiative.org/>
- **OpenSay:**  
<https://forum.opensay.org/>

# X-Sprint and Open Climate Knowledge

- Using data mining getpapers and ami from ContentMine
- Dictionaries on: migration, MENA migration, and refugees
- Run the dictionaries using ContentMine data mining on Europe PMC
- Dictionaries for community handover



# Open Research Project. #OCK

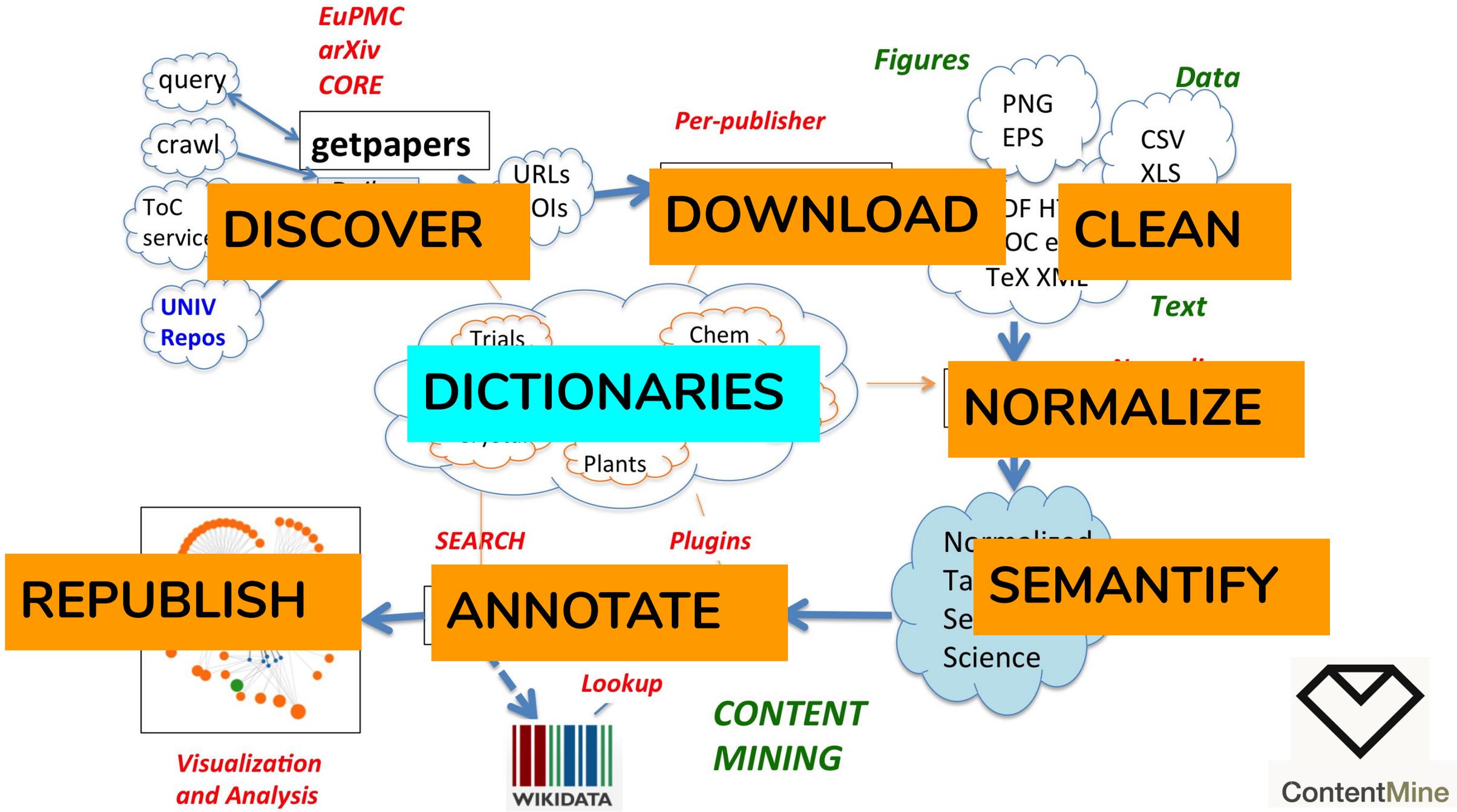
Filters  Labels

23 Open  0 Closed Author ▾

- Dictionaries method**  
#26 opened 16 days ago by mrchristian
- adding documentation**  
#24 opened 20 days ago by mrchristian
- GitHub Issues**
- Daily PUBLIC log of all activity**
- Organising project comms**  
#20 opened 27 days ago by mrchristian
- Scholarly HTML**  
#19 opened on Sep 21 by mrchristian
- created 200 scoping set for runaway climate**  
#18 opened on Sep 20 by petermr
- Energy Modeling Search**

