

What is America's Seed Fund?



SBIR/STTR are federally funded contracts & grants designed to stimulate the commercialization of technological innovation using small businesses

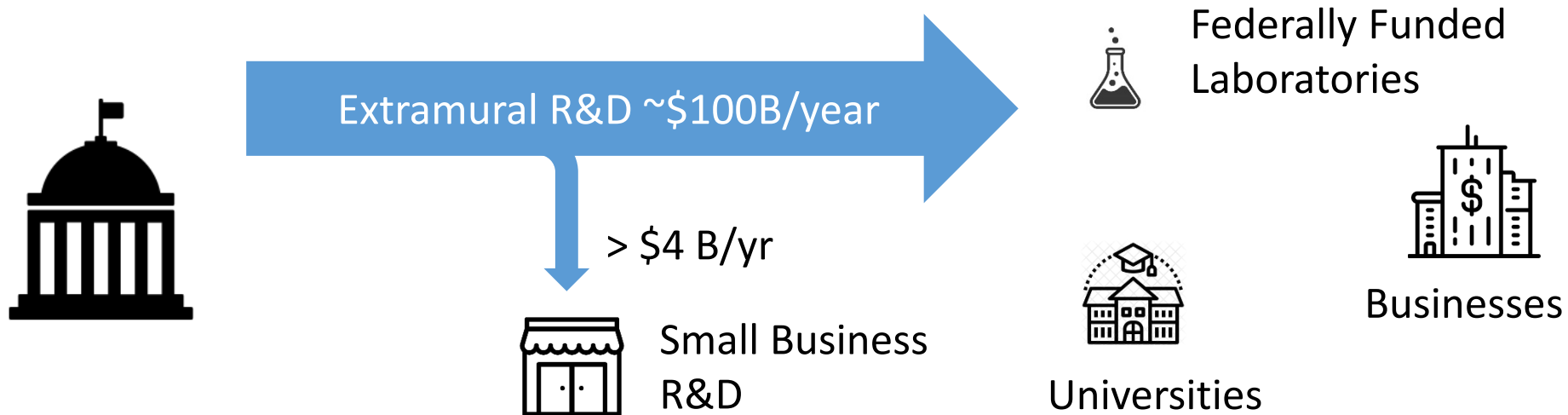


SBIR – Small Business Innovation Research
STTR – Small Business Technology Transfer



More about the Federal SBIR & STTR Programs...

- A >\$4 Billion early stage nondilutive R&D fund for US-based small businesses
- A mechanism to fund best early-stage high-risk innovation ideas
- Funds ideas that are too high risk for the private sector
- Use U.S. Small Businesses to stimulates technological innovation



Who is eligible for SBIR/STTR Funding?

- Small Business (<500 employees)
- >51% US Citizen or permanent resident owned & controlled.
- For Profit
- Principal Investigator primarily employed by Small Business at time of award
- Company Address / Facilities

SBIR/STTR Programs are mandated to foster and encourage participation in SBIR/STTR women, and socially/economically disadvantaged businesses

There are 11 SBIR/STTR Programs



The Small Business Administration (SBA) is mandated to provide oversight

SBIR & STTR

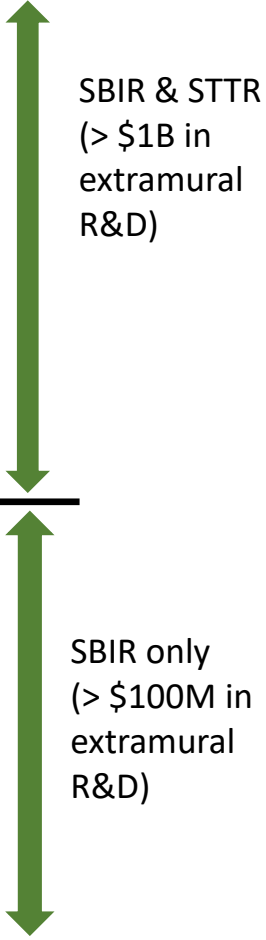


SBIR only

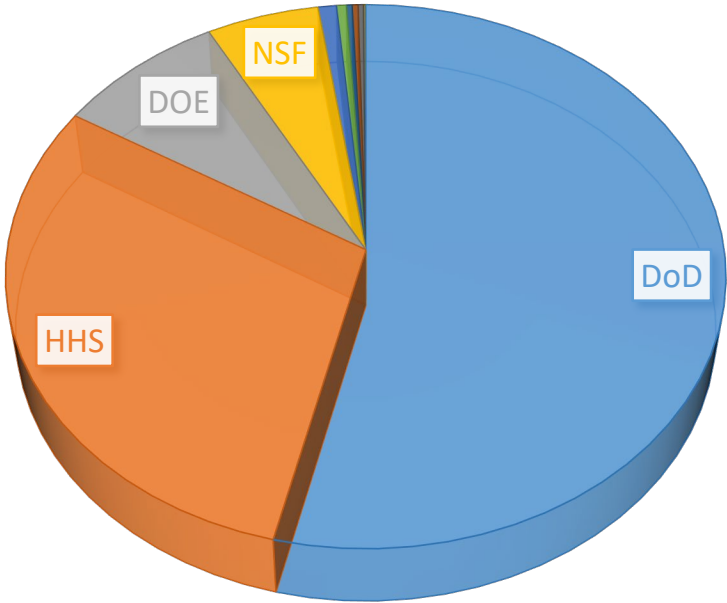


FY 2022 SBIR/STTR Budgets by Agency

| Agency | Budget (Millions) |
|---|-------------------|
| Department of Defense (DoD) | \$ 2,240 |
| Department of Health and Human Services (HHS), incl. National Institute of Health (NIH) | \$ 1,250 |
| Department of Energy (DOE), incl. Advanced Research Projects Agency (ARPA -E) | \$ 348 |
| National Science Foundation (NSF) | \$ 231 |
| National Aeronautics and Space Administration (NASA) | \$ 215 |
| Department of Agriculture (USDA) | \$ 38 |
| Department of Homeland Security (DHS) | \$ 20 |
| Department of Commerce: National Oceanic and Atmospheric Administration (NOAA), National Institute of Standards and Technology (NIST) | \$ 12 |
| Department of Education (ED) | \$ 12 |
| Department of Transportation (DOT)* | \$ 11 |
| Environmental Protection Agency (EPA) | \$ 5 |



2022 BUDGETS



SBIR: \$3.85 Billion
STTR: \$532 Million



- Contracting agency
- Granting agency
- Both



U.S. Department of Energy's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs

Eileen Chant, PhD

Outreach Program Manager

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April 2023



DOE SBIR/STTR Programs – The Specifics

- Awards in excess of \$300 Million per year
- Grants not contracts – your idea & your execution
- Topics are aligned with DOE Mission:
 - **Leadership in Clean Energy**
 - **Leadership in Basic Energy and Engineering Sciences**
 - **Enhancement of Nuclear Security**
- Topics are more wide ranging than most expect!
- Two Phase I solicitations per year
- Letter of Intent is required
- We offer an expansive application assistance program “Phase 0”. It is open now for current release <https://doephase0.dawnbreaker.com/>

