South Dakota E-CORE

Project Overview

November 2, 2026

SOUTH DAKOTA
NSF EPSCoR
ADVANCING GEOGRAPHIC DIVERSITY IN STEM

NSF-EPSCoR: Mission & Goals

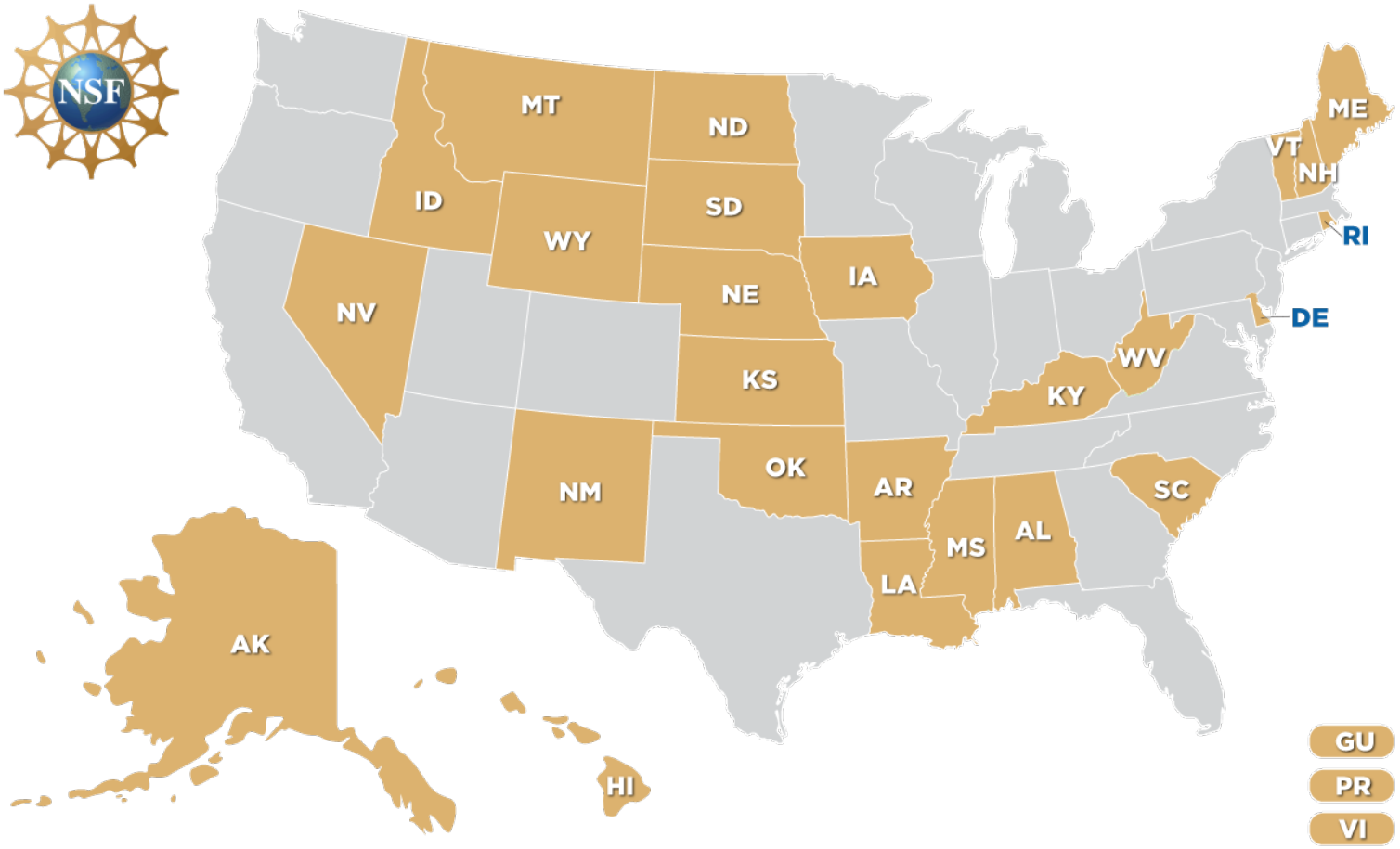
Mission

To enhance the research competitiveness of targeted jurisdictions (states, territories, and commonwealths) by strengthening STEM capacity and capability through a diverse portfolio of investments from talent development to local infrastructure.

