

Funding Opportunity: NSF Releases Mid-Scale Research Infrastructure-1 Solicitation

Lewis-Burke Associates LLC – August 23, 2024

The National Science Foundation (NSF) has released the latest solicitation for its Mid-Scale Research Infrastructure-1 (Mid-scale RI-1) program. The program is in its fourth round, with its first three iterations released in 2018, 2020, and 2022. NSF defines Research Infrastructure (RI) as “any combination of facilities, equipment, instrumentation, computational hardware or software, and the necessary human capital in support of the same.” Through the solicitation, NSF plans to support instrumentation and infrastructure projects in two tracks: “Implementation” (e.g., acquisition and/or construction) or “Design”. The “Design” track is intended to facilitate progress toward readiness for a mid-scale range implementation project. Project proposals should involve the training of a diverse workforce engaged in STEM research infrastructure, well-conceived technical and management plans, and may also include upgrades to existing research infrastructure.

Mid-Scale RI-1 projects should fulfill research community-defined needs such as those identified in National Academies [reports](#) and decadal surveys, through research community planning and prioritizing exercises, or in other national priorities. NSF is especially interested in infrastructure projects that provide more advanced research capabilities relative to what is generally available to the U.S. research community. Mid-Scale RI-1 is the smaller component of NSF’s Mid-Scale Research Infrastructure program and will support projects with total costs from \$4 million up to, but not including, \$20 million for implementation projects and \$400,000 up to, but not including, \$20 million for design activities meant to inform a future Mid-Scale RI-1 or larger Mid-Scale RI-2 proposal.

The Mid-scale RI-1 Program seeks to broaden the representation of PIs and institutions in its award portfolio, including a geographically diverse set of institutions (especially those in EPSCoR jurisdictions) and PIs who are women, early-career researchers, persons with disabilities, or members of other groups underrepresented in STEM. This solicitation for Mid-scale RI-1 is very similar to previous solicitations, but additionally encourages PIs to incorporate accessibility as part of any Mid-scale RI-1 design activity or implementation project.

Please find a summary of prior awardees below.

Due Dates: Preliminary proposals are due on **November 18, 2024**. Full proposals are due **March 19, 2025** by **5:00 PM** at the submitting organization's local time.

Award Information: NSF expects to make five to ten awards totaling \$100 million, with \$50 million in each fiscal year, subject to appropriations.

Eligibility: Proposals may be submitted by institutions of higher education and non-profit organizations located in the United States, as well as consortia of such eligible institutions and organizations. For-profit commercial organizations are not eligible to submit a proposal but can receive support as private sector partners alongside submitting organizations. While there are no limits on who may serve as a PI and the number of proposals per organization, individuals may only serve as a PI or co-PI for no more than one proposal.

Sources and Additional Information:

- The Mid-scale RI-1 program page is available at <https://new.nsf.gov/funding/opportunities/mid-scale-research-infrastructure-1-mid-scale-ri-1>.
- The complete solicitation is available at https://nsf.gov-resources.nsf.gov/files/nsf24598.pdf?VersionId=cf9KVQl.bkOY4c2CVQkuamsJugRCZ_o.
- A list of previous Mid-Scale RI-1 awards is available below and at <https://www.nsf.gov/awardsearch/advancedSearchResult?ProgEleCode=108Y00&BooleanElement=Any&BooleanRef=Any&ActiveAwards=true#results>.