Specific Topics Aligned with DOE Mission

Leadership in Clean Energy

- Advanced Turbine Technology
- Clean Coal, Oil and Gas Technologies
- Advanced Materials/Technologies for Nuclear Energy
- Smart Grid Technologies
- Cyber Security
- Energy Storage
- Bio-energy & Biofuels
- Hydrogen & Fuel Cells
- Solar Power
- Water Power
- Wind Energy
- Advanced Manufacturing
- Efficient Buildings & Vehicles

Leadership in Basic Energy and Engineering Sciences

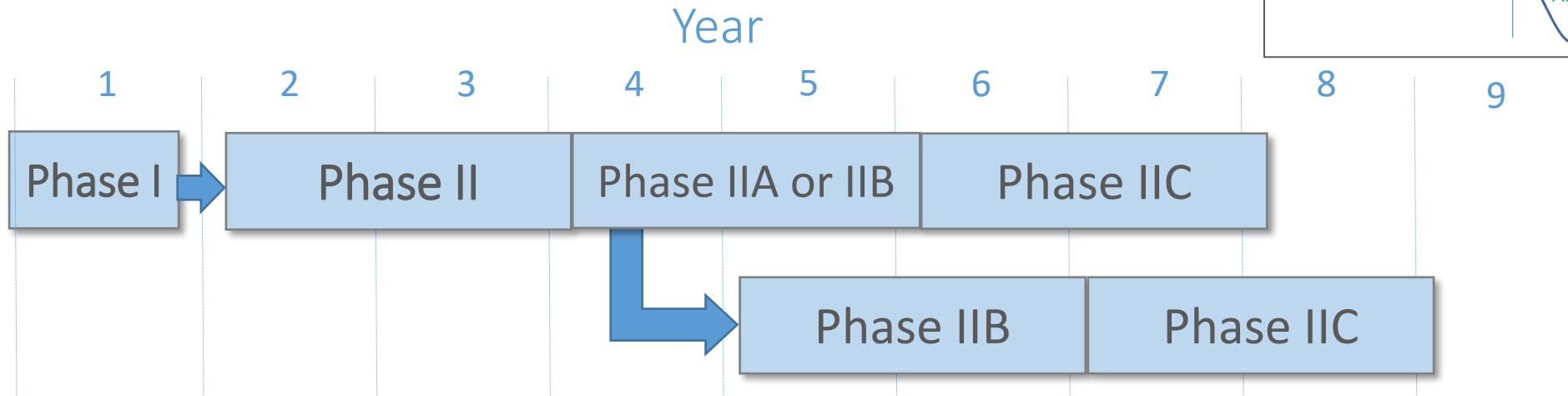
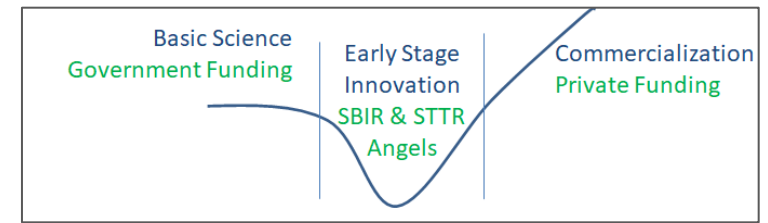
- Advanced Detectors
- Accelerator technology
- RF Components and Systems
- Data Acquisition, Processing and Analysis
- Fusion Energy Systems
- High Performance Computing & Networking
- Quantum Information Sciences
- Modeling and Simulation
- Atmospheric Measurement Technology
- Genomic Science and Related Biotechnologies
- Advanced Sources: neutron, x-ray, electron

Enhancement of Nuclear Security

- Advanced Detectors
- Novel Radiation Monitoring Concepts
- In Situ Remediation
- Facility Deactivation and Decommissioning
- Remote Sensing
- Global Nuclear Safeguards R&D
- Nuclear Detonation Detection

Specific – but many more topics than you would expect

How does our funding work?



Phase I

- Two annual Funding Opportunity Announcements
- Focused, mission-aligned topics
- Feedback provided on letters of intent
- \$200,000/\$250,000
- 6 - 12 months duration
- ~ 350-400 awards per year

Phase II

- Phase I awardees apply for Phase II the following year
- \$1,100,000/\$1,600,000
- 2 years duration
- ~ 160 awards per year

Phase IIA/IIB

- For projects that require additional R&D funding to transition to commercialization
- \$1,100,000
- 2 years duration
- ~30 awards per year

Phase IIC

- Pilot program to leverage 1:1 matching funds for commercialization
- \$1,100,000
- 2 years duration

Application Assistance

[Phase 0 application assistance](#) for first-time DOE applicants
(open now for Phase I Release 1!)

Email us!

General questions: sbir-sttr@science.doe.gov

Get Connected!

Subscribe to our mailing list: <https://science.osti.gov/sbir>

Stay Connected!



Recorded Topic and FOA Webinars

Ask-Us Anything During the Application Process



Being on our mailing list is the most important way to stay up to date on our funding opportunities!



What makes you a good fit with DOE?

Application Review Criteria

1/3

Technical Merit

1/3

Ability to Carry Out the Project

1/3

Impact

- Must be technology development R&D!
- Idea is novel
- Solid work plan to prove feasibility
- Responsiveness to the topic & subtopic
- Your team is composed of the right expertise
- Potential impact if R&D is successful

Awardee Resources

- New for Applicants and Awardees! [DOE SBIR/STTR Partnering Resources](#)
 - Looking for SMEs, collaborators, subcontractors?
 - Understand related research being done at research institutes
 - Email carol.rabke@science.doe.gov to discuss your partnering needs



Technical and Business Assistance (TABA)

\$6,500 above maximum award amount in Phase I

- a) Select your own vendor
- b) Use DOE vendor

\$50,000 above maximum award for Phase II

- [Energy I-Corps](#)
 - 40 are selected
 - Designed to educate on entrepreneurial concepts
 - 2 months training at no cost to participants
 - Customer discovery process



Diversity, Equity and Inclusion



- Our office collaborates across the Office of Science (SC) to advance organizational best practices for promoting diversity, equity, and inclusion (DEI) in SC's business practices for awarding and managing competitive research
- We are always looking for opportunities to elevate awareness to under-represented (UR) groups, feel free to reach out to us to speak at your event!
- We have a number of new-ish DEI initiatives
 - *Tracking diversity performance*
 - *Phase 0 for first-time applicants*
 - *Diversity Supplement for Phase II awardees*
 - *Improving accessibility of application process*
 - *Using software tools such as LinkedIn to identify and reach out to UR entrepreneurs who are a fit with DOE*

Small Business Administration SBIR/STTR Resources

- *Many resources on navigating the federal SBIR/STTR programs at <https://www.sbir.gov>*
 - Your state support programs
 - What awards have been issued
 - Events
- *SBIR/STTR funding programs info for all 11 agencies and links at <https://www.sbir.gov/solicitations>*
- FAST Assistance for SBIR/STTR Proposals in most states, including Delaware
- If you decide that DOE SBIR/STTR is not a good fit for you, try other agencies!

