



The U.S. National Science Foundation Established Program to Stimulate Competitive Research (EPSCoR) has announced two new programs: the **EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement (E-CORE RII)** and the **EPSCoR Research Incubators for STEM Excellence Research Infrastructure Improvement (E-RISE RII)**.

The two programs were established in response to the 2022 EPSCoR report, *Envisioning the Future of NSF EPSCoR*, and the CHIPS and Science Act of 2022. The funding will enhance jurisdictions' research and development competitiveness, support partnerships across academic institutions and non-academic sectors, create workforce development opportunities, and promote scientific progress nationwide. The inaugural E-CORE RII and E-RISE RII awards were made in 2024.

E-CORE RII & E-RISE RII Awardee and Partner Institution Overview

45

Funded Institutions

30

Emerging Research
Institutions

23

Primarily Undergraduate
Institutions

9

Non-Academic
Institutions

11

Minority-Serving
Institutions

4

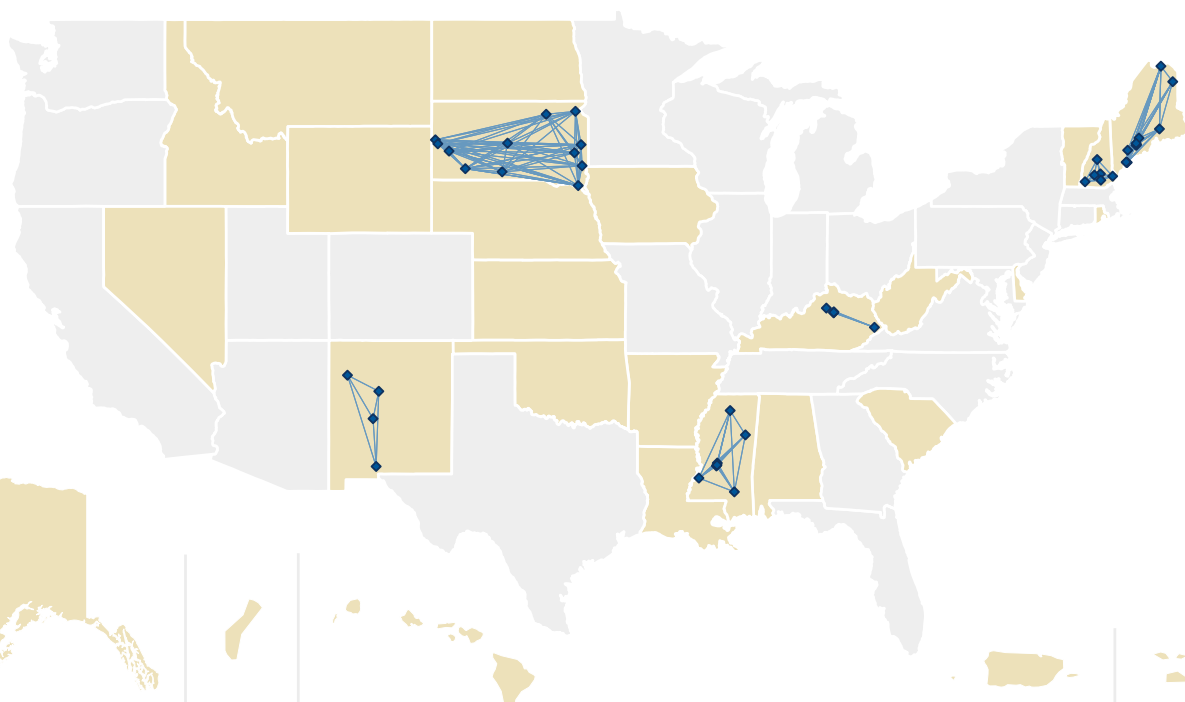
Tribal Colleges &
Universities

4

Historically Black
Colleges & Universities

3

Hispanic-Serving
Institutions





EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement

E-CORE RII aims to further EPSCoR's programmatic goals by building capacity in one or more targeted research infrastructure cores within an EPSCoR-eligible jurisdiction's research ecosystem.

Over the next four years, the teams—comprised of diverse academic institutions and government, industry and nonprofit partners—will leverage their partnerships to meet core research infrastructure needs to develop self-sustaining research ecosystems and create pathways to science, technology, engineering and mathematics, and spur economic growth and societal impact.

E-CORE RII awards provide up to \$8 million in funding over four years, with the possibility of renewal for an additional four years.

For additional information about the E-CORE RII program, visit:

<https://new.nsf.gov/funding/opportunities/epscor-collaborations-optimizing-research>

"By boosting their state's R&D capabilities, these teams are poised to drive use-inspired research and transform STEM education and workforce development within their regions. This investment from NSF's E-CORE RII program underscores our commitment to advancing research and building robust research infrastructure hubs, fostering innovation ecosystems and creating pathways for economic growth and societal impact."

– NSF Director Sethuraman Panchanathan

EPSCoR Research Incubators for STEM Excellence Research Infrastructure Improvement

E-RISE RII aims to further EPSCoR's programmatic goals by developing and implementing sustainable networks of diverse research teams to collaborate on critical jurisdictional research priorities.

