The U.S. National Institutes of Health seeks a research partner. Details below. If interested, plan to attend a virtual researcher interest meeting on May 28, 2024 from 1:30-2:30 EST to learn about the project opportunity. Complete this form or email Evidence@omb.eop.gov, attaching your resume, to receive a calendar invitation for the virtual meeting. Please submit questions for discussion at the meeting by emailing ODMetascience@od.nih.gov.

How can NIH strengthen stewardship through the development of robust measures for assessing the impact of its investments?

Agency: National Institutes of Health

Topics: Impact; Evaluation; Stewardship; Metascience

Summary:

NIH is the primary federal agency for leading, conducting, and supporting biomedical and behavioral research. NIH provides financial support to researchers throughout our nation and the world through its 27 Institutes and Centers (ICs) and the Office of the Director. NIH conducts and supports biomedical, behavioral, and social science research across a broad spectrum of scientific disciplines and approaches in pursuit of its mission to seek fundamental knowledge about the nature and behavior of living systems and to use that knowledge to enhance health, lengthen life, and reduce illness and disability. NIH research focuses on both ongoing and emerging public health needs. As NIH identifies these needs, it uses different scientific approaches to understand the basic causes and mechanisms of disease, find new ways of identifying, preventing, and curing disease processes, and bring these new interventions into common practice for the public's benefit.

NIH is seeking to engage with the scientific community to study NIH processes and programs to further strengthen the evidence base that supports NIH decision-making. The proposed research efforts focus on strengthening the agency's evidence-building capabilities in order to improve the public's and NIH's own understanding of its impacts. Proposed research should address aspects of one or more of the following questions:

1. How can NIH improve on identifying desired outcomes and measuring impact related to its mission?
    a. Beyond bibliometric measures, what are the indicators of scientific success?
    b. What approaches can be used to capture successful/impactful scientific strategies and new tools and methods, and are these approaches scalable?

   c. What measures can NIH use to capture both incremental knowledge gains and failures that ultimately contribute to scientific success?
   d. What approaches can NIH use to measure impact of different categories of science (e.g., basic, translation, clinical) and the technology and operations used to support the science?
   e. Are there better ways for NIH to trace dissemination of clinical research findings into:
      i. Care received by patients?
      ii. Use by clinical communities and healthcare providers?
      iii. Use by public health agencies other than NIH?
   f. How can NIH capture the economic impact of its outcomes? How does NIH-funded research lead to increased productivity and give rise to new industries?
   g. How can these approaches best inform strategies for funding research, resources, and training?

2. Are there methods that NIH can use to better predict and identify scientific opportunities (e.g., the emergence of gene editing technology)?

3. Are there approaches that could inform NIH funding decisions by measuring scientific quality, rigor, and reproducibility?

4. What evidence can NIH use to inform its efforts to optimize its investment in recruiting, training, and sustaining a diverse U.S. biomedical, behavioral, and social sciences research workforce?
   a. What data and methods may be used to capture trainee career outcomes?
   b. How can NIH evaluate its efforts to expand and diversify the U.S. biomedical, behavioral, and social sciences research workforce through engagement activities?

5. What evidence does NIH need to improve the clinical research ecosystem? What would inform a re-envisioning of the clinical trials system to maximize quality, participant experience, accessibility, timeliness, and impact on clinical care?
   a. How can NIH ensure there is equitable representation of the U.S. populations in its funded clinical research so health disparities are not compounded in underrepresented populations?

6. What evidence could inform steps NIH can take to ensure progress on overcoming health disparities and strengthen partnerships with underserved communities and practitioners?

7. How should NIH assess risk in its research portfolio? What is the right amount of risk for NIH to accept as a steward of public funds?
   a. Does the NIH funding system foster sufficient risk-taking to encourage researchers to explore high-risk research? If not, are there ways to test novel funding approaches that could be implemented at scale?

Anticipated deliverables:

• A report summarizing findings and potential measures that NIH could implement to strengthen its decision-making evidence base and suggested methods for collecting those measures. See relevant dates below.
• Presentation of findings to NIH decision-makers.

Planned use of results:

As a steward of public funds, NIH is committed to pursuing its mission effectively, efficiently, and transparently through continual improvement. NIH would consider the findings and methods described in the report for adoption within existing stewardship activities. Considering the findings and methods would also help NIH to further develop data, methods, and approaches to increase the use of evidence in policymaking.

Funding:

NIH does not have funds available to support any research projects arising from these efforts.