Finding Topics

What problem are you currently interested in solving and how do you apply your technology in this area?

Examples:

- Your company builds a detector that analyzes particle size of solids produced in the cosmetic industry, such as powders, etc. You want to understand if there are different markets for your technology and R&D funding to develop your analyzer for new applications.
- Your company develops metal organic frameworks (MOFs) for controlling humidity in HVAC systems, by adsorbing water from the environment at low temperatures. You want to conduct R&D to see if the materials can be used for carbon capture at higher temperatures in a flue stack.
- Your company develops a coating mitigating biofouling for boat hulls. You want to know if your coating can be used in other marine and hydro environments

Award Keywords & Topic Searching - SBA

Brainstorm 5-10 keywords that represent the problem you are trying to solve and your area of expertise, technology or innovation

- nanomaterials, sorbents, energy,
- water, purification, remote, renewable energy, filter
- artificial intelligence, software, inequality
- Detectors, monitoring

<https://www.sbir.gov/sbirsearch/topic/current/>



Award Data

View As: [List](#) [Chart](#) [State Map](#)

FILTER BY:

Agency

- Department of Agriculture (3852)
- Department of Commerce (1739)
- National Institute of Standards and Technology (410)
- National Oceanic and Atmospheric Administration (321)
- Department of Defense (95793)
- Air Force (30973)

Phase

- Phase I (140790)
- Phase II (60346)

Program

- SBIR (182412)
- STTR (18724)

Year

- 2023 (86)
- 2022 (6383)
- 2021 (6779)
- 2020 (7310)
- 2019 (7031)
- 2018 (5655)
- 2017 (6028)
- 2016 (5401)
- 2015 (5172)
- 2014 (5268)

Search Keywords Company Name Topic Code

- i** For best search results, use the search terms first and then apply the filters
- i** The Award database is continually updated throughout the year. As a result, data for FY22 is not expected to be complete until September, 2023.
- i** Download all SBIR.gov award data either **with award abstracts (290MB)** or **without award abstracts (65MB)**. A data dictionary and additional information is located on the **Data Resource Page**. Files are refreshed monthly.

Displaying 1 - 10 of 201136 results

SIMPLIFIED STEAM ELECTROLYSIS: HYDROGEN FOR HARD-TO-ABATE INDUSTRIES

SBC: *Advanced Ionics, Inc.* Topic: *NA*

Advanced Ionics, Inc. (AI)—proposes to advance its breakthrough, high-efficiency low-cost hydrogen electrolyzer technology to gigawatt-scale production within the next decade, supporting rapid decarbonization of heavy industry 10 to 20 years earlier than possible under typical industry-led R&D timeframes. Targeting the multi-billion-dollar hydrogen industry,¹ AI's system will generate volumes ...

SBIR **Phase I** **2023** **Department of Energy**

Efficient Recovery of Dilute Helium Gas Using Molecular Sieve Membranes

SBC: *Osmoses Inc.* Topic: *NA*

Diminishing domestic helium supplies and a growing dependence on foreign sources of helium, such as helium produced in Russia, have created severe shortages of this critical gas for various facets of the U.S. economy, including medicine, research, manufacturing, and consumer goods. This proposal aims to address this vulnerability in the U.S. supply chain through the development of a novel family o ...

SBIR **Phase I** **2023** **Department of Energy**

Simplifying Reactor Setup for Cell-Free Biofuel Production

Topic Searching - DOE

topicsV412222022.pdf 121 / 175 100% purify 2/3

Grant applications are sought in the following subtopics:

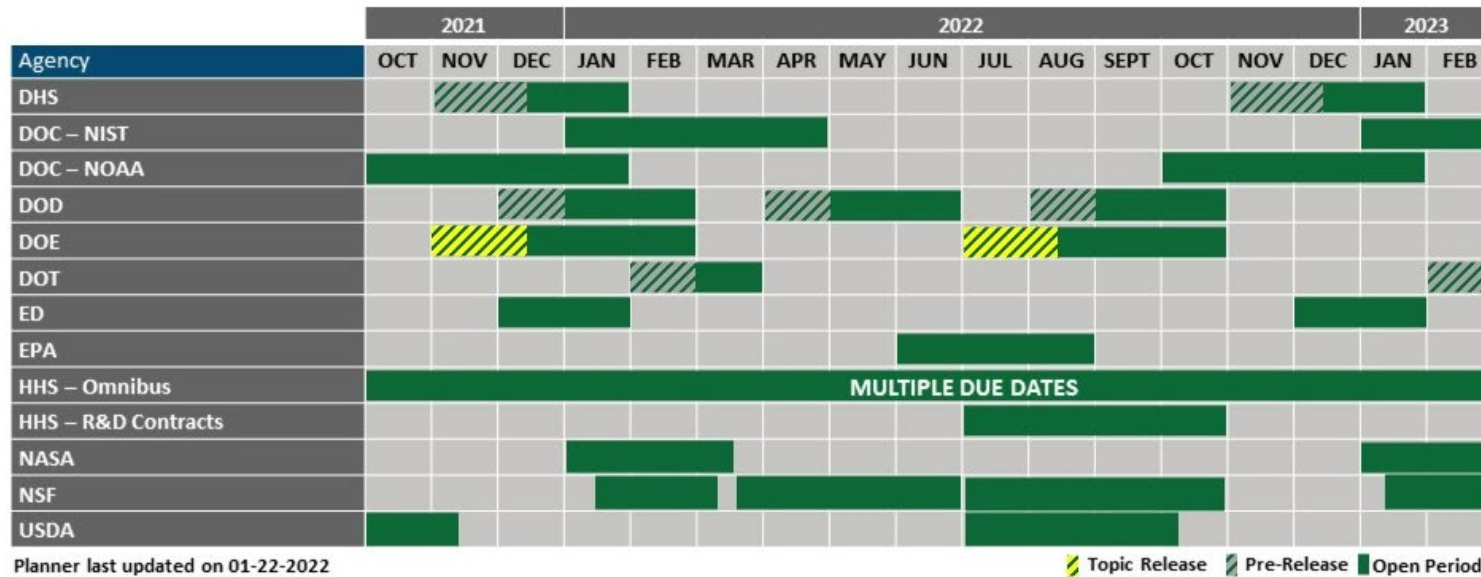
a. Novel Reactive Capture Approaches that Convert Industrially Produced CO₂ to Useful Products On-Site
Among the objectives of the Point Source Capture Program is to support the deep decarbonization of the industrial sector. Facilities of interest for decarbonation are cement and lime plants, iron and steel manufacturing plants, hydrogen production plants, ethanol plants, and chemicals and petrochemicals plants. The conventional capture approach is to first separate/capture carbon dioxide (CO₂) from process emissions or pre/post-combustion flue gases and then, as applicable, to regenerate the capture medium and to compress, transport, and store or otherwise utilize the purified CO₂ in other applications. The act of capturing CO₂ in this method is often accompanied downstream by energy intensive and costly support infrastructure and

[Back to Table of Contents](#)

processes to capture, purify, compress, transport and/or store the captured CO₂, and to regenerate the capture medium. It may therefore be highly advantageous in terms of energy efficiencies and costs to employ a “reactive capture” approach to carbon capture. 1 In the reactive capture approach, the act of capturing CO₂ and converting it into a higher value product is integrated into one continuous process onsite – thus eliminating the potential need to separately regenerate the capture medium and the need to purify, compress, transport, or store the captured CO₂. Removing the need for regeneration and compression steps from the carbon capture process could eliminate up to 90% of the energy loss associated with employing a typical amine capture process. 2 It is also possible that the integrated process could significantly reduce capital expenditures as well as provide distributed economic and employment opportunities.

