



The Role of EPSCoR Within NASA Education

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NASA Education

NASA Education Vision Statement

To advance high quality Science, Technology, Engineering, and Mathematics (STEM) education using NASA's unique capabilities



Experimental Program to Stimulate Competitive Research (EPSCoR)



The goal of EPSCoR is to:

Provide seed funding that will enable jurisdictions to develop an academic research enterprise directed toward long-term, self-sustaining, nationally-competitive capabilities in aerospace and aerospace-related research.

NASA EPSCoR objectives are to:

- Contribute to and promote **the development of research infrastructure** in NASA EPSCoR jurisdictions in areas of strategic importance to the NASA mission
- Improve the capabilities of the jurisdictions to gain support from sources outside the NASA EPSCoR program
- Develop partnerships between NASA research assets, academic institutions, and industryContribute to the overall research infrastructure, science and technology capabilities, higher education, and/or economic development of the jurisdiction
- Work in close coordination with Space Grant to improve the environment for science, technology, engineering and mathematics education in the jurisdiction

The two main components of EPSCoR are:

EPSCoR Research Infrastructure Development, or RID. This component enables jurisdictions to build and strengthen relationships with NASA researchers. The RID has a three-year base period of performance with a potential single, two-year renewable period of performance. Awards are \$125,000 per year. NASA intends to announce the RID opportunity every three to five years, pending funding availability.

EPSCoR Research Awards solicits topic-specific proposals addressing high-priority NASA research and technology development needs. Awards are up to \$750,000 for a three-year performance period. NASA intends to announce the EPSCoR CAN for Research Awards yearly, pending funding availability.

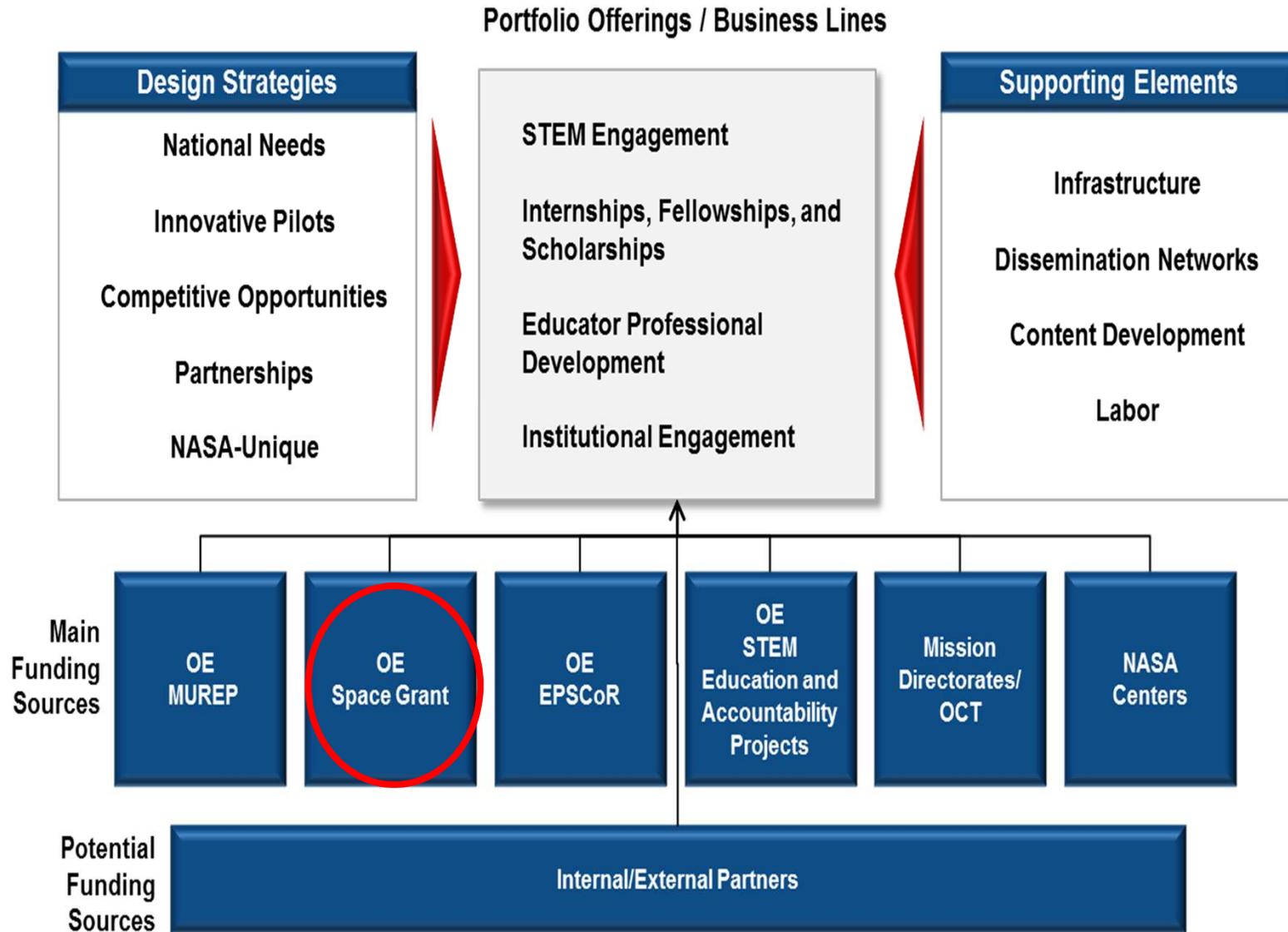


Partnerships

- Partnerships are utilized to ensure broad reach and distribution of NASA content to audiences.