Five Programmatic Goals of NSF EPSCoR	
A.	Catalyze the development of research capabilities and the creation of new knowledge that expands jurisdictions' contributions to scientific discovery, innovation, learning, and knowledge-based prosperity
B.	Establish sustainable STEM education, training, and professional development pathways that advance jurisdiction-identified research areas and workforce development
C.	Broaden direct participation of diverse individuals, institutions, and organizations in the project's science and engineering research and education initiatives
D.	Effect sustainable engagement of project participants and partners, the jurisdiction, the national research community, and the general public through data-sharing, communication, outreach, and dissemination
E.	Impact research, education, and economic development beyond the project at academic, government, and private sector levels

National Science Foundation – EPSCoR

- Established Program to Stimulate Competitive Research



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NSF-EPSCoR Programs

E-CORE

- "Collaborations for Optimizing Research Ecosystems"
- Award Size: $8 million for 4 years; renewable for another $8 million over additional 4 years.
- Statewide & highly collaborative
- Focus on STEM Education, Workforce Development, and/or otherwise strengthening the state's Research Infrastructure
- Initial Cohort: 3 states were awarded in 2024 (SD, NH, ME)

E-RISE

- "Research Incubators for STEM Excellence"
- Award Size: $7 million for 4 years, renewable for another $4.5 million for 3 years
- 1st Cohort includes a grant led by SDSU focusing on BioNitrogen & sustainable agriculture
- 2nd Cohort includes a grant led by USD focusing on growing Germanium crystals for detecting dark matter and for medical applications

South Dakota Research Ecosystem Network: Advancing STEM Education
- or -
"South Dakota E-CORE"

Award Period: May 2024 – September 2028

Mission

To build capacity and sustainable structures, systems, programs, and partnerships that foster high-quality STEM education in support of a vibrant research ecosystem across South Dakota.

Vision

This project envisions a South Dakota in which every student:

- experiences consistently rigorous, relevant, and engaging science, technology, engineering, and mathematics (STEM) instruction – across our geographically rural and culturally diverse state;
- graduates from high school well equipped to pursue STEM disciplines at the post-secondary level;
- recognizes the value of STEM to society; and
- knows that he or she could ultimately contribute within our STEM workforce.