Grant applications are desired for reactive capture approaches that integrate the CO₂ separation from diluted gas streams and the conversion of CO₂ to valuable product(s). The reactive capture process must achieve over 95% carbon capture rates and demonstrate significant progress towards a 30% reduction in the cost and 30% improvement in energy efficiency of carbon capture versus a reference conventional capture process where the acts of capture and conversion are separate. This topic area supports Infrastructure Investment and Jobs Act (IIJA) Title III: Fuels and Technology Infrastructure Investments; Subtitle A: Carbon Capture, Utilization.

Estimated SBIR Topic Release Schedule



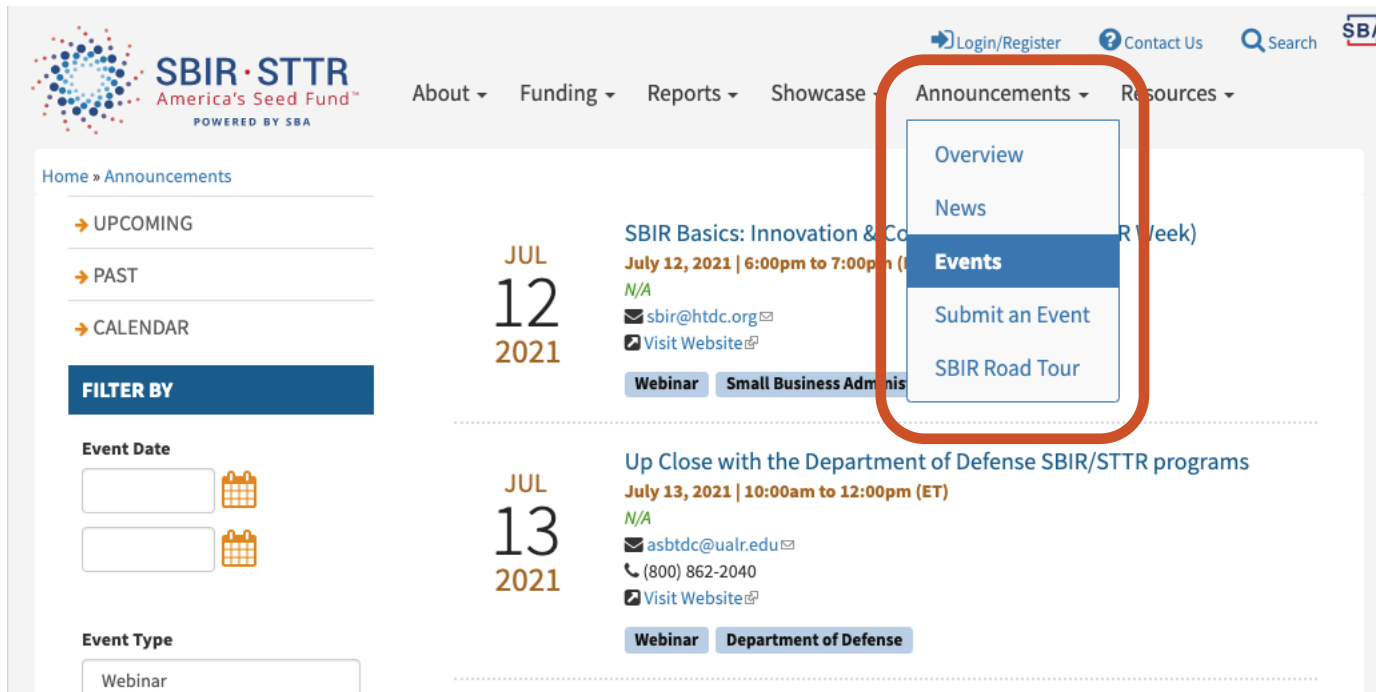
<https://www.sbir.gov/solicitations>

While there are core parts of solicitations that are the same across the SBIR/STTR programs, solicitation guidelines are quite different at different agencies, especially between agencies that provide awards as grants and those that use contracts. The solicitations and topics listed on this site are copies from agencies to be used for general planning purposes, but they may not be the most up-to-date.

For these reasons, you should [visit the agency SBIR program sites](#) to read the official version of the solicitations and download the appropriate forms and rules.

Take the Next Step

- Attend **SBIR/STTR** training events - <https://www.sbir.gov/events>
- SBIR.gov tutorials - <https://www.sbir.gov/tutorials>
- Review [Is SBIR/STTR A Source of Funding for My Company?](#)



The screenshot shows the SBIR/STTR website interface. The top navigation bar includes links for Login/Register, Contact Us, Search, and SBA. The main navigation menu has options for About, Funding, Reports, Showcase, Announcements, and Resources. A dropdown menu is open under 'Announcements', with 'Events' highlighted in blue. Below the menu, there are two event listings. The first event is 'SBIR Basics: Innovation & Commercialization (1 Week)' on July 12, 2021, from 6:00pm to 7:00pm. The second event is 'Up Close with the Department of Defense SBIR/STTR programs' on July 13, 2021, from 10:00am to 12:00pm (ET). A filter sidebar on the left allows filtering by event date and type, with 'Webinar' selected.

Action Items:

- Registrations, especially SAM.gov
- 5-10 keywords → Initial topic search
- Research SBIR support in your state/region



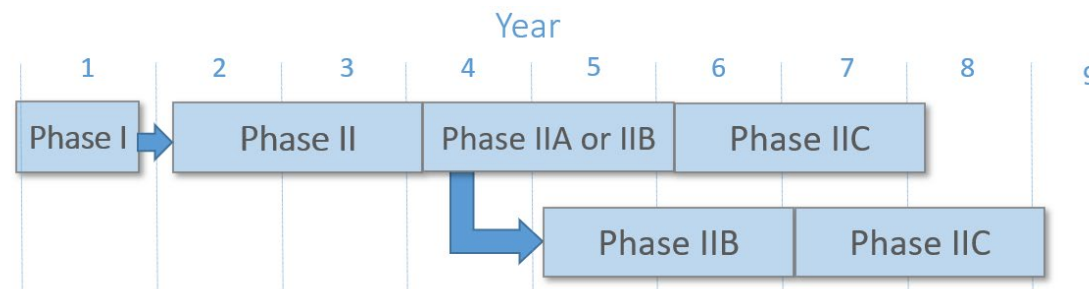
DOE SBIR/STTR Programs



The Basics

- Grants in excess of \$300 million/year
- Focused topics are aligned with DOE Mission:
 - Leadership in Clean Energy
 - Leadership in Basic Energy and Engineering Sciences
 - Enhancement of Nuclear Security
- Grants not contracts – Your idea & your execution
- Letter of Intent is required prior to application
- Responsiveness to topics, novel R&D, team, & work plan are key elements of your application
- [Phase 0 application assistance](#) for first-time applicants

About Our Grants



Phase I

- Two annual [Funding Opportunity Announcements](#)
- \$200,000/\$250,000
- 6 - 12 months duration
- ~ 300 - 400 awards/year

Phase II

- \$1,100,000/\$1,600,000
- 2 years duration
- ~ 160 awards per year

Join our mailing list!
<https://science.osti.gov/sbir>

Email us: sbir-sttr@science.doe.gov

eileen.chant@science.doe.gov

Phone: 301-903-5707

Follow us on social media!



