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VOICES

The Value of Openness, Inclusion,
Communication, and Engagement for
Science in a Post-Pandemic World

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Open Science (and the pandemic)

Open Science

“ an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone

Open Science

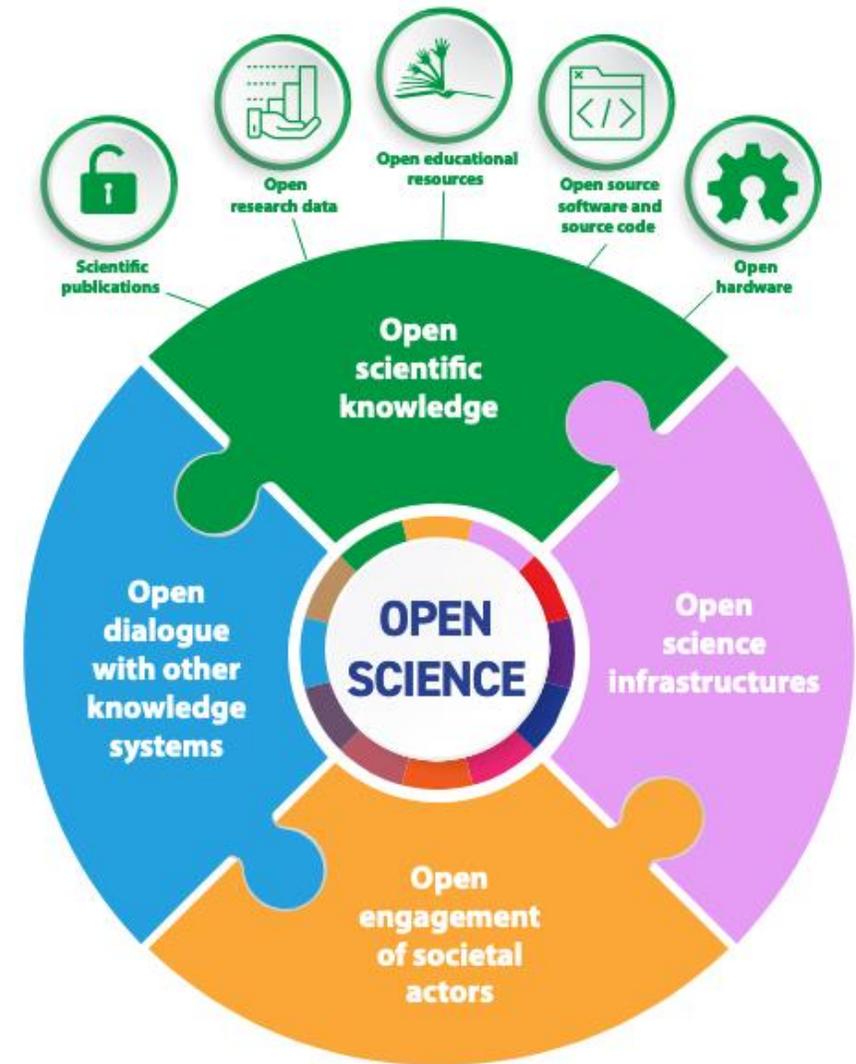
“ an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community.

UNESCO Recommendations on Open Science (2021)

UNESCO defines OS in four areas

all intended to work together

1. open knowledge
2. open infrastructure
3. dialogue with other knowledge systems
4. open engagement of societal actors



the pandemic led to more OS
but did it change who participates and
benefits?

- the VOICES project seeks to understand, document, and measure how the new interplay between researchers, policymakers, science communicators, and the public have affected research, and the role of research in society.
- the overarching goal is to identify concrete ways of ensuring that the gains made during the pandemic with regards to diversity in science, open science practices, science communication, and engagement with science persist for long-term recovery and resilience of our societies following the pandemic.

1. Describe and analyze arguments and discursive shifts that are being used to support a greater opening of science across a diverse set of actors, including academic communities, research funders, national governments, the media, and the public at large.
2. Examine the ways in which open science has been more or less diverse and inclusive to support policies that eliminate barriers to participation and encourage enabling factors.
3. Capture, analyze, and describe the new interplay between scholars, science communicators, journalists, and members of the public resulting from the opening of science.
4. Develop a theoretical framework that integrates the empirical evidence from each WP by building on well-established models of scientific production and communication.

results
(only a few of many)

on how OS is discussed

we want OS to be so much...