South Dakota

900,000 residents

< 12 people/sq mile

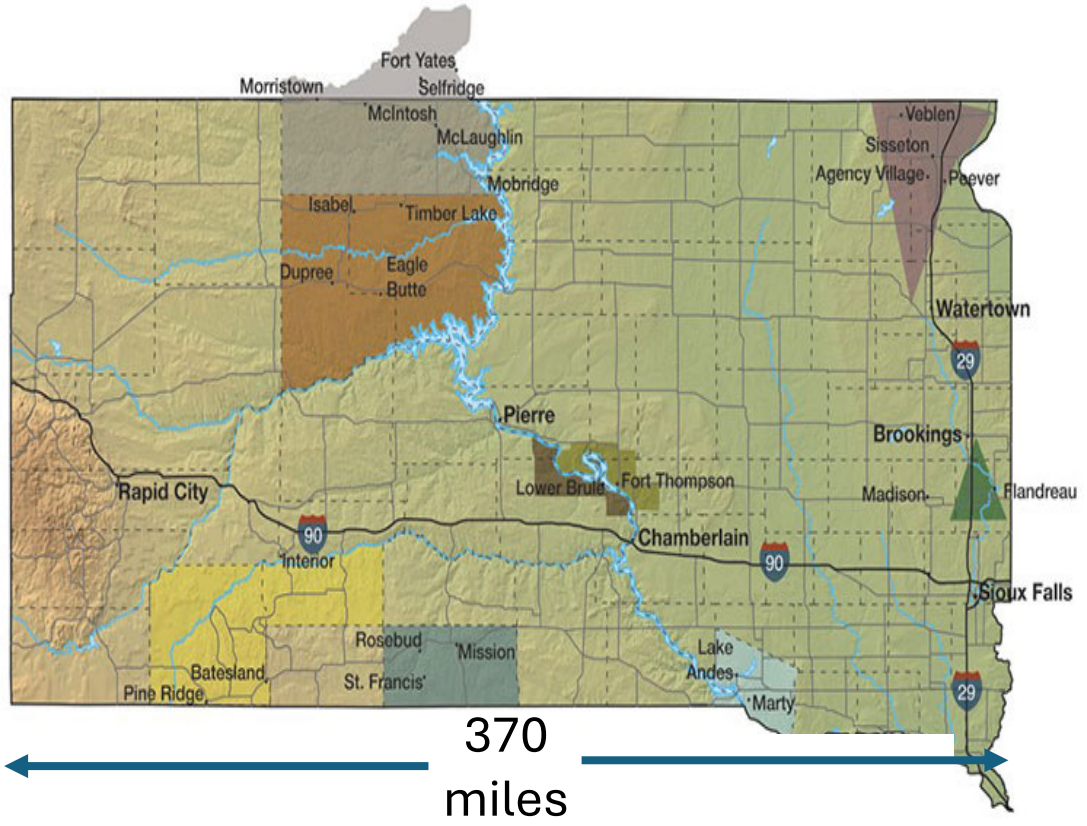
9 reservations

150,000 K-12 students

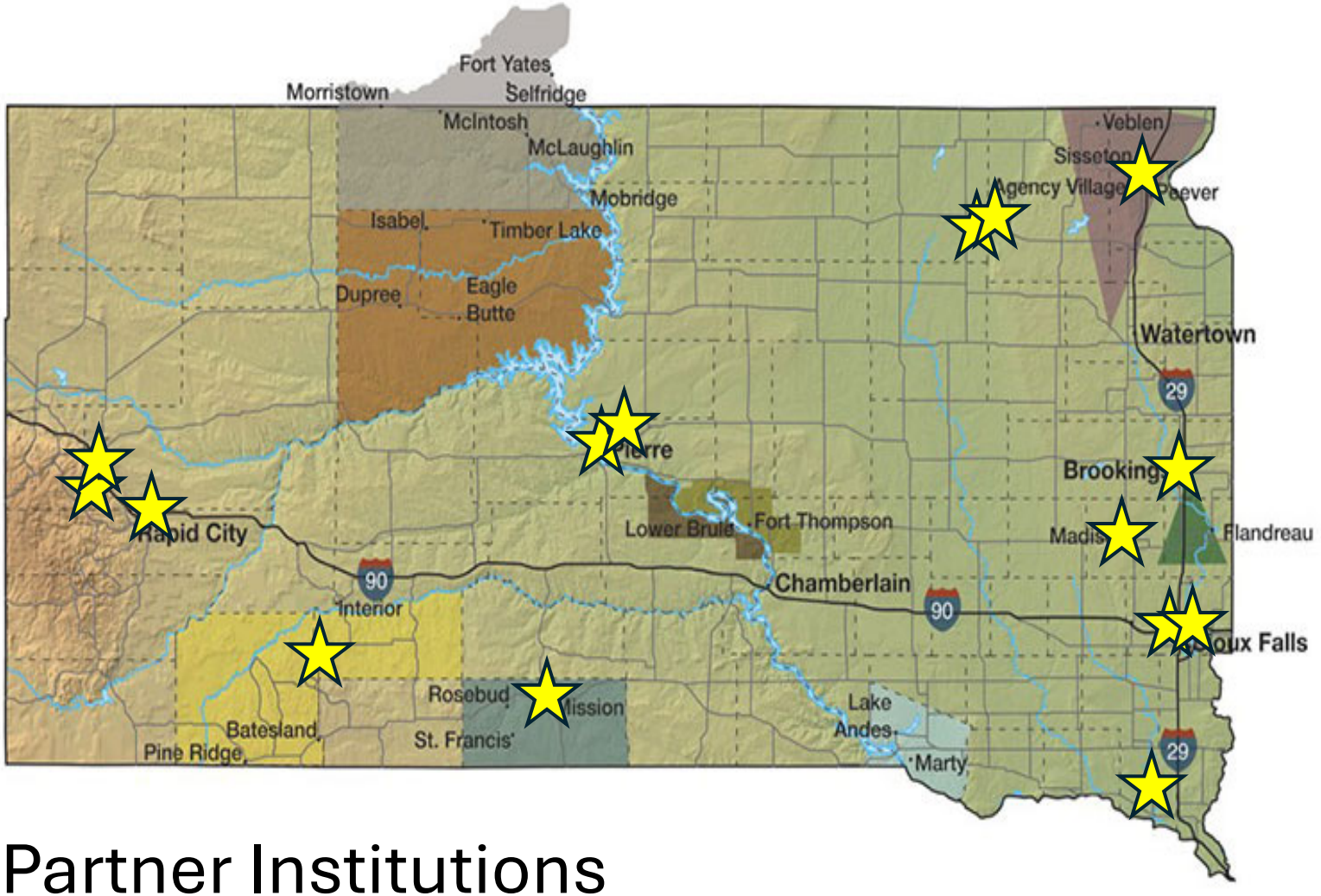