Tech-2-Market & Partnering Assistance

carol.rabke@science.doe.gov



National Institute of Food and Agriculture

U.S. DEPARTMENT OF AGRICULTURE

BIOENERGY, CLIMATE, AND ENVIRONMENT
FOOD PRODUCTION AND SUSTAINABILITY
YOUTH, FAMILY, AND COMMUNITY
FOOD SAFETY AND NUTRITION
INTERNATIONAL PROGRAMS

NIFA

USDA Small Business Innovation Research & Small Business Technology Transfer

INVESTING IN SCIENCE | SECURING OUR FUTURE | WWW.NIFA.USDA.GOV

USDA IS AN EQUAL OPPORTUNITY PROVIDER, EMPLOYER, AND LENDER



USDA SBIR/STTR: TABA Budget

Phase I

\$6,500

To develop a
Commercialization
Plan

Phase II

\$50,000

To accelerate
commercialization of
the innovation into the
market



USDA SBIR/STTR Topic Areas



8.1

Forests & Related Resources



8.2

Plant Production & Protection (Biology)



8.3

Animal Production & Protection



8.4

Conservation of Natural Resources



8.5

Food Science & Nutrition



8.6

Rural & Community Development*



8.7

Aquaculture



8.8

Biofuels & Biobased Products



8.12

Small & Mid-Sized Farms*

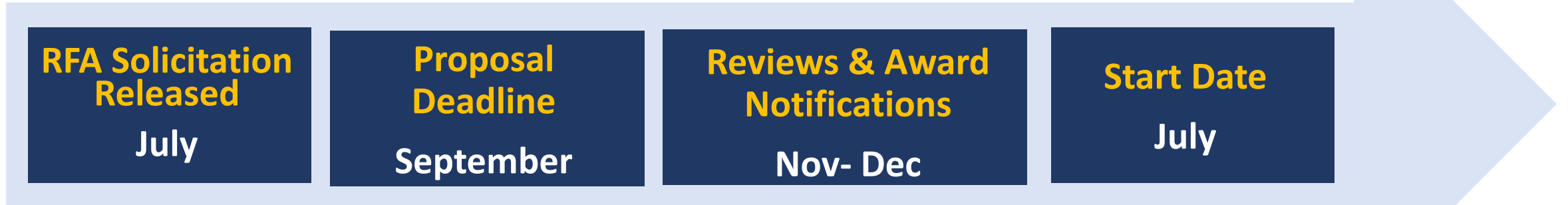


8.13

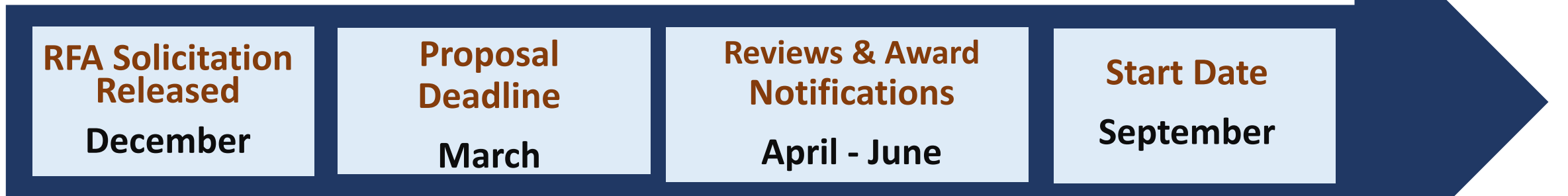
Plant Production & Protection (Engineering)

Typical Program Timelines

Phase I



Phase II: Only open to Phase I awardees





CONTACT US

Thank You!

Visit our website:

[NIFA.USDA.GOV/SBIR](https://nifa.usda.gov/sbir)

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SBIR/STTR Funding for Technologies to Improve Human Health

Stephanie Davis, Ph.D.

Small Business Program Coordinator

The National Heart, Lung, and Blood Institute (NHLBI)

National Institutes of Health (NIH)

April 19th, 2023

NIH Mission

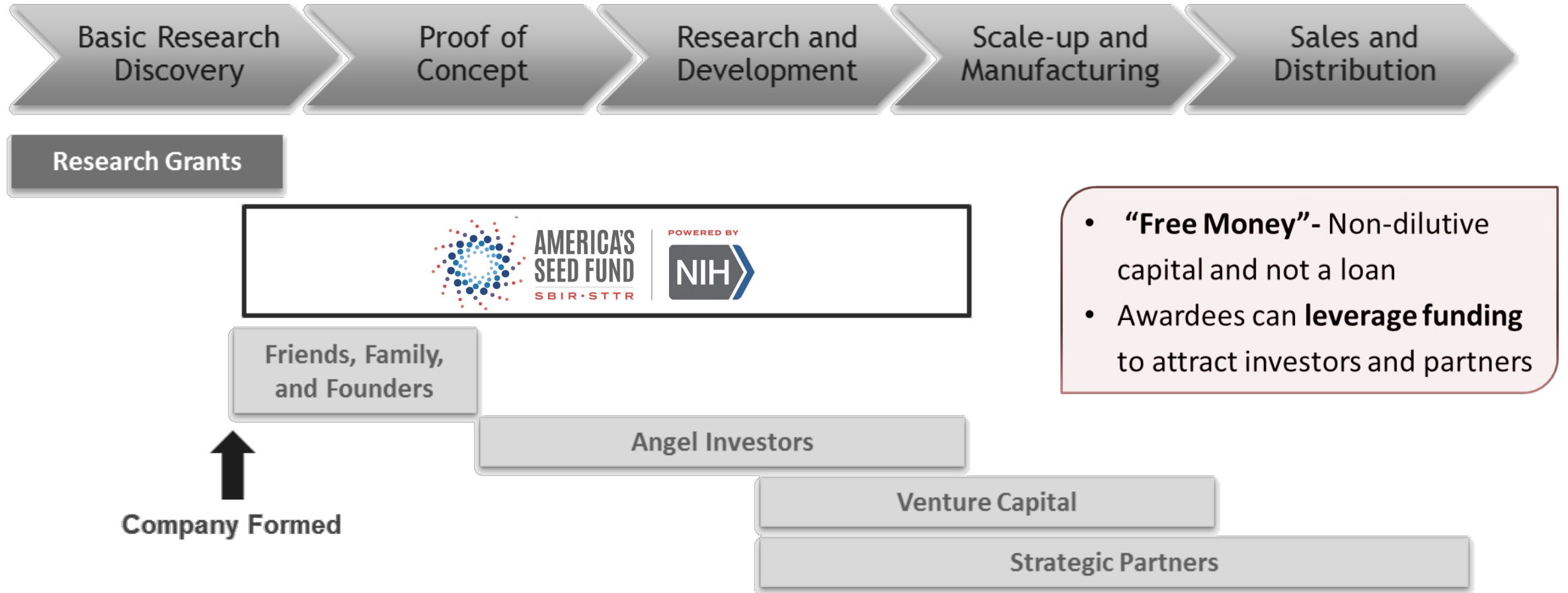


*To seek fundamental knowledge about the nature and behavior of living systems and the **application of that knowledge to enhance health, lengthen life, and reduce illness and disability.***