1. Instrumental arguments: benefits to science

- fix “problems” with science through increased speed and transparency
- reuse of data, better communication, faster dissemination, faster progress, greater interdisciplinarity, improved quality, more inclusive, more efficient, more collaborative, more ethical, less duplication, improved visibility, improved transparency, and use in the classroom

2. moral/intrinsic arguments: benefits to society

- again, a way to fix “problems” with science, especially those related to access to resources (“unfairness”)
- better health outcomes, more direct communication with public, improved socio-economic outcomes, faster dissemination to public, more inclusive, making knowledge available for public good, and use in education

mentions of EDI

among Brazilian documents

- Among the 30 texts analyzed:
- 36.6% (11) of the documents mentioned EDI
- 70% (21) cited public and universal access to knowledge

52 national and international guidelines and policies

- Many more documents in Europe than elsewhere: dominating “international” discussions
- In most of the documents analyzed, there is an evident mismatch between statements about the importance of EDI and the proposed actions or paths.
 - use language of EDI, but concrete policies focus on Open Access and Open Data

focus is on ability to pay

- Concerns about:
 - unequal distribution of resources (Global South/North; northern/southern Europe)
 - marketization of OA, with a number of documents calling for a move away from APCs (paying for OA)
- factors like race, age, disability status, and gender are not mentioned in the majority of documents analyzed and, when they are, it is only in passing

OA seems to be a priority around the world, but with different foci

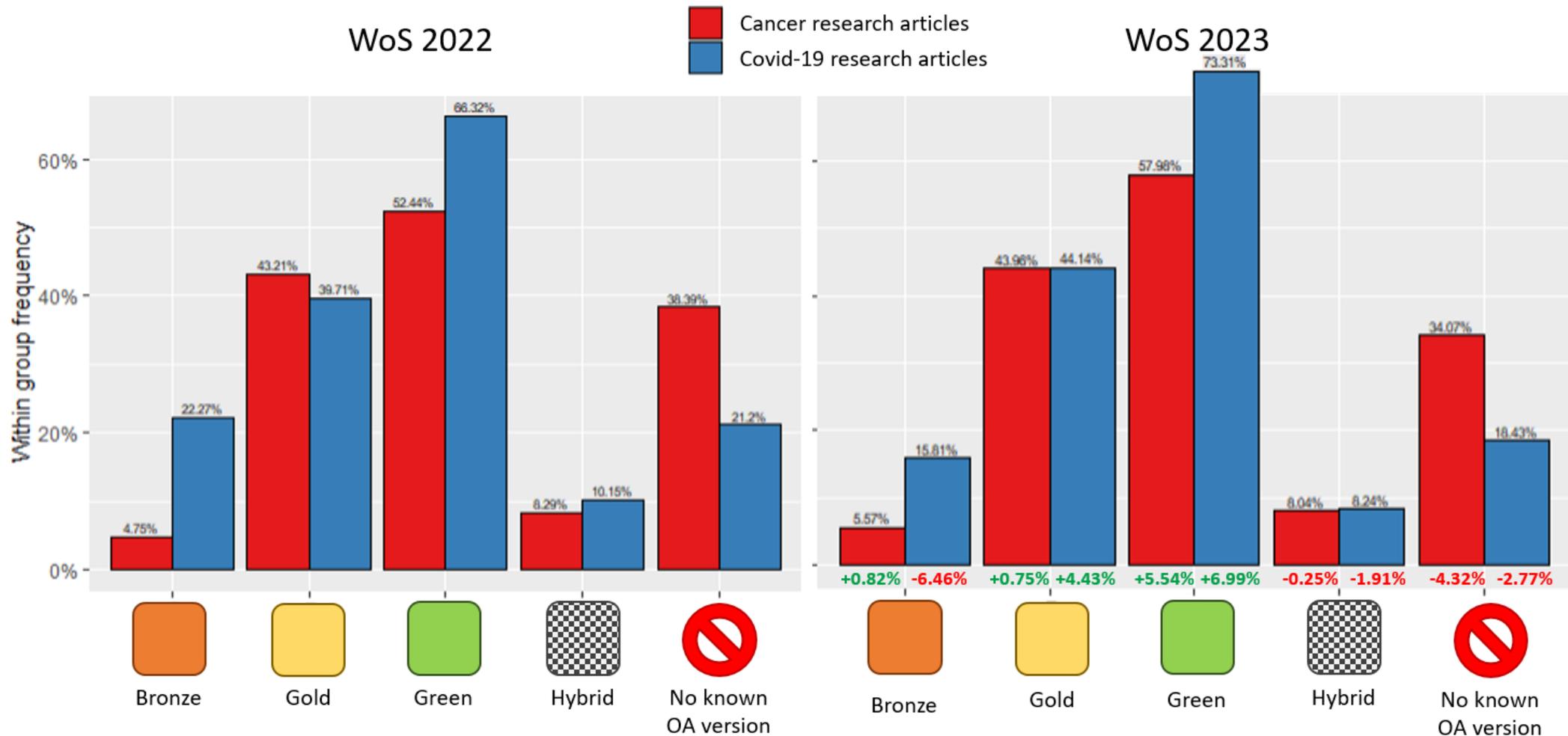
- North America and Europe: focused on benefits to science, with preprints featuring prominently
- Germany placing emphasis on Open Data
- Latin America: concerned with costs (esp. APCs), but also with legitimacy of their publishing
- Latin America and Eastern Europe: also focused on citizen and community science (and other forms of community engagement), but for different reasons