Data:

Data on NIH expenditures and the results of NIH supported research are available within Research Portfolio Online Reporting Tools (RePORT),[1] which provides access to reports, data, and analyses of NIH research activities. If researchers have specific suggestions for relevant administrative data to help inform their proposed project, NIH can assess whether such data exists and can be shared.

Other Benefits to Researchers:

NIH will participate in meetings with researchers to discuss research progress and answer any questions. Additionally, NIH could provide researchers with the opportunity to present findings to NIH decision-makers. Researchers have the potential opportunity to publish results.

Expertise needed:

Knowledge of evaluation research methods/design (e.g., mixed methods, experimental/quasi-experimental design); Science of science, or metascience (defined as the use of scientific methodology to study science itself).

Key dates:

Preliminary results for report describing potential measures NIH could implement due within 1 year of start date.

[1] https://report.nih.gov/

Evaluation.gov
Evidence Project Portal

Open Opportunity

Expressions of Interest:

To express interest in this project, provide a statement, not to exceed 2 pages, by August 12, 2024 that includes:

- Brief scope of work. Which of the questions would you work on and how would you approach the project?
- If any, identify potential challenges/hurdles and what you would anticipate needing from NIH to overcome them.
- What would you need from NIH to get started?
- If there is any other information you would like NIH to consider, please share.
- Email your expression of interest and a copy of a recent CV to ODMetascience@od.nih.gov by August 12, 2024

Project point of contact:

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NIH Evidence Project Portal Opportunity
Researcher Interest Meeting, May 28th, 2024

Q&A

1. Is there any funding or money available to execute this project?

   NIH does not have funds available to support any research projects arising from these efforts. However, there are sources of funding through traditional grant mechanisms for funding this kind of research that are on a much longer timescale than this opportunity, such as the Science of Science Approach to Analyzing and Innovating the Biomedical Research Enterprise (SoS:BIO) that is supported by the National Institute of General Medical Sciences in collaboration with the National Science Foundation: https://www.nigms.nih.gov/Research/specificareas/Pages/Science-of-Science-Policy-Approach-to-Analyzing-and-Innovating-the-Biomedical-Research-Enterprise-(SCISIPBIO).aspx

2. Is training available on how to use the NIH Research Portfolio Online Reporting Tools (RePORT) website?

   The NIH Research Portfolio Online Reporting Tools (RePORT) website (https://report.nih.gov/) provides access to reports, data, and analyses of NIH research activities, including information on NIH expenditures and the results of NIH-supported research. There is a guided tour available from the RePORT Expenditures and Results module website (https://reporter.nih.gov/) and FAQs (https://report.nih.gov/faqs).

3. Who is the audience for the deliverables?

   For the methodological approaches, the audience will be NIH staff working on analytics and evaluations of NIH programs. For the stewardship recommendations, NIH expects that results will be shared with policy- and decision-makers, as well as those implementing NIH programs and policies.

4. How often are you willing to meet with researchers?

   NIH will meet with researchers as needed depending on the complexity of the proposed project, and work across the agency to identify and coordinate input from the most appropriate experts.

5. What is NIH's internal capacity to do this work?

   NIH has a strong community of staff that engage in evaluation and analytics, and remains committed to supporting organizational capacity to enhance NIH's operations through high-quality evidence. *The Foundations for Evidence-based Policymaking Act of 2018* (https://www.congress.gov/115/plaws/publ435/PLAW-115publ435.pdf, also referred to as the *Evidence Act*) was established to advance evidence-building in the federal government by improving access to data and expanding evaluation capacity. The *Evidence Act* requires changes to how the federal government manages and uses the information it collects, emphasizing strong agency coordination for the strategic use of data. Although the capacity already existed

within NIH, the *Evidence Act* has provided a great opportunity to further build and bolster this capacity across the agency.

6. I'm interested in some other topic not included in the question set, should I apply?

   This opportunity is limited to identifying evidence that would fall within the scope of these questions, but as these are very general areas, many lines of research could potentially be included within the scope of this opportunity. In their expressions of interest, researchers are encouraged to state how they would address aspects of one or more of these questions.

7. Would data other than those publicly available be potential sources?

   Data other than those that are publicly available will not be provided by NIH for these projects. NIH believes in transparency and makes abstracts, administrative, and certain identifiable information available on funded grants, however, information on unfunded ideas, applicants, and investigators generally remains protected under *The Privacy Act of 1974*.

8. How will the assortment of research projects that result from this be managed?

   NIH staff gladly offer their knowledge and expertise with NIH processes and data for the purposes of a productive collaboration but will not be overseeing or managing these research projects. The data and findings are free to be published and shared by the researchers. Results will be shared with NIH decision-makers and could be considered for adoption within existing stewardship activities.

