

# Data Sharing Seminar Series for Societies

## Evolution of the AGU Policy on Data/Software

### 2 July 2021

RANDY TOWNSEND

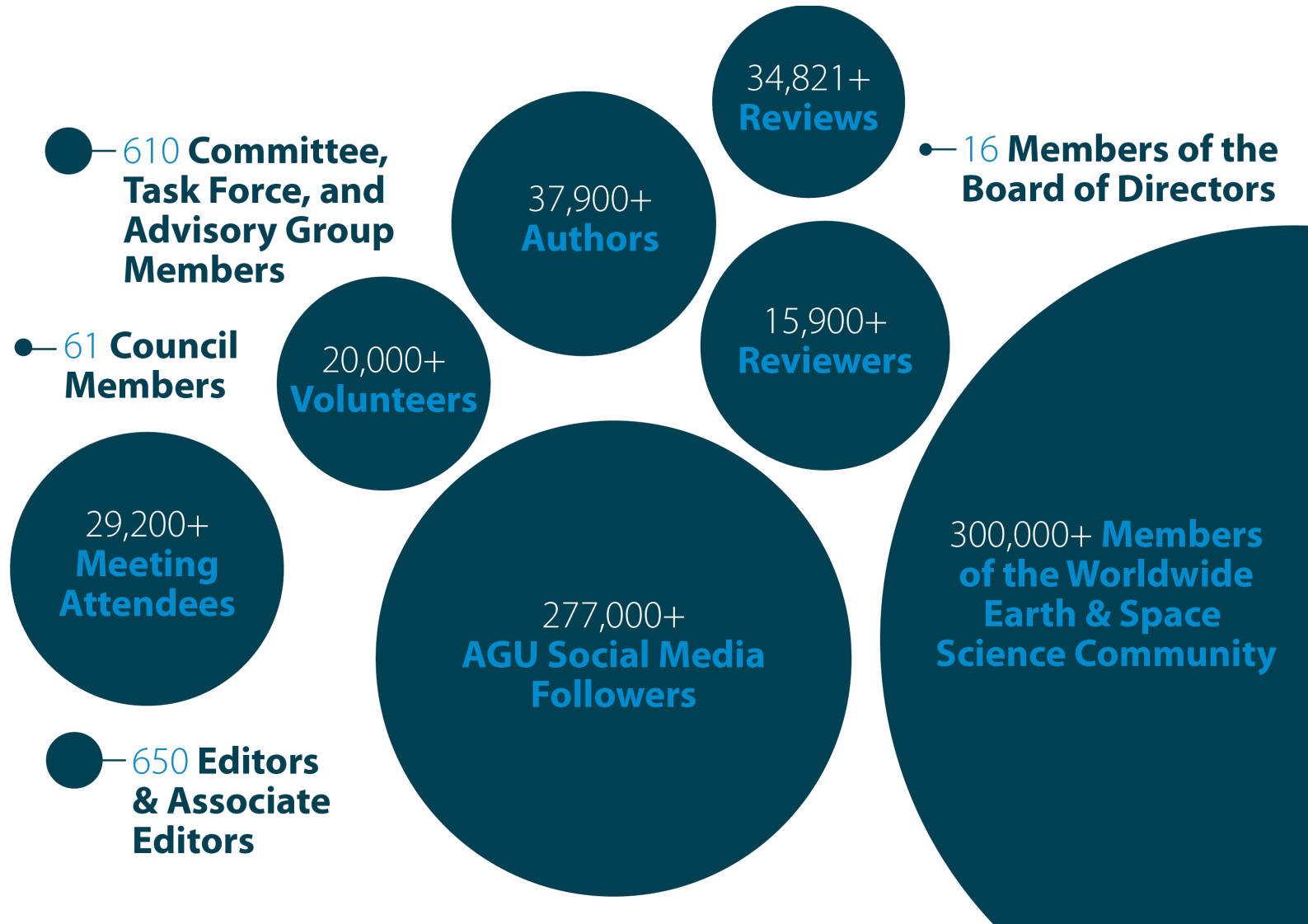
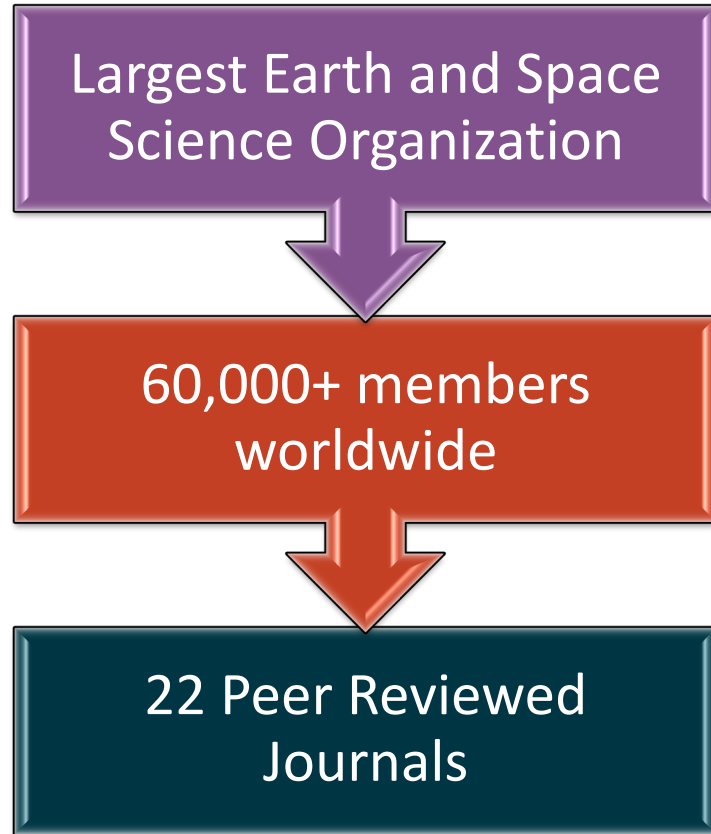
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# AGU by the Number