OS Practices

Open Access changes

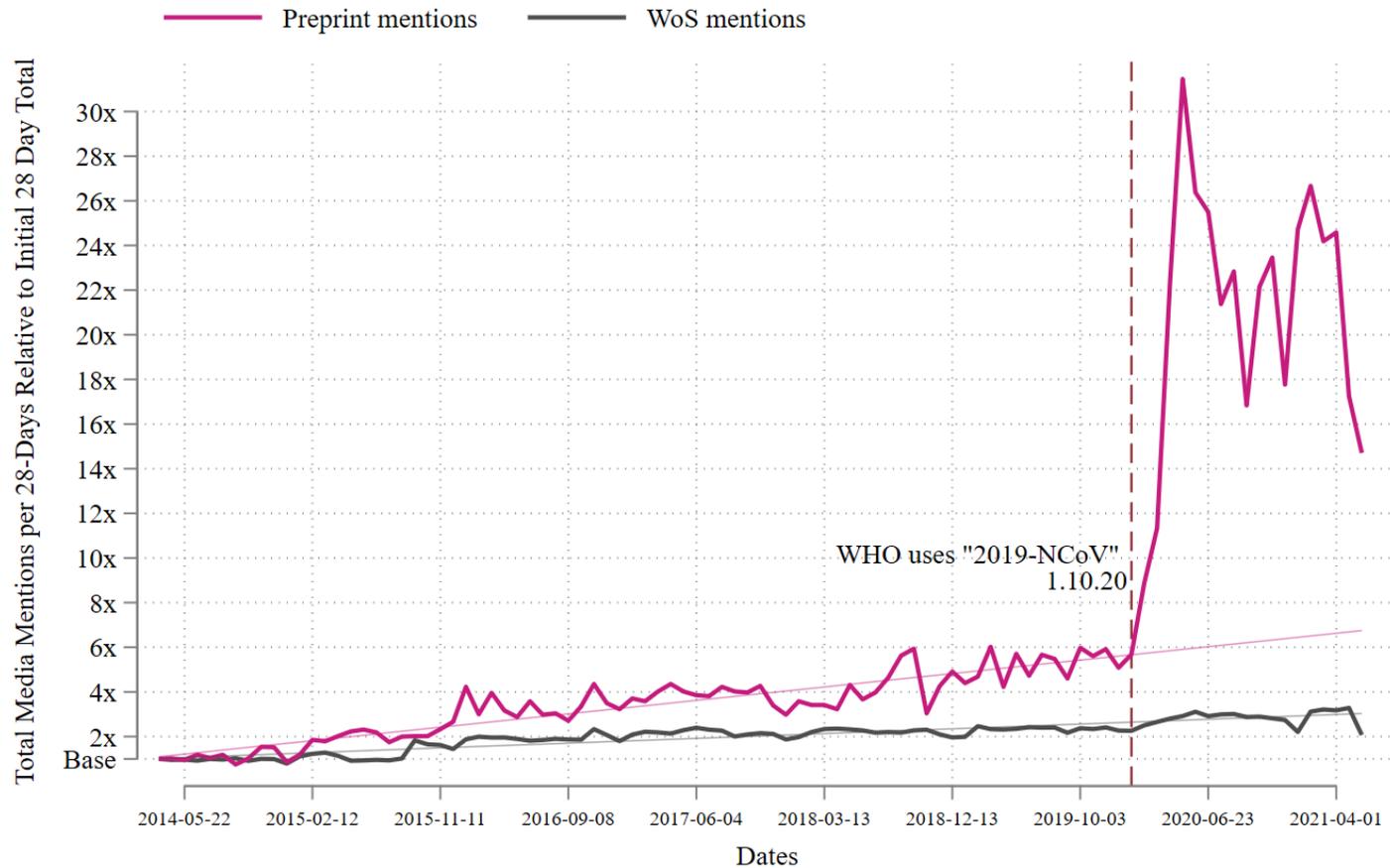
comparing share of OA between COVID and Cancer



