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

Greg Tananbaum, Head of Open Research Funders Group/Roundtable Secretariat
## NASEM Roundtable: Participants

### Universities
- Arizona State University
- Atlanta University Center
- Benedict College
- Duke University
- Harvard University
- Howard University
- Johns Hopkins University
- Massachusetts Institute of Technology
- Princeton University
- Stanford University
- Trinity University
- University of Arizona
- University of California
- University of California at Los Angeles
- University of Houston
- University of Southern California

### Funders
- Alfred P. Sloan Foundation
- American Heart Association
- Andrew W. Mellon Foundation
- Arcadia
- Arnold Ventures
- Bill & Melinda Gates Foundation
- Coalition for Epidemic Preparedness Innovations
- Gordon and Betty Moore Foundation
- Health Research Alliance
- Howard Hughes Medical Institute
- James S. McDonnell Foundation
- John Templeton Foundation
- Leona M. and Harry B. Helmsley Charitable Trust
- Lumina Foundation
- Robert Wood Johnson Foundation
- Schmidt Futures
- Wellcome Trust

### Agencies & Others
- Association of American Medical Colleges
- Association of American Universities
- Association of Public and Land-grant Universities
- European Commission
- National Institute of Standards and Technology
- National Institutes of Health
- Open Research Funders Group
- National Science Foundation
- Office of Science and Technology Policy
- Scholarly Publishing and Academic Resources Coalition
- U.S. Department of Education
- United Kingdom Research and Innovation
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
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 1</th>
<th>Developing 2</th>
<th>Accomplished 3</th>
<th>Exemplary 4</th>
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<td><strong>Description of Engaged Activities</strong></td>
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<td>Describe instances where you have engaged in &quot;open&quot; activities (such as making articles open access and sharing data/code according to FAIR principles), including representative examples.</td>
<td>The researcher has sometimes engaged in open science practices. This is defined as occasionally making recent research (≤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 at least one of these datasets available in accessible repositories under adherence to the FAIR principles, and (c) to the extent that the researcher has generated research outputs beyond articles and data, making at least one of these materials openly available for access and reuse. Additionally, the researcher demonstrates at least some open science hygiene (e.g., use of DOIs, ORCID, Creative Commons licenses).</td>
<td>The researcher has frequently engaged in open science practices. This is defined as often making recent research (≤5 years) available openly for access and reuse. Specific activities include (a) making some (more than one, but less than most) 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 dataset, but less than most) of these data available in accessible repositories under adherence to the FAIR principles, and (c) to the extent that the researcher has generated research outputs beyond articles and data, making some (more than one, but less than most) of these materials openly available for access and reuse. Additionally, the researcher frequently demonstrates good open science hygiene (e.g., use of DOIs, ORCID, Creative Commons licenses).</td>
<td>The researcher has consistently engaged in open science practices. This is defined as making the majority of recent research (≤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 these data available in accessible repositories under adherence to the FAIR principles, and (c) to the extent that the researcher has generated research outputs beyond articles and data, making the majority of these materials openly available for access and reuse. Additionally, the researcher consistently demonstrates good open science hygiene (e.g., use of DOIs, ORCID, Creative Commons licenses).</td>
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| 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 qualitative and/or quantitative evidence that any of their recent (≤5 years) open research outputs have been used by others. | The researcher can provide qualitative and/or quantitative evidence that at least one of their recent (≤5 years) open research outputs has been used by others. | The researcher has articulated a clear plan to make at least some research outputs available, including, but not limited to, articles, and data, and/or made them available to at least one specific community. | The researcher has articulated a clear plan to make most research outputs available, including, but not limited to, articles, and data, and/or made them available to at least one specific community. |

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What Other Resources Are Available to Funders?

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.

Track and Understanding

Article Sharing Policies

View Requirements

Data Sharing Policies

View Requirements

A Curated Resource Hub for Research Funders

Funders often require researchers and institutions to make their findings and research data freely available. 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 learn from others and help to standardize access to the entire research community.

ORFG Launches Blueprint to Incentivize the Sharing of Research Outputs

October 29, 2018

Open Policies 101

What is “Open” Science? Open policies promote the open dissemination and sharing of research results. These policies typically encompass both articles and data, and they are often required by funders. Open policies promote transparency, reproducibility, and scholarly investigation (commonly known as “open access” and the “favorable information flow” from research findings and data, including data, software, and code [Open data]).

Why are research funders adopting open policies? The open sharing of research outputs benefits science by getting more information quickly and widely.
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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