81% White

16% Native American

6,500 K-12 teachers of STEM



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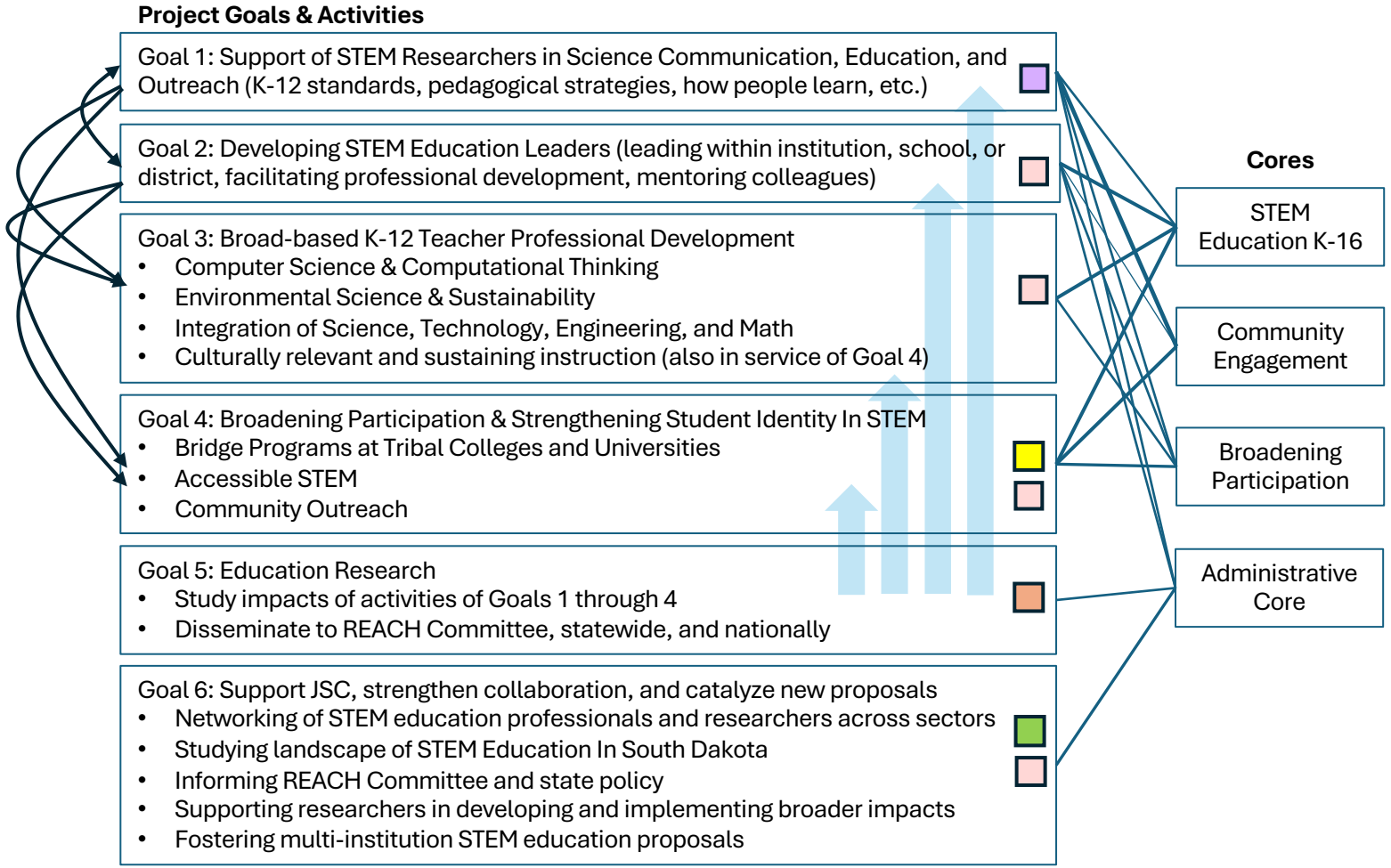