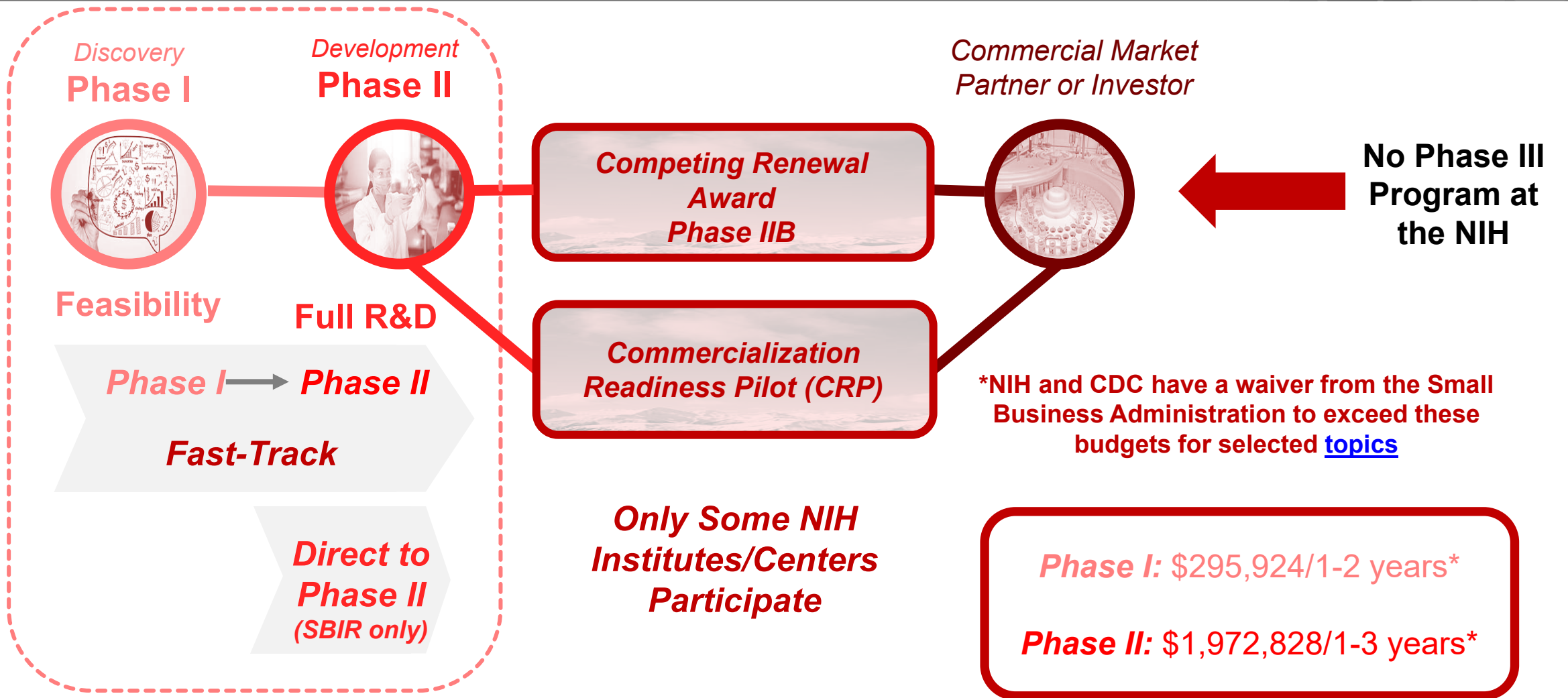
The Small Business Program helps NIH accelerate discoveries from bench to bedside

Benefits of NIH SBIR/STTR Funding

The largest source (\$1.4B) of early-stage capital for life sciences in the US



Phased Investigator-Initiated Grant Programs





AMERICA'S
SEED FUND
— S B I R —

POWERED BY



America's Seed Fund powered by NOAA

Derek Parks

Deputy Director, NOAA Technology Partnerships Office

April 2024



National Oceanic and Atmospheric Administration (NOAA)



Science

Understand and predict changes in climate, weather, oceans, and coasts

Service

Share that knowledge and information with others

Stewardship

Conserve and manage coastal and marine ecosystems and resources

NOAA 101

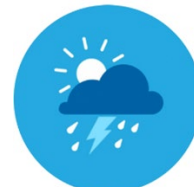
National Marine Fisheries Service



National Environmental Satellite, Data, and Information Service



National Weather Service



National Ocean Service



Office of Marine and Aviation Operations



Oceanic and Atmospheric Research



SBIR at NOAA

NOAA seeks proposals for ***highly innovative technologies*** with ***strong commercial potential*** that fit within the ***NOAA mission areas***



NOAA SBIR Program Overview

Estimated Annual Budget: ~\$15M

Award type: Grants

Solicitations per FY: One per phase



FY23 SBIR Topic Areas

- Extreme Events and Cascading Hazards
- Coastal Resilience
- The Changing Ocean
- Water Availability, Quality, and Risk
- Effects of Space Weather
- Monitoring and Modeling for Climate Change Mitigation



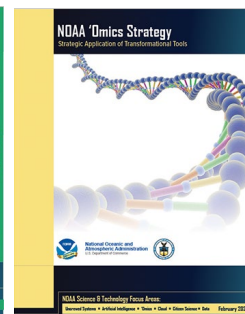
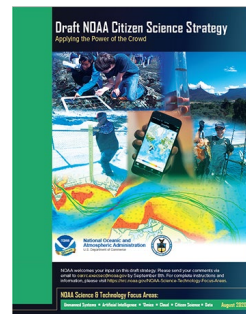
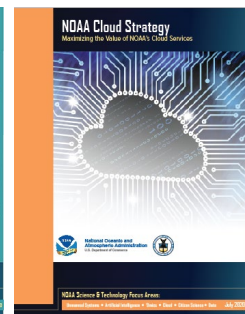
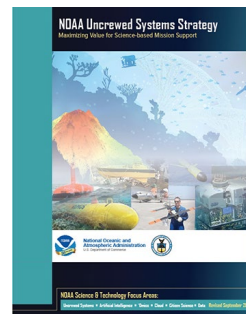
NOAA Science and Technology Focus Areas

- Science and Technology Focus Areas:

- Uncrewed Systems
- Data and Cloud Computing
- Artificial Intelligence
- Citizen Science
- 'Omics

- Other priority areas include:

- New Blue Economy
- Climate Ready Nation



Commercialization Support

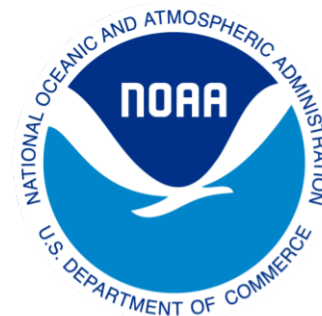
- In addition to funding, we also provide support and education about commercialization and navigating the development process.
- Phase I and II Commercialization Assistance Programs
- NOAA SBIR team includes commercialization expertise

Other resources for Entrepreneurs

- Innovation funding
 - Grants and contracts
 - Prize challenges
- Contracting with the Government
- Cooperative Research and Development Agreements (CRADAs)
- Technology available to license
- NOAA Data as a resource for innovation

Connect with us

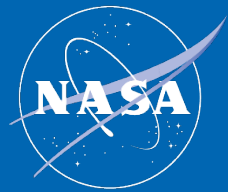
- Email us at noaa.sbir@noaa.gov
- Visit our website: techpartnerships.noaa.gov
 - Sign up for our NOAA SBIR email list
 - Browse NOAA SBIR success stories
 - Learn more about NOAA's R&D partnerships
- Follow the NOAA Technology Partnerships Office on [LinkedIn](#) and on Twitter [@NOAAinnovate](#)



NOAA
TECHNOLOGY
PARTNERSHIPS OFFICE

2023 Focus Areas

All topics are SBIR unless denoted by a * indicating both SBIR and STTR



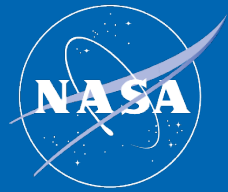
1. In-Space Propulsion Technologies
2. Power, Energy, and Storage
3. Autonomous Systems for Space Exploration*
4. Robotic Systems for Space Exploration*
5. Communications and Navigation
6. Life Support and Habitation Systems*
7. Human Research and Health Maintenance
8. In-Situ Resource Utilization*
9. Sensors, Detectors, and Instruments*
10. Advanced Telescope Technologies
11. Spacecraft and Platform Subsystems
12. Entry, Descent, and Landing Systems*
13. Information Technologies for Science Data
14. *(n/a) Focus Area not solicited for in 2023*
15. Materials Research, Advanced Manufacturing, Structures, and Assembly*
16. Ground Launch & Processing*
17. Thermal Management Systems
18. Air Vehicle Technology*
19. Integrated Flight Systems
20. Airspace Operations and Safety
21. Small Spacecraft Technologies
22. Low Earth Orbit Platform Utilization and Microgravity Research
23. Digital Transformation for Aerospace (STTR only)*
24. Dust Mitigation and Extreme Lunar Environment Mitigation Technologies

For more information on SBIR and STTR Focus Areas, review Chapter 9 of each solicitation: sbir.nasa.gov/solicitations

Backup

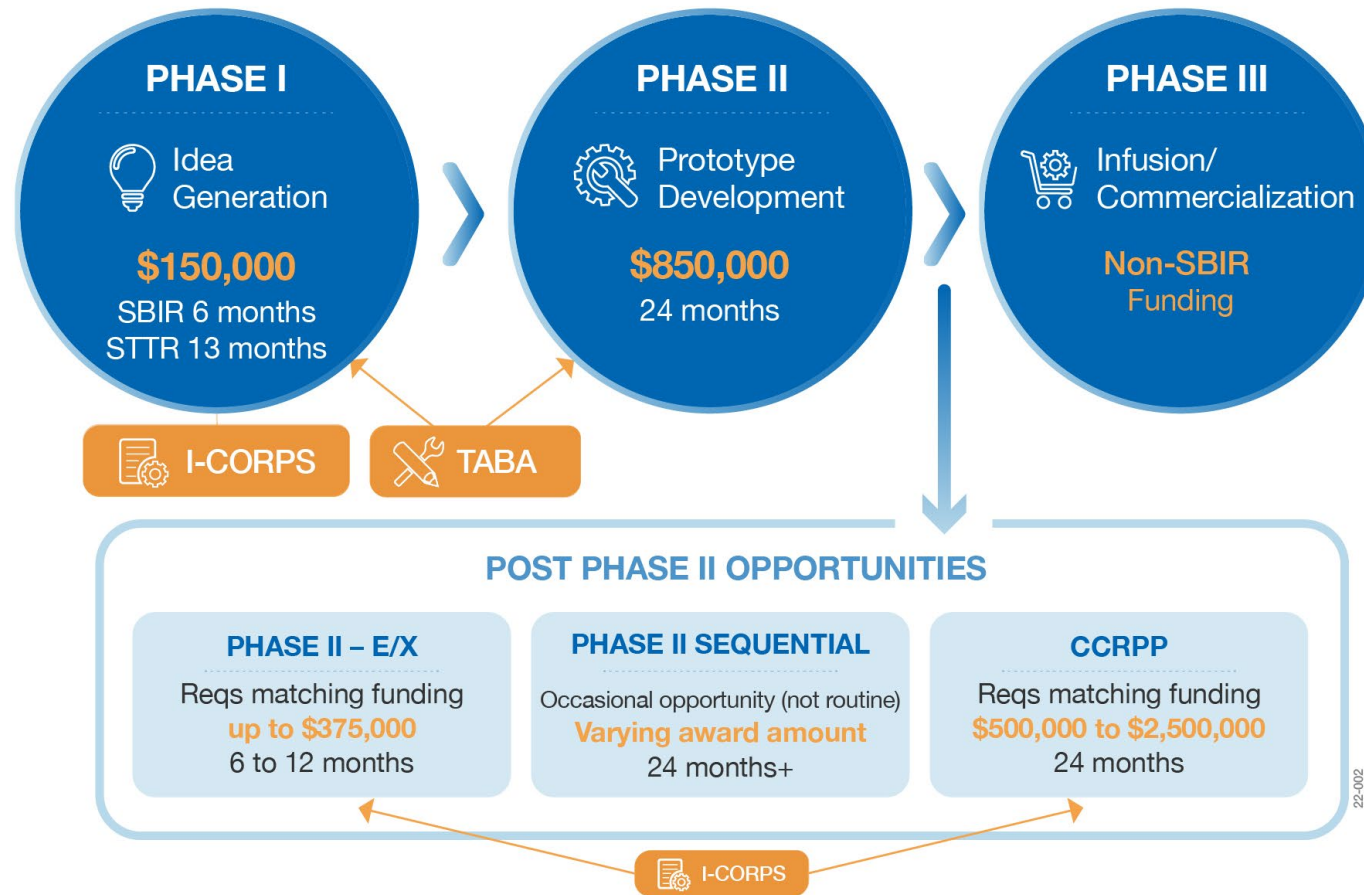


What exactly do you get?