# Evolution of the AGU Policy on Data/Software

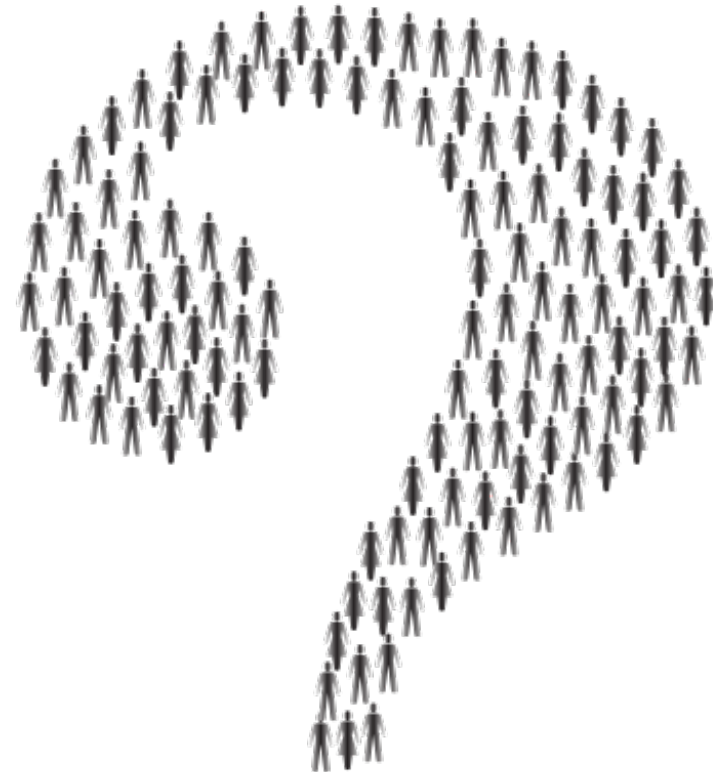
WHAT DATA?

WHAT DO YOU WANT ME TO DO WITH MY DATA?

WHY IS THIS NECESSARY?