Partner Institutions

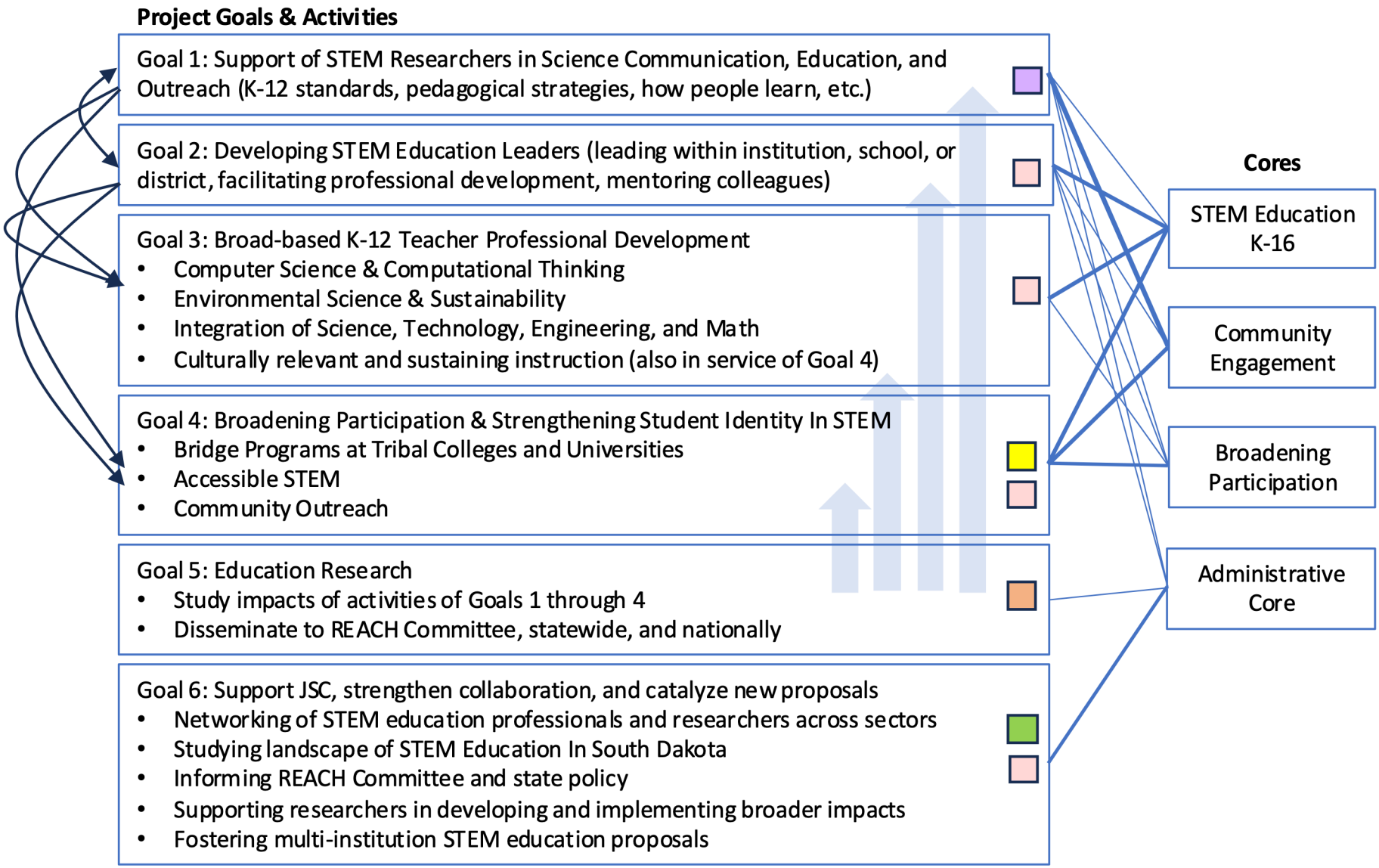
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Goals & Related Activities