9. Will multiple partners/individuals be chosen to address specific projects across the proposed research areas? Or, will one partner be chosen who can best answer as many proposed research areas as possible?

   As these questions are broad and have multiple aspects that could benefit from further evidence, multiple partners/individuals may work on the same topic.

10. Developing program/evaluation metrics requires deep stakeholder engagement and teamwork. What are the provisions/expectations/logistics for those principles in this complex project?

    Depending on the submitted expressions of interest, there could be opportunities for varying levels of engagement.

11. Is it possible to gain access to the confidential grant application data that the NIH stores related to the peer review process (e.g., applications, scores, reviewer identities)?

    NIH believes in transparency and makes abstracts, administrative, and certain identifiable information available on funded grants, however, information on unfunded ideas, applicants,

and investigators generally remains protected under *The Privacy Act of 1974* and will not be made available through this engagement.

12. Is there an opportunity to apply for Evaluation Set-Aside (ESA) Funds to support this kind of work?

    No, NIH is not accepting applications for the NIH Evaluation Set-Aside (ESA) Funds.

13. Can teams of co-investigators submit statements of interest, or should all submissions have a PI?

    Yes, teams of co-investigators may submit statements of interest.

14. What happens after the expression of interest? When can we expect to hear back?

    Depending on the number of expressions of interest received, researchers can expect to hear back by the end of the summer.

15. What's the timeline/deadlines for the metrics recommendations report?

    Preliminary results for reports describing potential measures NIH could implement are due within 1 year of start date.

16. Is it also of interest how NIH impacts decisions of pharmaceutical companies or just CMS decisions?

    Yes, NIH is also interested in understanding impacts on private industries as well as other government policies.

17. How similar or different are your topic areas to the agencies Learning Agenda?

    The HHS Evaluation Plan describes how the evaluation priority areas of HHS operating and staff divisions are aligned with the goals of the HHS Strategic Plan and the HHS Evidence-Building Plan. The broad nature of this learning agenda does not lend itself to highlighting the evaluation questions of interest listed here.

18. Are you open to recommendations of changing NIH repositories to count access and downloads?

    NIH has a longstanding commitment to making the results of NIH-funded research available and maintains a number of repositories for sharing or accessing data (see https://www.nlm.nih.gov/NIHbmic/bmic-about.html). Studies that may provide evidence for strengthening data sharing efforts or better understanding of the outcomes of such efforts would be of great interest.

National Institutes of Health

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MARINA VOLKOV, PHD

Director, Office of Evaluation, Performance, and Reporting
Division of Program Coordination, Planning, and Strategic Initiatives
Office of the Director