NASA Education Portfolio Architecture





What is the Institutional Engagement (IE) Line of Business?



- Purpose of Institutional Engagement:
 - To support efforts that build and develop **capacity** for sustained STEM capabilities in topical areas of interest to NASA.
- Applies to:
 - Higher education institutions;
 - Informal education institutions with a STEM focus, such as planetariums or visitor centers;
 - National organizations dedicated to improving/enhancing STEM education.



Key IE Characteristics

- Results in *systemic change* to achieve a lasting capacity.
- *Long-term* relationship / collaboration between institution and NASA.
- *Multidimensional* in scope (e.g., exhibit development with associated curriculum and professional training).
- *Differentiation* between institution and organization.



Characterization of Institutions and Organizations Included in the IE LOB



	Institutions	Organizations
Location	Physical (brick & mortar)	Virtual
Scope	Local or regional	National
Types	Universities, community colleges, museums, planetariums, NASA visitor centers	Educational societies, associations, non-profits, and boards with a commitment to STEM
Educational reach	Higher education; informal education	K-12 education; higher education; informal education
Capacity focus	To achieve long-term systemic change at a particular institution	To achieve long-term systemic change in STEM education
Capacity examples	<i>Higher ed:</i> Research, curriculum, advanced instruction <i>Informal ed:</i> Exhibits, infrastructure, personnel	<i>Enabling capabilities:</i> common standards, curriculum sequences & certifications, authentic STEM practices & mentoring
Alignment	Direct, through NASA technology & mission-focused opportunities	Facilitated, through NASA STEM education policy positions and workforce needs
NASA support	Funded & unfunded	Funded & unfunded
Engagement mechanism	Grant, cooperative agreement	Space Act Agreement (SAA), Memorandum of Understanding (MOU), letter agreement, Intergovernmental Personnel Act (IPA)



Institutional Engagement Goals

- **Goal 1—Capacity:** Support interactions between NASA Centers and educational institutions and organizations to
 - Enhance their competitiveness to perform STEM research and development,
 - Enable their ability to deliver and participate in NASA-based activities, and
 - Expand their advocacy for effective change in STEM education.
- **Goal 2—Content:** Increase the STEM capacity of institutions and organizations to contribute to the NASA mission through research, curriculum development and instruction, delivery of content, and/or enabling capabilities.
- **Goal 3—Diversity:** Promote diversity representation of institutions and organizations affiliated with NASA whether through Institutional Engagement funding or other means of collaboration.
- **Goal 4—Sustainability:** Improve the ability of NASA-supported institutions and organizations to leverage beyond NASA funding to sustain their developed capacity in STEM personnel, programs, and infrastructure.
- **Goal 5—Network/ Community:** Facilitate a process where like-minded educational institutions and organizations can utilize the NASA networks of grantees, collaborators, and alliances with the intent of building a community of practice to help sustain their STEM capacity .



NIFS Measurable Goals and Objectives



- i. Provide significant merit-based direct awards to qualified students in higher education to: (1) racially or, ethnically underrepresented students (in STEM), (2) females, (3) persons with disabilities and (4) veterans at percentages that meet or exceed the national enrollment percentages for these populations by academic disciplines, as determined by the most recent, publicly available data from the U.S. Department of Education's National Center for Education Statistics.
- ii. Improve retention rates of students in NASA-relevant disciplines by (a) increasing persistence in degree pursuit through scholarship & academic mentoring support (b) increasing competencies through degree-relevant experience in applying classroom knowledge and skills, and (c) increasing motivation through building professional self-confidence and clarifying career opportunities.
- iii. Generate useful, degree-relevant productivity furthering NASA's mission and directly benefiting mentors.
- iv. Leverage participant experiences and enthusiasm to raise public awareness of NASA activities, inform educators and students of ways they can connect with NASA, and inspire younger students to consider science and mathematics pursuits.



EPSCoR's Future Home

- EPSCoR Will Not Be Moved to the Office of the Chief Technologist (OCT) but Will Remain In the Office of Education



EPSCoR Solicitations

- RID – The NSSC is completing the award process
- Research Awards – Selection Briefing with AA scheduled to occur during the next few weeks
- New Research Award Solicitation – To be released January 2013



Data Collection



- OEPM is the Office of Education's primary tool for data collection
- Data collection will begin Dec 12/Jan 13
- Training will be offered December 2012
- The help desk information is contained on the OEPM home page and also in the banner. If you have user questions (functionality/technical issues) please contact the help desk at
 - Phone: 1.866.419.6297
 - Email: MSFC-DL-HelpdeskMSFC@mail.nasa.gov