1. Support of STEM researchers in science communication, education, and outreach
2. STEM Education Leadership (K-12 and post-secondary)
3. Broad-based K-12 teacher professional development
4. Broadening participation and strengthening student identity in STEM
5. Education research
6. Strengthening collaboration across the state
   - Connecting STEM educators and researchers
   - Understanding STEM education landscape
   - Catalyzing new proposals
   - Seed grants (current solicitation)



Five Programmatic Goals of NSF EPSCoR
• Catalyze the development of research capabilities and the creation of new knowledge that expands jurisdictions' contributions to scientific discovery, innovation, learning, and knowledge-based prosperity
• Establish sustainable STEM education, training, and professional development pathways that advance jurisdiction-identified research areas and workforce development
• Broaden direct participation of diverse individuals, institutions, and organizations in the project's science and engineering research and education initiatives
• Effect sustainable engagement of project participants and partners, the jurisdiction, the national research community, and the general public through data-sharing, communication, outreach, and dissemination
• Impact research, education, and economic development beyond the project at academic, government, and private sector levels.


Project Goals & Activities
Goal 1: Support of STEM Researchers in Science Communication, Education, and Outreach (K-12 standards, pedagogical strategies, how people learn, etc.)
Goal 2: Developing STEM Education Leaders (leading within institution, school, or district, facilitating professional development, mentoring colleagues)
Goal 3: Broad-based K-12 Teacher Professional Development
• Computer Science & Computational Thinking
• Environmental Science & Sustainability
• Integration of Science, Technology, Engineering, and Math
• Culturally relevant and sustaining instruction (also in service of Goal 4)
Goal 4: Broadening Participation & Strengthening Student Identity In STEM
• Bridge Programs at Tribal Colleges and Universities
• Accessible STEM
• Community Outreach
Goal 5: Education Research
• Study impacts of activities of Goals 1 through 4
• Disseminate to REACH Committee, statewide, and nationally
Goal 6: Support JSC, strengthen collaboration, and catalyze new proposals
• Networking of STEM education professionals and researchers across sectors
• Studying landscape of STEM Education In South Dakota
• Informing REACH Committee and state policy
• Supporting researchers in developing and implementing broader impacts
• Fostering multi-institution STEM education proposals
Cores
STEM Education K-16
Community Engagement
Broadening Participation
Administrative Core

Looking Forward

- Current award is anticipated to continue for 2 more years, through September 2028
- Renewal Proposal is due in January 2027
- Third cohort of STEM Leadership program to begin in July 2027
- Continued and new professional development opportunities for STEM faculty and researchers planned for summer 2027 and beyond
- Considering re-establishment of a statewide Summer STEM Research & Education Conference

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