NASA SBIR/STTR Overview

Jason Derleth/Damian Taylor , Mission Directorate Representative/Mission Directorate Liaison | 06.12.2019

NASA SBIR / STTR Programs Vision and Mission

VISION

Empower small businesses to deliver technological innovation that contributes to NASA's missions, provides societal benefit, and grows the US economy.

MISSION

Create opportunities through SBIR/STTR awards to leverage small business knowledge and technology development for maximum impact and contribution

NASA's SBIR and STTR programs have awarded **more than $3.75 billion** to research-intensive American small businesses.

Engineers and scientists from more than 3,100 Firms in all 50 States, DC, and Puerto Rico have participated across the two programs.

Approximately 15,000 total awards have been made to-date.

Program Goals and Objectives

Goal 1: Synthesize and communicate the Agency's interests that small businesses could best impact.	• Objective 1.1: Enable NASA to appropriately use SBIR/STTR to address specific NASA technology needs and problems, and also • Objective 1.2: Solicit and support strategic research and development related to broader NASA interests that considers commercial synergies and national needs.
Goal 2: Engage a diverse portfolio of small businesses and entrepreneurs.	• Objective 2.1: Continue enabling research and development from reliable SBIR/STTR partners, *and also* • Objective 2.2: Actively encourage research and development from first time applicants and awardees, and participation by underrepresented communities, programs and geographies.
Goal 3: Create opportunities for SBIR/STTR technology transition and commercialization.	• Objective 3.1: Encourage the transition of SBIR/STTR technologies into NASA's aeronautics, space and science programs, *and also* • Objective 3.2: Encourage commercialization to non-NASA markets of innovations derived from NASA SBIR/STTR funding, including in the aeronautics and commercial space sector.
Goal 4: Streamline internal processes and optimize resource usage	• Objective 4.1: Identify and regularly create process efficiencies by leveraging the expertise of the SBIR/STTR workforce, *and also* • Objective 4.2: Explore innovative approaches and improvements.

The SBIR and STTR Programs

Small Business Innovation Research (SBIR)

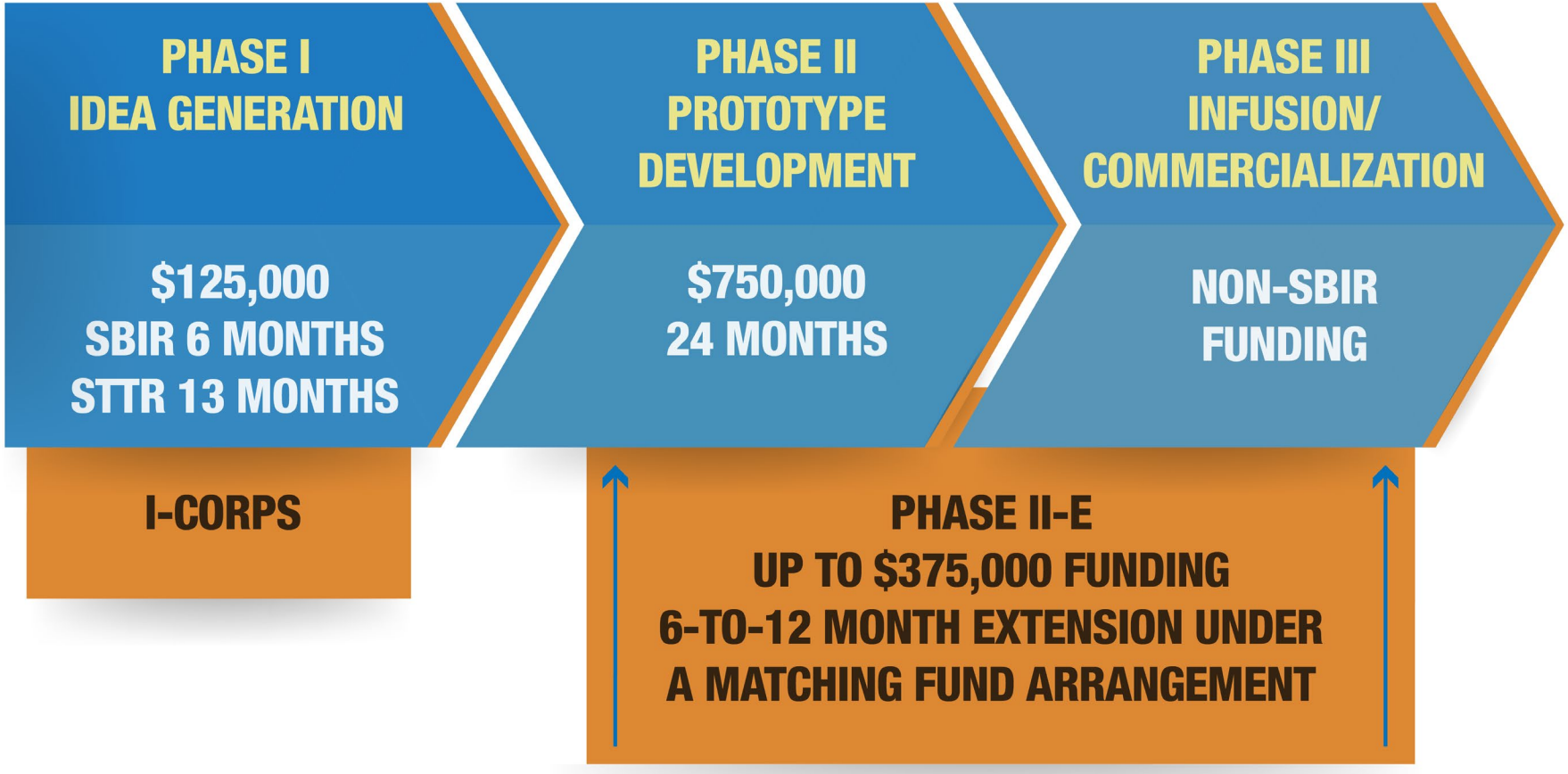
Small Business set-aside program for Federal R&D – with potential for commercialization