The networks will leverage their partnerships by developing innovative educational plans that address their jurisdictional priorities and help prepare a skilled technical workforce. They will broaden participation in science, technology, engineering and mathematics by requiring the inclusion of members of traditionally underrepresented groups. The teams aim to make sustainable improvements in science for the betterment and economic impact of their jurisdictions' research and development enterprise.

E-RISE RII awards provide up to \$7 million in funding over four years, with the possibility of renewal for an additional \$4.5 million over three additional years.

For additional information about the E-RISE RII program, visit:

<https://new.nsf.gov/funding/opportunities/epscor-research-incubators-stem-excellence>

"This investment from NSF's E-RISE RII program powers scientific progress through broad networks of researchers, institutions and organizations that will significantly enhance STEM research capacity in our EPSCoR jurisdictions. We are investing in a future where EPSCoR jurisdictions are even more competitive in the scientific enterprise, both nationally and internationally."

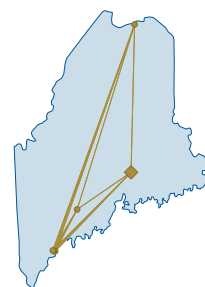
– NSF Director Sethuraman Panchanathan



E-CORE RII Project Summaries

- **Strengthening Maine's Research Ecosystem and Pathways Through Strategic Capacity Building (Maine-SMART)**

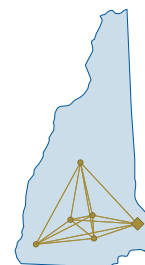
Led by the University of Maine, the Maine-SMART project will take a comprehensive approach to addressing both scientific and cultural needs within the state. By leveraging partnerships with diverse institutions and organizations, the project has the potential to foster systemic changes in collaboration, education and workforce development, aligning closely with Maine's science and technology plan. The project integrates Indigenous science and sociocultural learning theory into research and educational practices, thus offering innovative solutions to complex problems while promoting inclusivity and belonging among tribal members in STEM.



Collaborating institutions: The Gulf of Maine Research Institute, the Maine Mathematics and Science Alliance, the University of Southern Maine, the Maine Community College System, and the University of Maine at Fort Kent. NSF Award IDs: 2412130, 2412131, 2412132, 2412133, 2412135.

- **New Hampshire Long-term Investment to Fuel Transformative research (NH-LIFT)**

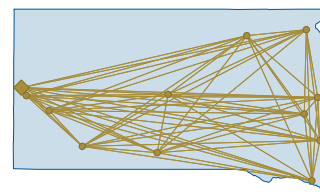
The NH-LIFT project, spearheaded by the University of New Hampshire, aims to develop a network that includes representatives from all 17 colleges and universities in the state and work with the NSF Small Business Innovation Research/Small Business Technology Transfer program to develop relationships between academia and businesses. The goals of NH-LIFT are to procure new research opportunities at partner institutions; develop and strengthen educational and research collaborations with regional industry partners; share institutional best practices to recruit, empower and retain a broad and diverse group of students in STEM fields; and build a cohort of project alumni that will support near-peer mentoring and recruitment.



Collaborating institutions: Keene State College, Dartmouth College, Plymouth State University, New England College, Saint Anselm College, and the Community College System of New Hampshire. NSF Award ID: 2412054.

- **South Dakota Research Ecosystem Network: STEM Education, Community Engagement, and Broadening Participation**

Led by Black Hills State University, this project will meet the challenge of creating pathways for young learners to develop interest and confidence in STEM and become motivated to work in STEM fields across the largely rural jurisdiction of South Dakota. The project aims to engage STEM researchers and K-12 teachers and students to create a pipeline of the next generation of the South Dakota STEM workforce that could become a national model for connecting individuals that are geographically isolated to STEM education at the pre-college level.



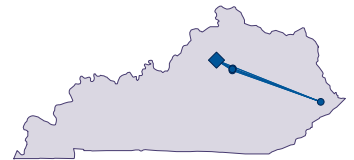
Collaborating institutions: Oglala Lakota College, the University of South Dakota, the South Dakota School of Mines and Technology, Dakota State University, South Dakota State University, the Augustana University Association, Northern State University, Sinte Gleska University, Sisseton Wahpeton College, the Sanford Underground Research Facility/South Dakota Science and Technology Authority, and the South Dakota Discovery Center. NSF Award IDs: 2412055, 2412056, 2412057, 2412058, 2412059, 2412060, 2412061, 2412062.



E-RISE RII Project Summaries

- **Kentucky — Driving AgTech Research and Education in Kentucky (DARE-KY) through Inclusive Network Building, Impactful Research, and Workforce Development for Soilless Food Systems**

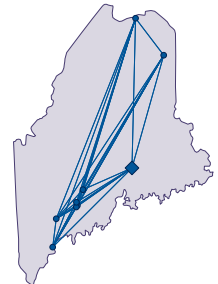
Led by Kentucky State University, this project will establish an unprecedented, cross-sector research incubator to improve nutrient management, food safety, and sustainability of soilless agriculture in Kentucky, which will lead more diverse and inclusive STEM research and several approaches to understand how nutrient flow through aquaponic systems influences microbial communities and its potential impact on biofilm formation and food safety. The project will enhance workforce development in Kentucky by creating new curricula, integrating research into student learning and developing new work-and-learn opportunities.