We have a powerful software that can search **open repositories** using **linked data dictionaries** based on **WikiData**. We can then retrieve metadata and documents and apply analysis for **entity recognition** with Machine Learning, **manually and automatically annotate**, create collections and repositories, develop Knowledge Graphs, and more.

It's all open and you can use the tools as well. <https://github.com/OCKProject/climate>



# Understanding how to make change

We are doing the following:

- Get up-to-date statistics for open content
- Make a plan for a transition to 100% open
- Create a public repository of all open climate change research publishing
- Create an open climate change research knowledge graph

# A research paper as a Jupyter Notebook

- Peer review of research
- Paper on Arxiv
- Experiments and figures as MyBinder

Image: Stephan Rasp @raspstephan 3 July 2019

- <https://mobile.twitter.com/raspstephan/status/1146325984267898881>
- <https://arxiv.org/abs/1907.01351>
- <https://github.com/raspstephan/Lorenz-Online>

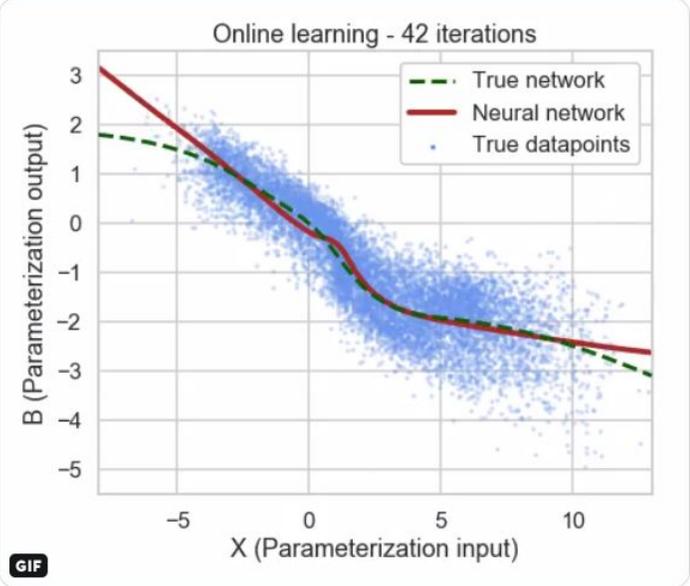
Attribution 4.0 International (CC BY 4.0)

← Tweet

 **Stephan Rasp**  
@raspstephan

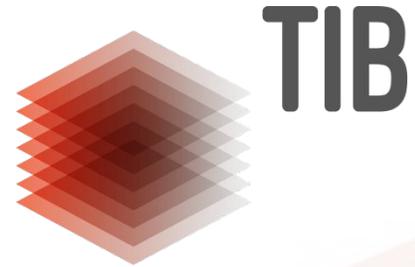
Here is my new paper on online learning, a method to tackle instabilities and biases in neural network cloud parameterizations: [arxiv.org/abs/1907.01351](https://arxiv.org/abs/1907.01351)

It also comes with a [@mybinderteam](https://mybinder.org/v2/gh/raspstephan/Lorenz-Online) notebook containing all the experiments: [mybinder.org/v2/gh/raspstephan/Lorenz-Online](https://mybinder.org/v2/gh/raspstephan/Lorenz-Online)



9:53 AM · Jul 3, 2019 · Twitter Web Client

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# Thank you!

**OCKProject**

<https://github.com/OCKProject/climate>

**FORCE11 WG**

<https://www.force11.org/group/open-climate-knowledge>

**X-Sprint - Migration Dictionaries**

<https://github.com/OCKProject/X-Sprint>

**Contact details:**

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