May 28th, 2024

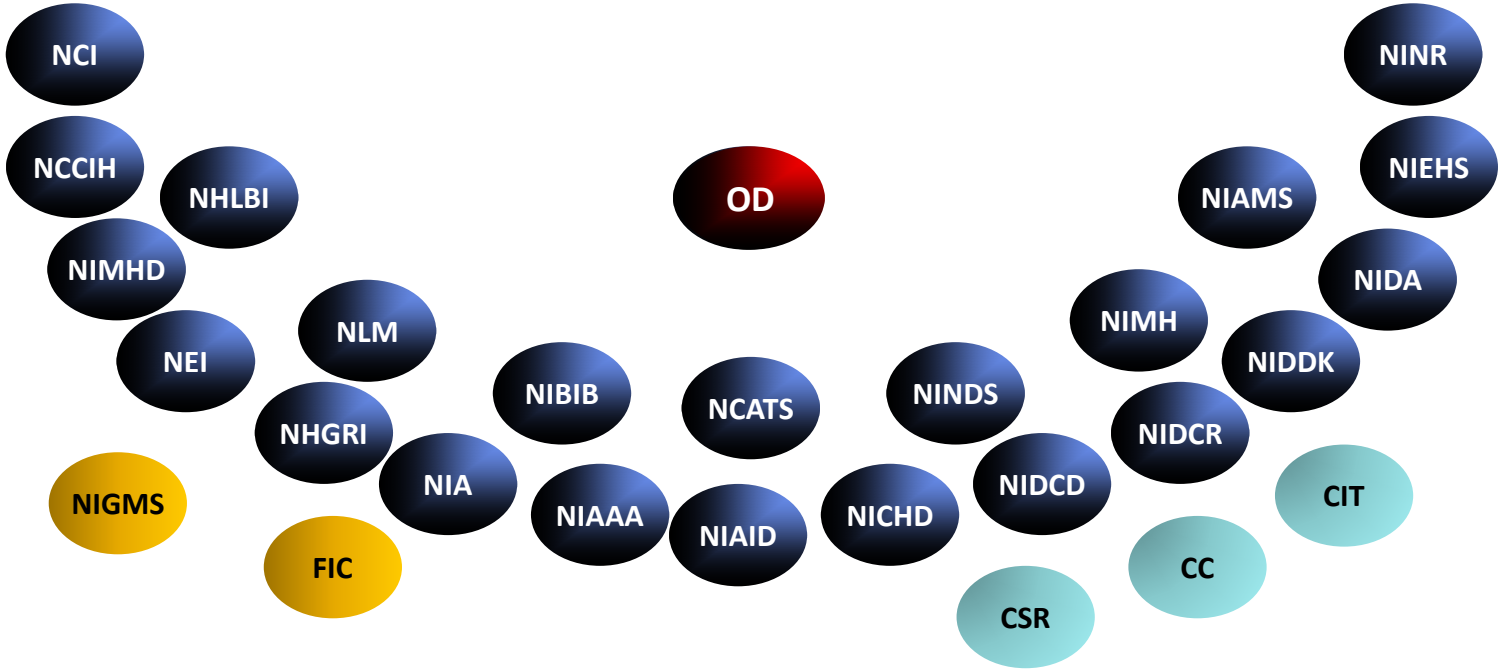
The National Institutes of Health

- Mission: seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability

- Budget: $48 billion
  - 83% extramural research
    - almost 50,000 competitive grants to more than 300,000 researchers at more than 2,500 universities, medical schools, and other research institutions in every state
  - Approximately 11% intramural projects
    - conducted by nearly 6,000 scientists in its own laboratories, most of which are on the NIH campus in Bethesda, Maryland
  - Remaining 6% covers research support, administrative, and facility construction, maintenance, or operational costs

NIH National Institutes of Health
Turning Discovery Into Health

The National Institutes of Health



National Institutes of Health
Turning Discovery Into Health

Peer review and funding decisions

- Mandated by statute in accordance with section 492 of the Public Health Service Act and federal regulations governing "Scientific Peer Review of Research Grant Applications and Research and Development Contract Projects"
- First level of review for most applications: Center for Scientific Review
- Second level of review: Advisory Council/Board
- Applications that are scientifically meritorious, based on review, and recommended by an Institute or Center's National Advisory Council are considered for funding
- Final funding decisions are made by the Institute or Center Directors

Seeking research partners:
Evidence Project Portal: Open Opportunity

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Evaluation.gov
Evidence Project Portal

NIH National Institutes of Health
Turning Discovery Into Health

Proposed research area 1:

- How can NIH improve on identifying desired outcomes and measuring impact related to its mission?
  a) Beyond bibliometric measures, what are the indicators of scientific success?
  b) What approaches can be used to capture successful/impactful scientific strategies and new tools and methods, and are these approaches scalable?
  c) What measures can NIH use to capture both incremental knowledge gains and failures that ultimately contribute to scientific success?
  d) What approaches can NIH use to measure impact of different categories of science (e.g., basic, translational, clinical) and the technology and operations used to support the science?
  e) Are there better ways for NIH to trace dissemination of clinical research findings into:
     i. Care received by patients?
     ii. Use by clinical communities and healthcare providers?
     iii. Use by public health agencies other than NIH?
  f) How can NIH capture the economic impact of its outcomes? How does NIH-funded research lead to increased productivity and give rise to new industries?
  g) How can these approaches best inform strategies for funding research, resources, and training?

Proposed research area 2:

- Are there methods that NIH can use to better predict and identify scientific opportunities (e.g., the emergence of gene editing technology)?

Proposed research area 3:

- Are there approaches that could inform NIH funding decisions by measuring scientific quality, rigor, and reproducibility?

Proposed research area 4:

- What evidence can NIH use to inform its efforts to optimize its investment in recruiting, training, and sustaining a diverse U.S. biomedical, behavioral, and social sciences research workforce?
  a) What data and methods may be used to capture trainee career outcomes?
  b) How can NIH evaluate its efforts to expand and diversify the U.S. biomedical, behavioral, and social sciences research workforce through engagement activities?

Proposed research area 5:

- What evidence does NIH need to improve the clinical research ecosystem? What would inform a re-envisioning of the clinical trials system to maximize quality, participant experience, accessibility, timeliness, and impact on clinical care?
  a) How can NIH ensure there is equitable representation of the U.S. populations in its funded clinical research so health disparities are not compounded in underrepresented populations?

Proposed research area 6:

- What evidence could inform steps NIH can take to ensure progress in research on overcoming health disparities and strengthen partnerships with underserved communities and practitioners?