mentions of preprints in the news media



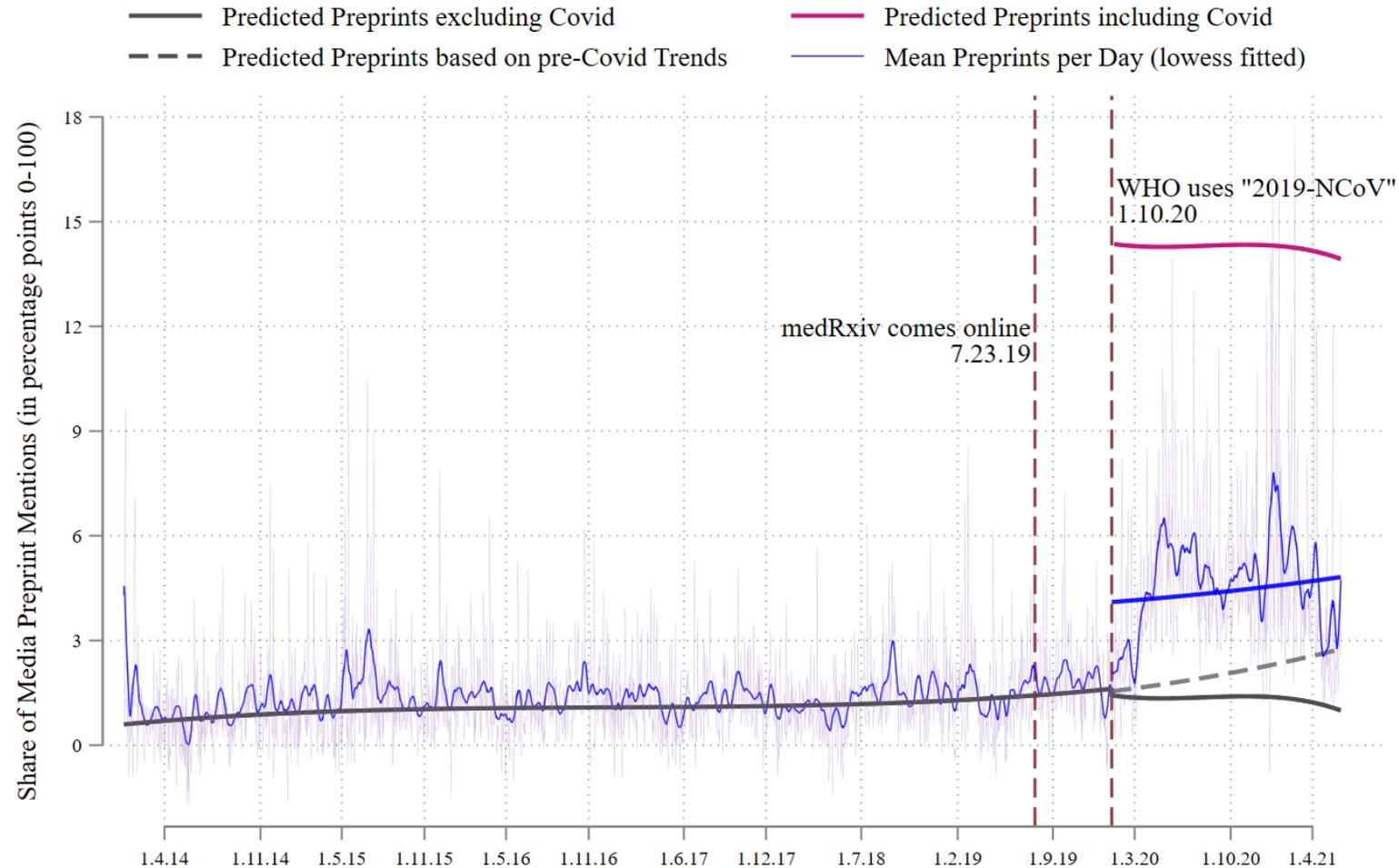
(relative to early 2014)