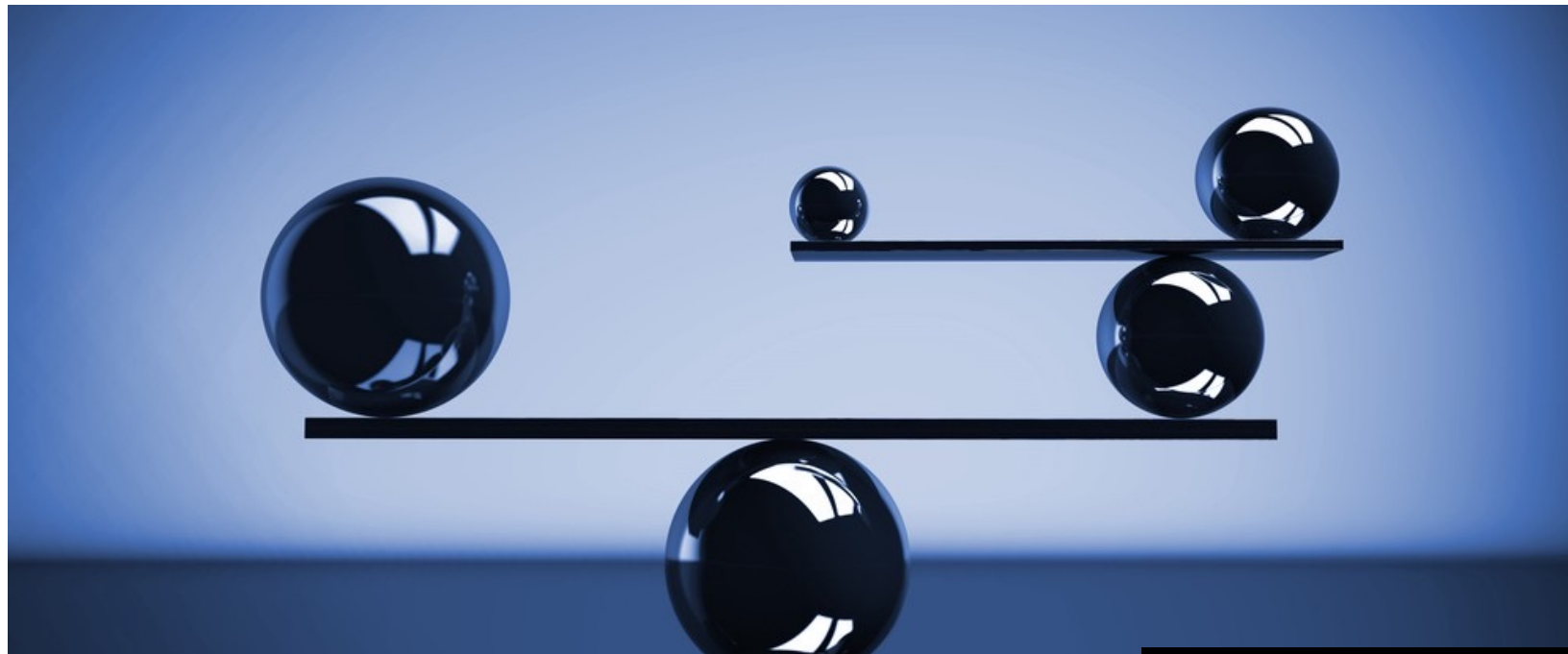
WHAT ABOUT PROTECTED DATA?

I HAVE TERABYTES OF DATA. HOW DO I HANDLE THAT?



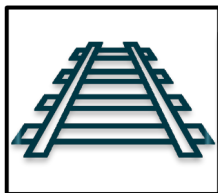
# The Value of the Soft Launch

Early Adopters | Skeptical Scrutinizers | The Resistance



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# Shifting from Soft Launches to Increased Enforcement



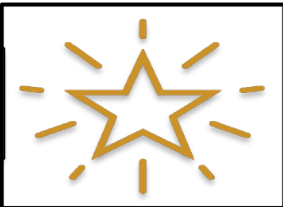
Make sure your resources reflect where you're going

Repeat, Repeat, Repeat –Often, Everywhere, Every Opportunity



Brief champions with every update –be transparent with everybody

Clarify expectations



Exercise message discipline –most will agree that this is a good thing



# CONVERSATION | COLLABORATION | COORDINATION



## WIDESPREAD **COMMUNITY** ENGAGEMENT

- Crowdsourcing **shared recommendations**
- Development of wide-range of **tools and resources**
- **Diverse representation** of perspectives and concerns

## MORE SOPHISTICATED QUESTIONS

- When do I get **credit for my data** being cited?
- How do I make it **easy for others** to understand and use my data?
- **What repository** should I use for my data?
- What does a **Data Citation** look like?

## Trusted, Community-Accepted Repositories

### Repositories

For the software and data that supports your research to be properly preserved and cited, it must be placed in an appropriate repository. Where possible, use discipline-specific repositories, institutional repositories that provide preservation services, or generalist repositories. Repositories are critical for creating proper data citations and help facilitate discovery and preservation.

#### Domain Repositories

- See [Journal Specific Guidance](#)
- [Repository Finder Tool](#) – Use the “Enabling FAIR Data” option to gain access to geo-related domain repositories.
- [Re3Data](#) – Multi-domain list of all registered repositories.
- [FAIRsharing](#) – Growing list of registered repositories.

#### Institutional Repositories

- [Institutional Data Repositories: An Important Option for Complying with Data Sharing Requirements](#) – A handout on Institutional Data Repositories for distribution at American Geophysical Union (AGU) events.

#### General Repositories

- [Generalist Repository Comparison Chart](#) [Document] - Shak, Shelley, Marlene, Maryam E, Chandrasubramanian, Ishwar, Crosas, Marco, Pedrez, Ciro, Gaudin, Julien, Zignel, Alberto. (2020, July 15). Generalist Repository Comparison Chart. Zenodo. <http://doi.org/10.5281/zenodo.3948720>

#### AGU CoreTrustSeal Cohort

- Earth, space, and environmental science repositories are invited to join the cohort navigating CoreTrustSeal certification. Please contact Rebecca Koskela for more information. [rebecca.koskela@coninststitute.org](mailto:rebecca.koskela@coninststitute.org)