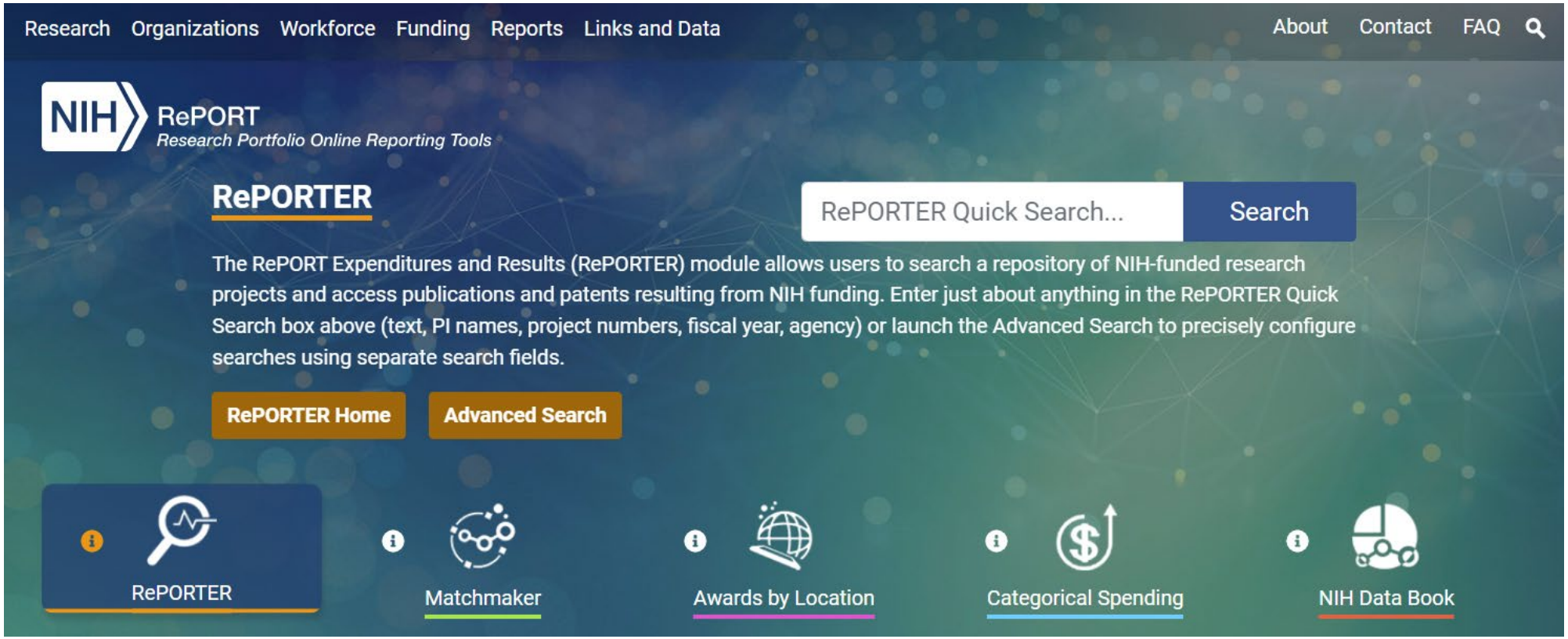
Proposed research area 7:

- How should NIH assess risk in its research portfolio? What is the right amount of risk for NIH to accept as a steward of public funds?
  a) Does the NIH funding system foster sufficient risk-taking to encourage researchers to explore high-risk research? If not, are there ways to test novel funding approaches that could be implemented at scale?

Open opportunity

- Anticipated deliverables
  - A report summarizing findings and potential measures that NIH could implement to strengthen its decision-making evidence base and suggested methods for collecting those measures
  - Presentation of findings to NIH decision-makers
- Planned use of results
  - NIH would consider the findings and methods described in the report for adoption within existing stewardship activities
  - Further develop data, methods, and approaches to increase the use of evidence in policymaking
- Funding
  - NIH does not have funds available to support any research projects arising from these efforts

Data sources: Research Portfolio Online Reporting Tools (RePORT)



National Institutes of Health
Turning Discovery Into Health

Next Steps

- Expressions of Interest:
  - Provide a statement, not to exceed 2 pages, by August 12, 2024, that includes:
    - Brief scope of work. Which of the questions would you work on and how would you approach the project?
    - If any, identify potential challenges/hurdles and what you would anticipate needing from NIH to overcome them.
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    - If there is any other information you would like NIH to consider, please share.
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Questions?

Project point of contact:

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