Share of news mentions to preprints



comparing COVID and non-COVID research



role of science communication

Role of PR/Science News

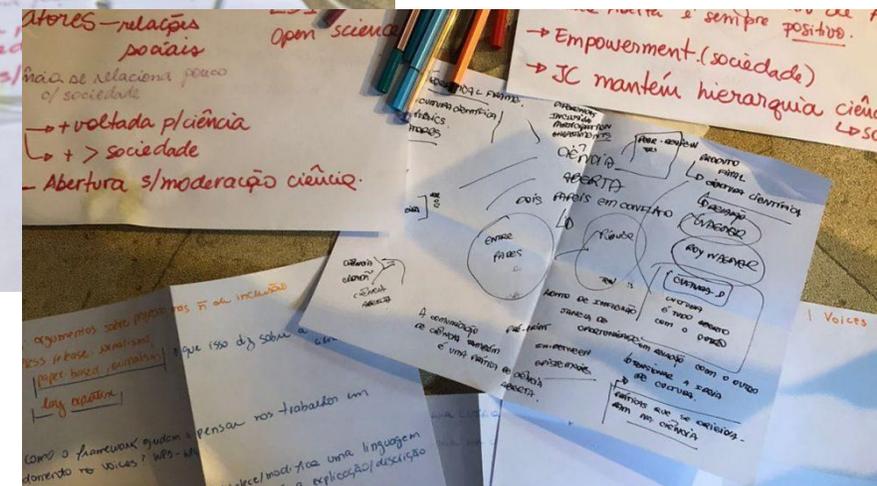


Collected hundreds of press releases, linked to publications, and analyzing diversity of sources, journalists, and topics



Developing a theory connecting OS to Scientific Culture **SL**

inspired by Vogt (2012)



Vogt, C. (2012). The spiral of scientific culture and cultural well-being: Brazil and Ibero-America. *Public Understanding of Science*

too many to list

- partnership with Making Data Count project (to study Open Data)
- partnership with “Another Open Science Exists” project (analyzing other forms of OS, beyond OA, OD, and preprints)
- partnership with OS Dashboard project
- published (or under review) literature reviews
- published (or under review) peer reviewed publications
- multiple conference presentations at national and international
- spin-off projects on:
 - curation and moderation policies of preprint servers
 - analyzing quality of open bibliometric databases (OpenAlex)

