

NSF 24-036

Dear Colleague Letter: Assessing Societal and Economic Impacts of Place-Based Innovation

December 18, 2023

Dear Colleagues:

With this Dear Colleague Letter (DCL), the National Science Foundation's (NSF's) Directorate for Technology, Innovation and Partnerships (TIP) announces its intention to invest in EArly-concept Grants for Exploratory Research (EAGER) proposals that will advance the state of the art in assessing the societal and economic impacts of place-based innovation. The subsequent EAGER awards will advance research that addresses gaps in publicly available data and associated knowledge to adequately and appropriately benchmark activities in place-based innovation grounded in integrating research and development (R&D), translation, and workforce development (WFD), with emphases on how we leverage the full spectrum of diversity, equity, inclusion, and accessibility (DEIA) as well as leveraging of cross-sector partnerships. This DCL invites transdisciplinary teams to develop convergent and potentially transformative research proposals to address these gaps, and thereby increase the understanding of, and data surrounding, the elements of a regional innovation ecosystem and the various ways in which they interact and intersect with one another.

BACKGROUND

The NSF Regional Innovation Engines (NSF Engines) program was authorized in the CHIPS and Science Act of 2022 (Section 10388) to:

- 1. advance multidisciplinary, collaborative, use-inspired and translational research, technology development, in key technology focus areas;
- 2. address regional, national, societal, or geostrategic challenges;
- 3. leverage the expertise of multi-disciplinary and multi-sector partners, including partners from private industry, nonprofit organizations, and civil society organizations; and
- 4. support the development of scientific, innovation, entrepreneurial, and STEM educational capacity within the region of a given NSF Engine to grow and sustain regional innovation.

The NSF Engines program aims to fund regional coalitions of partnering organizations to catalyze technology and science-based regional innovation ecosystems. Each NSF Engine is focused on addressing specific aspects of a major national, societal and/or geostrategic challenge that are of significant interest in the NSF Engine's defined region of service. Each NSF Engine will carry out an integrated and comprehensive set of activities spanning use-inspired research, translation to practice, entrepreneurship, and WFD to nurture and accelerate regional industries. In addition, each NSF Engine is expected to embody a culture of innovation and have a demonstrated, intense, and meaningful focus on improving diversity throughout its regional science and technology ecosystem. The first-ever cohort of NSF Engines is expected to be announced in late 2023. Monitoring, assessing, and evaluating the progress individual NSF Engines make in R&D, translation, WFD, DEIA, and leveraging cross-sector partnerships will be critical to understanding the establishment and evolution of regional innovation ecosystems, including the specific gating factors that determine progression through the nascent, emergent, growth, and mature phases defined in the NSF Engines Broad Agency Announcement.

OPPORTUNITY

Given the limited publicly available data and knowledge to benchmark place-based innovation in general, particularly that which is grounded in the integration of R&D, translation, WFD, DEIA, and leveraging of cross-sector partnerships, NSF seeks to invest in new research that advances the state of the art. For instance, there is a gap in the understanding of, and data on, the amount of time projects spend in the R&D and translation phases, and the amount of time and investments needed to bring a product from conception to market availability. Similarly, there is a lack of understanding and data on whether and how different WFD approaches impact participants' short-, medium-, and long-term career trajectories and future earnings. An additional component of complexity is that data and benchmarks are likely to vary by geographical region as well as technology. NSF's investments through this DCL may therefore address the availability of data, benchmarks, and thresholds necessary for the assessment, monitoring, and evaluation of place-based innovation activities in R&D, translation, WFD, DEIA, and cross-sector partnerships with respect to the development of regional innovation ecosystems. This work will in turn directly inform the NSF Engines program and associated investments.

EAGER proposals require the submission of a Concept Outline that describes at a high level the research to be pursued, how it will address the challenge described above, and the expected outcomes if the research is successful. An EAGER proposal may only be submitted after consideration of the Concept Outline by an NSF Program Officer. A minimum of one PI and one co-PI must be associated with a Concept Outline. Participation of economists and/or social scientists is strongly encouraged. Concept Outlines are strictly limited in length to three pages plus a half-page justification of the estimated budget, for a total of three and one-half

pages, including references. The Concept Outline must describe the research idea with a clear explanation of why it is innovative, potentially transformative, or otherwise potentially impactful. Reasons why the concept is appropriate for EAGER funding must be provided in a separate paragraph, e.g., the proposed work involves radically different approaches, applies new expertise, and/or engages novel interdisciplinary perspectives; in short, the proposed work constitutes a high-risk, high-reward and transdisciplinary activity that is unsuitable for submission to existing NSF programs through the "regular" proposal submission process.

Concept Outlines for EAGER proposals responsive to this DCL must be received via email, to one of the cognizant program officers noted below, by 5 p.m. submitter's local time on February 12, 2024. The correspondence permitting submission of an EAGER proposal can be expected approximately four weeks after submission of the Concept Outline.

EAGER proposals must be submitted no later than **May 6, 2024**. Earlier submissions are encouraged, and decisions will be made on an ongoing basis. Proposers should select the current version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) as the funding opportunity and direct proposals to the Regional Innovation Engines Program in the Innovation and Technology Ecosystems (ITE) Division of the Directorate for Technology, Innovation and Partnerships. EAGER proposals submitted without prior submission of a corresponding Concept Outline and subsequent correspondence email will be returned without review. The email from an NSF Program Officer serves as documentation of approval for submission and must be uploaded by the prospective PI in the "Program Officer Concurrence Email" section of Research.gov. The Concept Outline and proposal titles must begin with "EAGER: PBI:". Complete guidance on preparing and submitting an EAGER proposal may be found in PAPPG Chapter II.F.3.

Separately submitted collaborative proposals from multiple organizations will not be accepted. A proposal involving more than one organization must be submitted as a single proposal from one organization, with the collaborators identified as subawardee organizations.

New collaborations with researchers at Federally Funded Research and Development Centers (FFRDCs), non-profits, and/or industry/for-profit institutions are welcomed. However, note that funding of FFRDC collaborators is not allowed as part of EAGER proposals responding to this DCL.

EAGER proposals will be internally reviewed. Proposals that fail to address concepts described in this DCL will be returned without review.

All correspondence, inquiries, and concept outlines in response to this DCL should be addressed to one of the following program officers:

Xueying "Shirley" Han, xhan@nsf.gov; or

• Rebecca Shearman, rshearma@nsf.gov.

Sincerely,

Erwin Gianchandani Assistant Director for TIP NSF