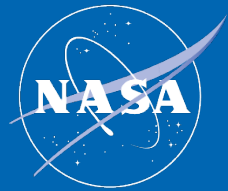


Up to \$1 million for Phase I and II and nearly \$3 million or more for Post Phase II opportunities!

NASA SBIR/STTR PHASES



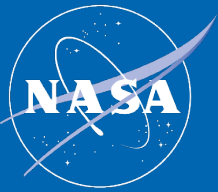
Who can join?



- The SBIR/STTR program's **focus is on R&D**, funding ideas that have the potential to solve some of NASA's most pressing challenges
- You **must be a Small Business Concern (SBC)** with 500 employees or less and legally established in the U.S. (visit our website for the full criteria)
- **For STTR**, the partnering research institution must be in the U.S. and be a nonprofit college or university, domestic nonprofit research organization, or a federally funded R&D Center (FFRDC)
- **If NASA is not the right fit**, there are 10 other government agencies that have SBIR/STTR programs that you may want to explore: <https://www.sbir.gov/agencies-landing>

Approximately 80% of the small businesses we fund have less than 50 employees

What does SBIR/STTR provide research institutions?



For Research Institutions:

- A path to turn **cutting-edge research** from the lab to **life-changing technology** in the market
- The **credibility** that comes from working alongside **NASA's researchers and experts**
- A **federal funding** mechanism to advance research in your area of interest



For Professors:

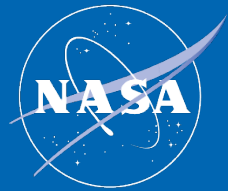
- Research data for potential **publication in the future**
- A way to **expose students to exciting projects** that could lead to employment
- An approach to **foster entrepreneurship and innovation** in students
- A **differentiator when marketing** your institution to potential students



For Students:

- The opportunity to work on **pioneering research projects**
- **Experience** that could lead to employment

What does SBIR/STTR provide small businesses?



Early-stage funding for research & development (R&D)



Up to \$1 million during your first three years, plus up to nearly \$3 million or more through Post Phase II opportunities



We **take zero equity**, and you keep your intellectual property



The **experience** of working with NASA experts on your technology



The **opportunity** to join us on one of our many ambitious missions



A **network** of diverse entrepreneurs and innovators



A door into potential work with **NASA programs and other government agencies**



A way to hone your **business skills** to complement your technical skills

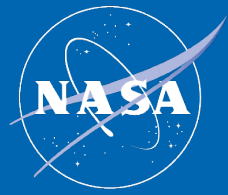


A way to **de-risk your technology** as you work to mature it

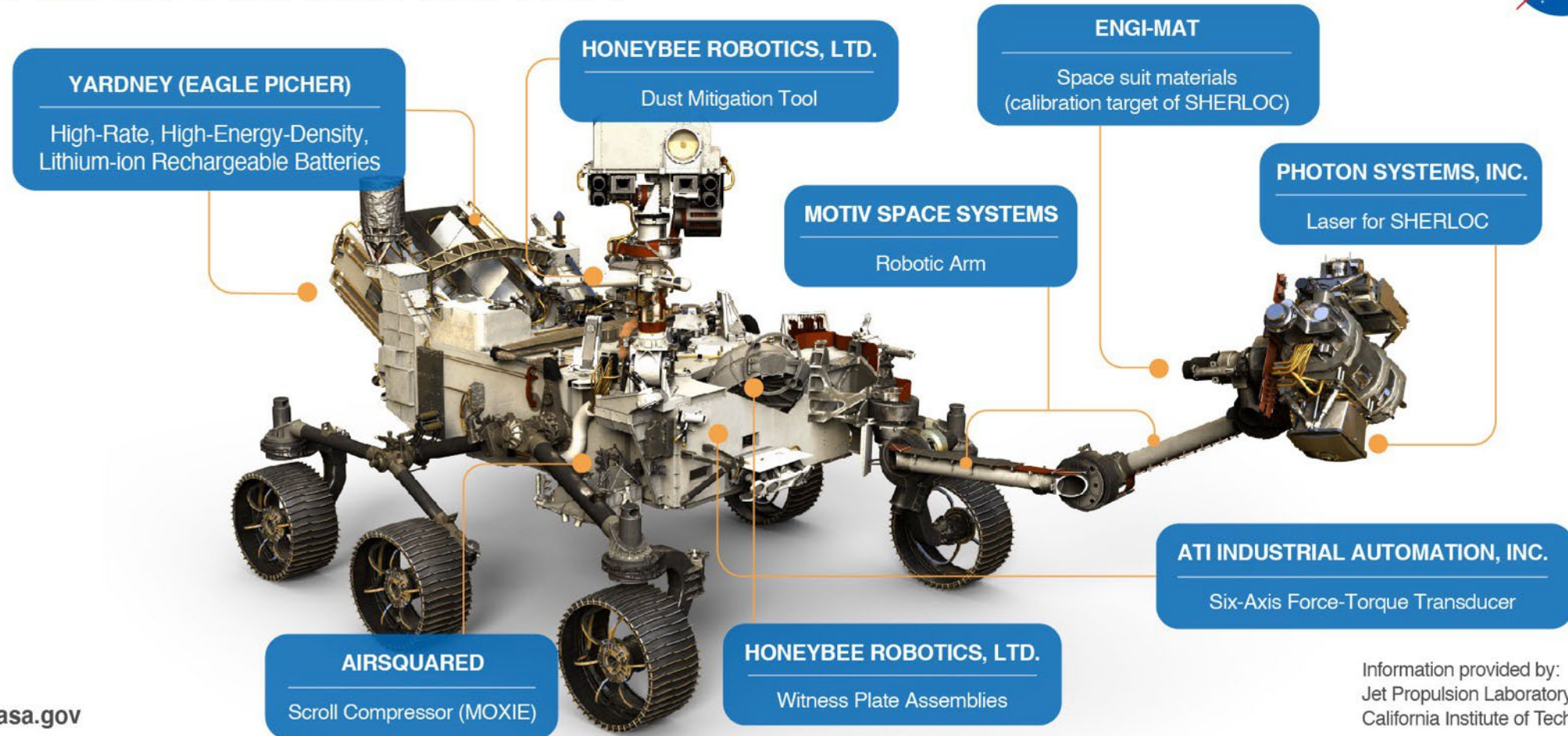


A **reputation** that comes with working with an agency known for expanding the physical and mental boundaries of humanity

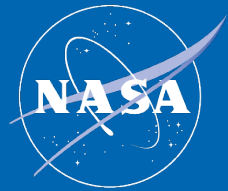
Infusion into NASA's missions



SBIR TECH ON-BOARD MARS 2020 PERSEVERANCE ROVER



How does it work?



Solicitation Release

January 2023



Proposal Submissions

January – March 2023



Proposal Reviews and Selection

March – June 2023



Phase I Selection Announcement

June 2023



Contract Negotiations/Awards

June – August 2023



Phase II Proposal Submission

Due by Phase I Contract End Date



Note: A Federal agency may enter into a Phase III agreement at any time with a Phase I or Phase II awardee.

Note: Dates are subject to change. For the latest dates, please visit our website's "Schedule & Awards" page.