The Partnership

what's working, what's not

Project Team



4 countries: Brazil, Canada, Germany, UK

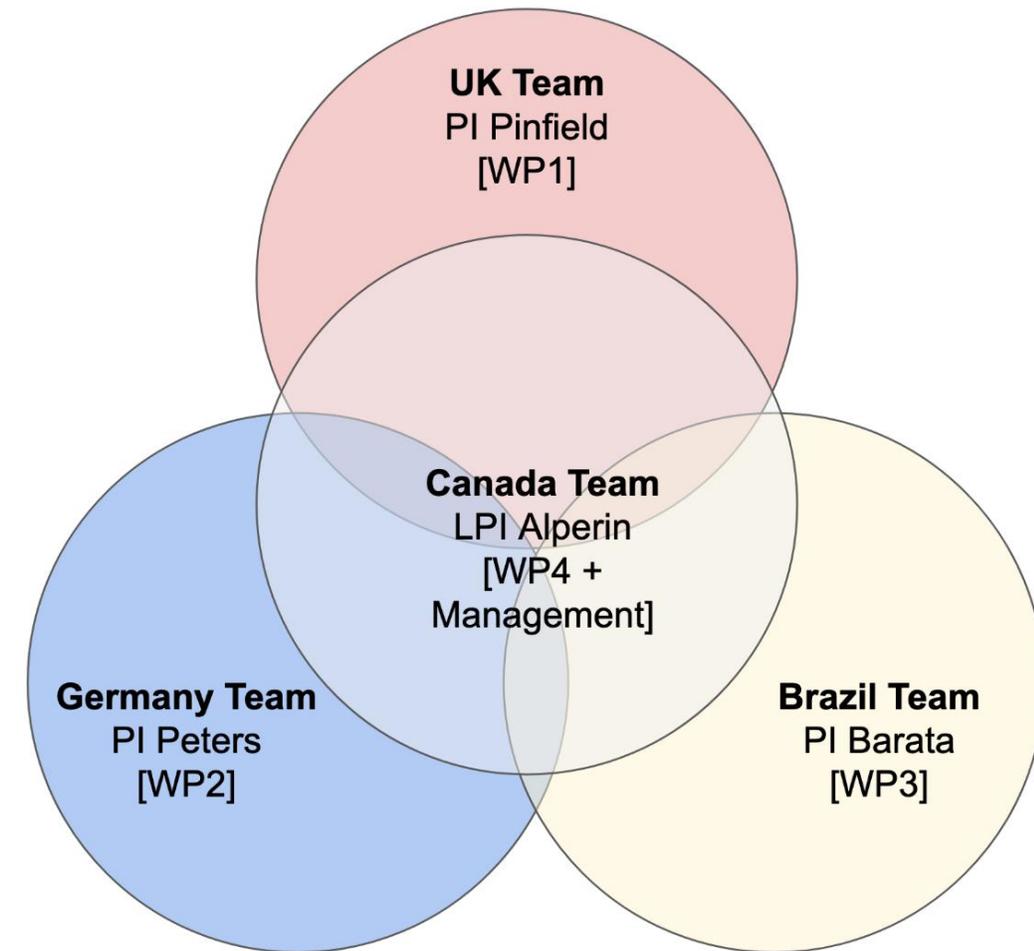


a few more members added since!

Intersecting Work Packages

mix of information scientists, science communicators, journalists, social scientists, and more...

- Canada Team (SFU):
 - Juan Pablo Alperin (me!)
 - Natascha Chtena
 - Alice Fleerackers
- Brazil team (U. Campinas)
 - Germana Barata
 - Monique Oliveira
 - Mariana Hafiz
 - Jhonatan Dias
- German Team (Kiel U.)
 - Isabella Petters
 - Isabelle Dorsch
- UK Team (U Sheffield)
 - Stephen Pinfield
 - Melanie Benson Marshall



+ Collaborators!

there is a lot of it

- Able to hire great postdocs and RAs to support the work
- Mix of disciplinary backgrounds and expertise complementing each other well
- Projects taking a global dimension, especially important to have both sides of the Atlantic, but also have both hemispheres (with Brasil team and me also representing Latin American perspectives)
- Split work packages, but all teams stepping in and working on all areas
- Having a coordinating team has been essential to join efforts

TIMEZONES TIMEZONES TIMEZONES

- nearly impossible to find good times for team to meet
 - not reasonable to expect people up at 4am, nor to stay working until 11pm...
- Working in inclusive ways takes time, but project timeline pressures us to move quickly
- Every country started on different timelines, caused by administrative roadblocks (especially challenging for Brazil team)
- Similar challenges with ethics approvals across institutions, limiting ability for some teams to take part, or holding back others

but even the bad is good with the right team





Thank you.

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