Collaborating institutions: Bluegrass Community and Technical College, University of Pikeville, Kentucky Science and Technology Corporation, and FoodChain Inc. NSF Award ID: 2416939.

- **Maine — Enhancing Maine Forest Economy, Sustainability, and Technology (Maine-FOREST) Ecosystem to Accelerate Innovation**

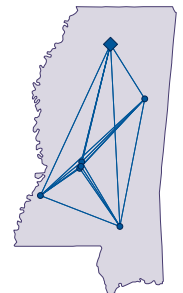
Led by the University of Maine, this project will build strategic R&D capacity to fuel the dramatic growth of Maine's forest-based economy and the rural communities it supports. The project will employ innovative and inclusive approaches to participatory system dynamics modeling to leverage stakeholder networks, while yielding new information regarding convergent science. The project's framework will nurture adaptive community resilience and strengthen the capacity of rural and Indigenous communities to respond to current and future socio-ecological threats and opportunities.



Collaborating institutions: Bates College, Colby College, University of Maine Fort Kent, University of Maine at Presque Isle, University of Southern Maine, Maine Development Foundation, and Maine Mathematics and Science Alliance. NSF Award IDs: 2416915, 2416916, 2416917, 2416918, 2416919, 2416920, 2416921, 2416922.

- **Mississippi — Establishment of the Mississippi Nano-bio and ImmunoEngineering Consortium (NIEC)**

This project, spearheaded by the University of Mississippi, will build capacity in Mississippi for use-inspired R&D of advanced polymer materials and for addressing the scientific, engineering and educational training needs of the nano- and biotechnology industries at a time when these industries are experiencing unprecedented growth. The project proposes to create a robust pipeline for next-generation materials by fostering multidisciplinary research teams to iteratively design, synthesize and characterize new materials, while evaluating their impact on delivery efficacy in relevant disease models. In addition to advancing scientific knowledge in biomaterials research—with a focus on pioneering innovations applicable to healthcare, bioengineering and materials science—this project will establish a comprehensive biomaterials research network across Mississippi.



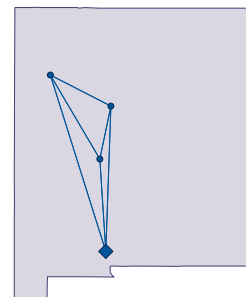
Collaborating institutions: Mississippi State University, Jackson State University, Tougaloo College, Alcorn State University, University of Southern Mississippi, and University of Mississippi Medical Center. NSF Award IDs: 2414442, 2414443, 2414444, 2414445, 2414446, 2414447, 2414448.



E-RISE RII Project Summaries (continued)

- **New Mexico — Research Center for Distributed Resilient and Emergent-Intelligence-Based Additive Manufacturing (DREAM)**

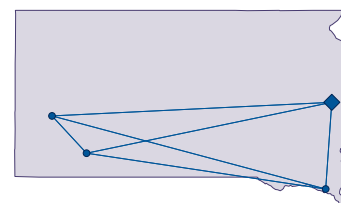
This project, led by New Mexico State University, will enhance New Mexico's competitive edge in the global manufacturing sector by establishing the groundwork for an advanced distributed intelligent additive manufacturing infrastructure. The project will contribute to fundamental knowledge in advance manufacturing, cybersecurity and machine learning while spurring economic growth in New Mexico and contributing to national efforts to onshore manufacturing. The project will provide an integrated pathway for workforce development in additive manufacturing from middle school to doctoral and postdoctoral levels by intertwining classroom activities with research experience and pedagogical models that promote diversity, inclusion and belonging.



Collaborating institutions: Navajo Technical University, University of New Mexico, and New Mexico Institute of Mining and Technology. NSF Award ID: 2417062.

- **South Dakota — BioNitrogen Economy Research Center (BNERC)**

South Dakota State University is leading this project to build sustainable capacity to leverage abundant atmospheric nitrogen gas and solar energy to create a commercially viable, solar-powered "bionitrogen economy" in South Dakota, relying in part on the knowledge and resources of Native communities about agricultural and medicinal indigenous plants. While alleviating environmental issues of nitrogen pollution in a largely agricultural state, the project will also provide alternatives for the commercial production of nitrogen- and carbon-rich biological products, including fertilizers, nutritional proteins and bioplastics. The project will promote workforce development by integrating K-12 outreach, undergraduate and graduate research programs and partnering with tribal communities.



Collaborating institutions and organizations: Oglala Lakota College, South Dakota School of Mines and Technology, University of South Dakota, and Houdek. NSF Award IDs: 2416911, 2416912.

For additional information, including information about other funding opportunities through NSF EPSCoR, visit www.nsf.gov/epscor.