<https://www.agu.org/Learn-About-AGU/About-AGU/Data-Leadership>



AGU's Data Leadership page

- Domain (or Discipline) Repository
- Institutional Repository
- General Repository

# DEVELOPING ANSWERS FOR EMERGING QUESTIONS

## What does a Data Citation look like?



[Data Citation Guidelines for Earth Science Data](#) [Document] - [ESIP Data Preservation and Stewardship Committee \(2019\): Data Citation Guidelines for Earth Science Data, Version 2. ESIP. Online resource.](#)  
<https://doi.org/10.6084/m9.figshare.8441816.v1>

[Why and How to Cite Data](#) [Video] – Webinar on general data citation training, guidelines and examples. [Parsons, Mark, Rensselaer Polytechnic Institute \(2018, June\).](#)

[A Data Citation Roadmap for Scientific Publishers](#) [Article] - [Cousijn, H., Kenall, A., Ganley, E. et al. \(2018\). A data citation roadmap for scientific publishers. Sci Data 5, 180259.](#)  
[doi:10.1038/sdata.2018.259](https://doi.org/10.1038/sdata.2018.259)

[A Data Citation Roadmap for Scholarly Data Repositories](#) [Article] - [Fenner, M., Crosas, M., Grethe, J.S. et al. A data citation roadmap for scholarly data repositories. Sci Data 6, 28 \(2019\).](#)  
<https://doi.org/10.1038/s41597-019-0031-8>

[Data Citation Synthesis Group: Joint Declaration of Data Citation Principles](#) [Document] – [Foundational document. Data Citation Synthesis Group: Joint Declaration of Data Citation Principles. Martone M. \(ed.\) San Diego CA: FORCE11; 2014 <https://doi.org/10.25490/a97f-egykh>](#)

<https://www.agu.org/Learn-About-AGU/About-AGU/Data-Leadership>

These and more useful resources for data citations, FAIR, software, and more:

AGU's Data Leadership page.

We highlight Earth, space, and environmental science resources.

## Citation format short cut!

The DOI registry agencies (worldwide) teamed together to build a tool.

It works for anything with a DOI, including data.

<https://citation.crosscite.org>

## DOI Citation Formatter

Paste your DOI:

For example 10.1145/2783446.2783605

Select Formatting Style:

Begin typing (e.g. Chicago or IEEE.) or use the drop down menu.

Select Language and Country:

Begin typing (e.g. en-GB for English, Great Britain) or use the drop down menu.

Format



Brooks Hanson | Shelley Stall | Christopher Erdmann

# FAIR Data Principles (applied to software and all digital objects)

- **Findable**

- Assign persistent IDs (e.g. DOI) to make data a searchable resource, ...

- **Accessible**

- Retrievable by their ID and accessible even when conditions change

- **Interoperable**

- Use formal, broadly applicable vocabularies and qualified references...

- **Reusable**

- Rich, accurate metadata and use of standards...

1. Use Persistent Identifiers

2. Preserve your data in trusted, community-accepted repository

3. Document your data well

3. Document your data well

Findable + Accessible + Interoperable +  
4. License your data as openly as possible



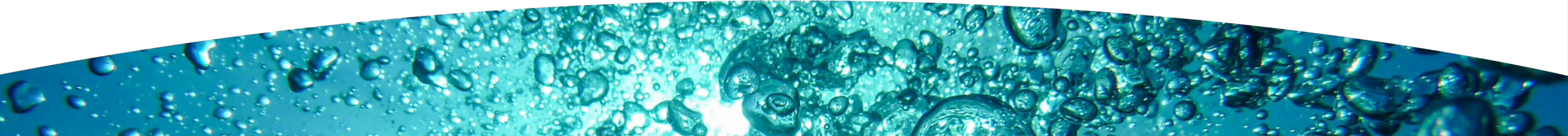


# REQUIREMENTS

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## RECOMMENDATIONS

- ❖ Data Availability Statement
- ❖ Software Availability Statement
- ❖ Active Repository Link
- ❖ Data Citation
- ❖ Software Citation



# WHAT ARE THE REQUIREMENTS?


## PEER REVIEW

- DATA AVAILABILITY STATEMENT
- SOFTWARE AVAILABILITY STATEMENT
- DATA CITATION
- SOFTWARE CITATION
- REPOSITORY DEPOSIT
- SUPPORTING INFORMATION

## PUBLICATION

- DATA AVAILABILITY STATEMENT
- SOFTWARE AVAILABILITY STATEMENT
- DATA CITATION
- SOFTWARE CITATION
- REPOSITORY DEPOSIT
- SUPPORTING INFORMATION


# TAKEAWAYS & REFLECTIONS



3 C's  
Conversation | Collaboration | Coordination



Consistent  
Message  
Discipline



We continue to evolve

# Thank you

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**ADVANCING EARTH  
AND SPACE SCIENCE**