Overview of NASEM's Roundtable on Aligning Incentives for Open Science

Greg Tananbaum, Head of Open Research Funders Group/Roundtable Secretariat
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<th>Funders</th>
<th>Agencies &amp; Others</th>
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<td>Alfred P. Sloan Foundation</td>
<td>Association of American Medical Colleges</td>
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<td>Atlanta University Center</td>
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<td>Association of American Universities</td>
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<td>Benedict College</td>
<td>Andrew W. Mellon Foundation</td>
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<td>Duke University</td>
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<td>Harvard University</td>
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<td>Johns Hopkins University</td>
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<td>Massachusetts Institute of</td>
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<td>Trinity University</td>
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<td>University of Arizona</td>
<td>Leona M. and Harry B. Helmsley Charitable Trust</td>
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<td>University of California</td>
<td>Lumina Foundation</td>
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<td>University at Los Angeles</td>
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<td>University of Houston</td>
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<td>University of Southern Caifornia</td>
<td>Wellcome Trust</td>
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Open is Better for Science and Better for Society

- Pedagogy
- Citizen Science
- Research Replication
- Public Policy
- AI/Machine Learning/Big Data
- Pace of Discovery
- Knowledge Equity
- Public Confidence in Science

PAYWALLS
DATA HOARDING
EMBARGOES
CAN'T REPRODUCE
NO MACHINE READABILITY
Open is Also Better for Philanthropy

Research Funders and Open Policies

- Values Alignment
- Return on Investment

“We fund innovative projects that push the boundaries of scientific knowledge and help people flourish.”

“The American Heart Association's mission is to be a relentless force for a world of longer, healthier lives.”
Mutually Reinforcing Vectors
NASEM Roundtable Toolkit

Email greg@orfg.org for draft copy of toolkit
More than a dozen philanthropies, including a number of HRA members, are signalling their interest in open activities, independent of any formal policies.

NASEM “Nudge” Language

Foundation XYZ values the open sharing of research outputs. If applicable, describe 1) instances where you have engaged in “open” activities (such as making articles open access and sharing data/code according to FAIR principles), 2) examples of how your open research outputs have been used by others in your discipline, in other disciplines, and/or outside of academia (include DOIs if possible), and 3) plans to engage in open activities in the future.

Please provide representative examples demonstrating how you have made research outputs resulting from other projects openly accessible. If possible, please provide the DOI and license terms under which the materials are available.
## Signalling Language Rubric

<table>
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<th>Application Stage (e.g., jobs, grants)</th>
<th>Beginning</th>
<th>Developing</th>
<th>Accomplished</th>
<th>Exemplary</th>
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<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td><strong>Signalling in Open Science Practices</strong></td>
<td>The researcher involves in engaging open science practices. This is defined as occasionally making use of recent research (&lt;5 years) available openly for access and reuse. Specific activities include: (a) making at least one of their articles available in open access journals or repositories, (b) to the extent that the researcher has generated research data; making some (more than one but less than all) of their articles available in open access journals or repositories, (c) to the extent that the researcher has generated research data, making some (more than one but less than all) of their articles available in accessible repositories under adherence to the FAIR principles, and (d) to the extent that the researcher has generated research outputs, making some (more than one but less than all) of their articles available in accessible repositories under adherence to the FAIR principles.</td>
<td>The researcher has engaged in open science practices. This is defined as occasionally making use of recent research (&lt;5 years) available openly for access and reuse. Specific activities include: (a) making at least one of their articles available in open access journals or repositories, (b) to the extent that the researcher has generated research data; making some (more than one but less than all) of their articles available in open access journals or repositories, (c) to the extent that the researcher has generated research data, making some (more than one but less than all) of their articles available in accessible repositories under adherence to the FAIR principles, and (d) to the extent that the researcher has generated research outputs, making some (more than one but less than all) of their articles available in accessible repositories under adherence to the FAIR principles.</td>
<td>The researcher has consistently engaged in open science practices. This is defined as making the majority of recent research (&lt;5 years) available openly for access and reuse. Specific activities include: (a) making the majority of their articles available in open access journals or repositories, (b) to the extent that the researcher has generated research data, making the majority of their articles available in accessible repositories under adherence to the FAIR principles, and (c) to the extent that the researcher has generated research outputs, making the majority of their articles available in accessible repositories under adherence to the FAIR principles.</td>
<td>The researcher has consistently engaged in open science practices. This is defined as making the majority of recent research (&lt;5 years) available openly for access and reuse. Specific activities include: (a) making the majority of their articles available in open access journals or repositories, (b) to the extent that the researcher has generated research data, making the majority of their articles available in accessible repositories under adherence to the FAIR principles, and (c) to the extent that the researcher has generated research outputs, making the majority of their articles available in accessible repositories under adherence to the FAIR principles.</td>
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**Describe instances where you have engaged in “open” activities (such as making articles open access and sharing data/code according to FAIR principles), including representative examples**

- The researcher involved in making articles open access and sharing data/code according to FAIR principles. For example, the researcher has published their recent research (<5 years) in open access journals and repositories, and has made some of their data available in accessible repositories under adherence to the FAIR principles. Additionally, the researcher has demonstrated good open science hygiene (e.g., use of DOIs, ORCID, Creative Commons licenses).

**Provide examples of how your open research outputs have been used by others in your discipline, in other disciplines, and/or outside of academia (include DOIs if possible)**

- The researcher cannot provide quantitative evidence that any of their recent (<5 years) open research outputs have been used by others.
- The researcher has articulated a clear plan to make at least some research outputs accessible and reusable, but not limited to, articles and data, and their research has been used by others.
- The researcher has articulated a clear plan to make most research outputs accessible and reusable, and their research has been used by others.
- The researcher has articulated a clear plan to make all research outputs accessible and reusable, and their research has been used by others.
What Other Resources Are Available to Funders?

A Curated Resource Hub for Research Funders

Funders of scientific research are well-positioned to guide scientific discovery by enabling and incentivizing the most rigorous and transparent methods. This resource hub provides examples of best practices currently employed by funders of biomedical, educational, and social sciences. These recommendations and templates provide useful tools so that you, the funder, can turn those other institutions that don't share the same research commitments.

ORFG Launches Blueprint to Incentivize the Sharing of Research Outputs

October 29, 2018

Plan S

Browse Article and Data Sharing Requirements by Federal Agency

This is a community resource for tracking, comparing, and understanding both current and future U.S. federal funder requirements for sharing research articles and research data. Click below to review and compare agencies' public access plans for articles or data sharing requirements.

View Requirements

What funders are doing to support transparent and reproducible research

Help support open science today.

Donate Now

Open Policies 101

The open access movement is stronger when we collectively advocate for policies that promote open research and practices that encourage innovation. That's open sharing. ROFLs and other funders have held many open policy workshops to help researchers and funders discuss the benefits and challenges of open science. We've also acted on that feedback by releasing our own open policy specifications for sharing research outputs. We're helping researchers and policymakers understand the benefits of open sharing, and we're advocating for the adoption of open policies to make sure that all researchers, regardless of their funding source, can share their findings with the world.

ORFG.ORG
Ways to Engage

- Raise your hand!
- Join signalling language cohort
- Host ORFG/HRA webinar for your team to discuss what open could look like for you and your grantees

“Solving the world’s most pressing problems requires a vast ecosystem of sources and knowledge, built on equal access to information that is vital to the public good.”

Janet Napolitano, Former President of the University of California System & Former US Secretary of Homeland Security
Want to explore this further?

Let’s talk!

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