Title	Project Track	NSF Directorate/ Division	Lead Organization	State	Amount Awarded	Start Date
National Quantum Nanofab	Implementation	ENG/ECCS	University of Colorado at Boulder	CO	\$19,998,055	07/01/2024
X-rays for Life Sciences, Environmental Sciences, Agriculture, and Plant sciences (XLEAP)	Implementation	BIO/DBI	Cornell University	NY	\$19,999,301	04/01/2024
National Testing Facility for Enhancing Wind Resiliency of Infrastructure in Tornado-Downburst-Gust Front Events (NEWRITE)	Design	ENG/CMMI	Iowa State University	IA	\$14,025,452	10/01/2023
Creating an Offshore Subduction Zone Observatory in Cascadia with the Ocean Observatories Initiative Regional Cabled Array	Implementation	GEO/OCE	University of Washington	WA	\$10,652,162	10/01/2023
SPHERE - Security and Privacy Heterogeneous Environment for Reproducible Experimentation	Implementation	CISE/CNS	University of Southern California	CA	\$15,214,829	10/01/2023

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OMEGA-EP-Pumped Optical Parametric Amplifier Line (EP-OPAL) Facility Design	Design	MPS/PHY	University of Rochester	NY	\$17,976,642	10/01/2023
National Full-Scale Testing Infrastructure for Community Hardening in Extreme Wind, Surge, and Wave Events (NICHE)	Design	ENG/CMMI	Florida International University	FL	\$12,835,821	02/01/2022
A Deep Soil Ecotron facility to explore below ground communities and ecosystem processes	Implementation	BIO/DBI	University of Idaho	ID	\$18,950,955	10/15/2021
Preliminary & Final Design of the 40T All Superconducting Magnet	Design	MPS/DMR	Florida State University	FL	\$15,822,376	10/01/2021
Designing a global measurement infrastructure to improve Internet security	Design	CISE/OAC	University of California – San Diego	CA	\$7,917,527	10/01/2021
EduceLab: Infrastructure for Next-Generation Heritage Science	Implementation	CISE/IIS	University of Kentucky Research Foundation	KY	\$13,595,474	10/01/2021
Implementation of a National Silicon Carbide Research Fabrication Facility	Implementation	ENG/ECCS	University of Arkansas	AR	\$19,694,373	10/01/2021
Next Generation Radar Designs	Design	MPS/AST	Associated Universities, Inc.	VA	\$4,763,357	10/01/2021
Atmospheric Science and Chemistry Measurement Network (ASCENT)	Implementation	GEO/AGS	Georgia Tech Research Corporation	GA	\$12,136,232	10/01/2021
Observatory for Online Human and Platform Behavior	Implementation	SBE/SES	Northeastern University	MA	\$16,217,700	10/01/2021

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Facility for Open Research in a Compressed Environment (FORCE)	Implementation	GEO/EAR	Arizona State University	AZ	\$13,711,265	10/01/2021
Zettawatt-Equivalent Ultrashort Pulse Laser System (ZEUS)	Implementation	MPS/PHY	University of Michigan - Ann Arbor	MI	\$16,699,886	10/01/2019
FABRIC: Adaptive Programmable Research Infrastructure for Computer Science and Science Applications	Implementation	CISE/CNS	University of North Carolina at Chapel Hill	NC	\$21,793,177	10/01/2019
The Next Generation Wyoming King Air Atmospheric Research Aircraft	Implementation	GEO/AGS	University of Wyoming	WY	\$15,810,587	10/01/2019
1.2 GHz NMR Spectrometer for National Gateway Ultrahigh Field NMR Center	Implementation	BIO/DBI	Ohio State University	OH	\$17,577,202	10/01/2019
NSF National EXtreme Ultrafast Science (NEXUS) Facility	Implementation	MPS/CHE	Ohio State University	OH	\$10,484,658	10/01/2019
Compact X-ray Free-Electron Laser Project (CXFEL)	Design	BIO/DBI	Arizona State University	AZ	\$4,765,713	10/01/2019
Next Generation Event Horizon Telescope Design	Design	MPS/AST	Smithsonian Institution Astrophysical Observatory	MA	\$14,625,302	10/01/2019
A world-class Neutron Spin Echo Spectrometer for the Nation: UD-NIST-UMD Consortium	Implementation	MPS/DMR	University of Delaware	DE	\$11,802,857	10/01/2019