Small Business Technology Transfer (STTR)

A sister set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions – with potential for commercialization

SBIR/STTR Program Structure

NASA SBIR/STTR PROCESS



Go to sbir.nasa.gov/guide for details

NASA SBIR/STTR Program Awards Updates

NASA SBIR 2018 Phase II Selections:

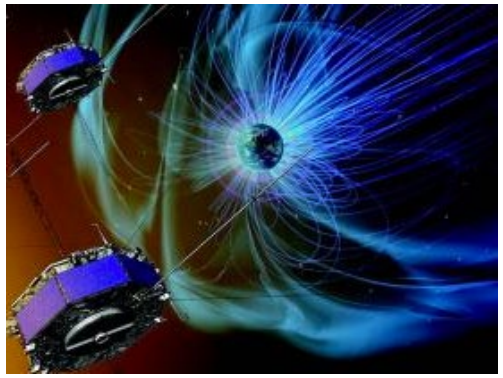
- 289 SBIR proposals were received from American small businesses to advance research and technology in Phase II of its 2018 Small Business Innovation Research (SBIR) program.
- The Selection Announcement was made on May 14, 2019.
- Awarded $106M to U.S. Small businesses for technology development.
- Awards supports NASA's future space exploration missions while also benefiting the U.S. economy.

NASA SBIR/STTR 2019 Phase I Selections in Progress:

- The 2019 solicitation opened on February 5, 2019 and closed on March 29, 2019.
- More than 1,600 SBIR and STTR proposals were submitted.
- The Selection Announcement is targeted for June 18, 2019.
- Future Program Schedule and Selection Announcements: https://sbir.nasa.gov/prg_sched_anncmnt

NASA's Organizational Structure

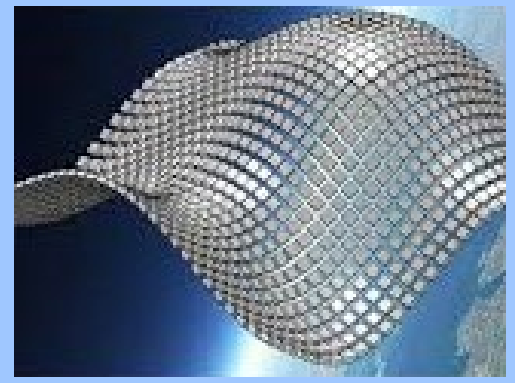
Four Mission Directorates



Science (SMD)

Aeronautics Research (ARMD)

Human Exploration & Operations (HEOMD)



Space Technology (STMD)

