



NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 19-013

Dear Colleague Letter: Mid-Scale Research Infrastructure (Mid-scale RI) Opportunities

October 15, 2018

Dear Colleagues:

Mid-Scale Research Infrastructure (Mid-scale RI) is an NSF-wide *Big Idea* designed to address the research community's growing needs for contemporary research infrastructure to support the advancement of science and engineering research, as well as science, technology, engineering and mathematics education research. Mid-scale RI will fund the implementation of experimental research capabilities in the mid-scale range (i.e., with a total project cost of between \$6 million and \$70 million). The overall objective of Mid-scale RI is to transform scientific and engineering research fields by making available new capabilities, while simultaneously training researchers in the acquisition, implementation, development, design, and/or construction of cutting-edge infrastructure.

Mid-scale research infrastructure has been identified as critical for scientific advances in many research areas. In recognition of this scientific importance, the 2017 American Innovation and Competitiveness Act (AICA) directed NSF to "evaluate the existing and future needs, across all disciplines supported by the Foundation, for mid-scale projects" and to "develop a strategy to address the needs identified." NSF issued a Dear Colleague Letter (NSF 18-013¹) and received responses whose execution would require \$8 billion to \$10 billion in funding for projects in the \$20 million to \$100 million range.

This fall, NSF intends to announce Mid-scale RI funding opportunities. These will be for research infrastructure that will advance the frontiers of discovery in any of the research domains supported by NSF.² These forthcoming funding opportunities are intended to encompass research infrastructure broadly defined, from the creation of mid-scale disciplinary instrumentation to the implementation (including acquisition and construction) of mid-scale facilities, cyberinfrastructure and other infrastructure that are demonstrated to be necessary to support specific science, engineering or education research objectives associated with current or future NSF-supported research activities. This portfolio may also

include mid-scale upgrades to existing research infrastructure.

NSF anticipates that one solicitation will include an opportunity to propose Mid-scale RI projects with a total project cost of between approximately \$6 million and approximately \$20 million, pending the availability of funds. A second solicitation is expected to include an opportunity to propose Mid-scale RI projects with a total project cost of between approximately \$20 million and approximately \$70 million, pending the availability of funds.

Both Mid-scale RI programs will emphasize strong scientific merit, responsiveness to an identified need of the research community, technical readiness for implementation, sound management, and a well-developed plan for training students and involving a diverse workforce in mid-scale facility development and/or data management.

CONTACTS

Information regarding the Mid-scale RI funding opportunities will be available this fall via the NSF website. The funding opportunities will list NSF-wide and directorate-specific points of contact. In the meantime, general questions about this Dear Colleague Letter may be addressed to:

MSRI@nsf.gov

Sincerely,

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¹ [NSF 18-013, Dear Colleague Letter: Request for Information on Mid-scale Research Infrastructure](#).

² See the [NSF 18-1, Proposal and Award Policies and Procedures Guide](#) and subsequent revisions for a description of the fields of research supported by NSF.