STMD Strategic Thrusts

Go: *Enable Safe and Efficient Transportation Into and Through Space*

- Provide safe, affordable, and routine access to space
- Provide cost-efficient, reliable propulsion for long duration missions
- Enable significantly faster, more efficient deep space missions

Land: *Increase Access to Planetary Surfaces*

- Safely and precisely deliver humans & payloads to planetary surfaces
- Increase access to high-value science sites across the solar system
- Provide efficient, highly-reliable sample return reentry capability

Live: *Enable Humans to Live and Explore in Space and on Planetary Surfaces*

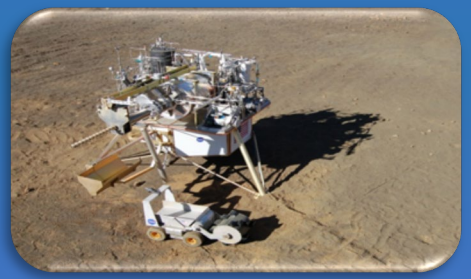
- Provide in-space habitation and enable humans to live on other planets
- Provide efficient/scalable infrastructure to support exploration at scale
- Providing ability to safely explore and investigate high-value sites

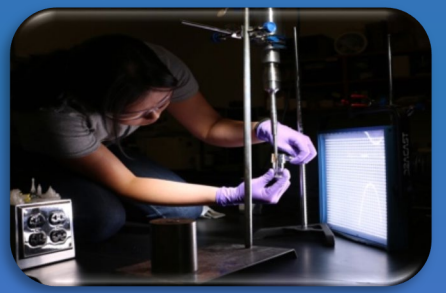
Explore: *Expand Capabilities Through Robotic Exploration & Discovery*

- Expand access to new environments to enable high-value science
- Develop new means of observation, exploration, and characterization
- Enable substantial increase in the quantity and quality of science data

Exploration Technology Principles

- Spark Innovation
- Engage The Brightest Minds
- Enable Exploration and Discovery
- Embrace Competition and Public-Private Partnerships
- Invest in America




Space Technology Pipeline

Early Stage Innovation

- NASA Innovative Advanced Concepts
- Space Tech Research Grants
- Center Innovation Fund/Early Career Initiative

SBIR/STTR

Technology Maturation

- Game Changing Development

Partnerships & Technology Transfer

- Technology Transfer
- Prizes and Challenges
- iTech

Technology Demonstrations

- Technology Demonstration Missions
- Small Spacecraft Technology
- Flight Opportunities

Learning about NASA's Needs – Focus Areas

NASA's research subtopics are organized by "Focus Areas" that group interests and related technologies.

- **Identify** the Area(s) closest to your innovation/idea
- **Go** to our website to research
- **Prepare to write** a proposal tailored to NASA's needs

FA 1: In-Space Propulsion Technologies

FA 2: Power Energy and Storage

FA 3: Autonomous Systems for Space Exploration

FA 4: Robotic Systems for Space Exploration

FA 5: Communications and Navigation

FA 6: Life Support and Habitation Systems

FA 7: Human Research and Health Maintenance

FA 8: In-Situ Resource Utilization

FA 9: Sensors, Detectors and Instruments

FA 10: Advanced Telescope Technologies

FA 11: Spacecraft and Platform Subsystems

FA 12: Entry, Descent and Landing Systems

FA 13: Information Technologies for Science Data

FA 14: In-Space and Advanced Manufacturing

FA 15: Materials, Materials Research, Structures, and Assembly

FA 16: Ground and Launch Processing

FA 17: Thermal Management Systems

FA 18: Air Vehicle Technology

FA 19: Integrated Flight Systems

FA 20: Airspace Operations and Safety

FA 21: Small Spacecraft Technologies

FA 22: Low Earth Orbit Platform Utilization and Microgravity Research

FA 23: Digital Transformation for Aerospace

https://sbir.nasa.gov/solicitations

NASA SBIR/STTR Website

The NASA SBIR/STTR website is located at www.sbir.nasa.gov

Contact the Program
SBIR/STTR Helpdesk and Program Points of Contact

Research NASA's Needs
Annual Solicitations including past years

Looking to Join the Program?
- Program Basics
- Forms Library
- Model Contract
- In-depth Training Resources and FAQs

Contact us and let's innovate together

Website

www.sbir.nasa.gov

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NASA Help Desk

301.937.0888