Funding Innovative Research

Small Business Innovation Research (SBIR)
Small Business Technology Transfer (STTR)
SBIR/STTR objectives

To help start-ups and small businesses transform their high-risk, high impact technologies into marketable products and services that solve real problems.
Why should you care about SBIR/STTR?

- Science, technology, engineering and mathematics (STEM) affect every aspect of our lives
- There are very limited sources of funding available for STEM start-ups
  - Business angels
  - Venture Capital
  - Personal resources
- The SBIR/STTR programs provide a non-dilutive source of capital for start-ups
  - The company doesn’t give up any equity in exchange for SBIR/STTR funding
Are SBIR/STTR loan programs? NO!

- **NON-DILUTED CAPITAL**
  The funding agency cannot take an equity position or ownership of your firm

- **IP/DATA RIGHTS PROTECTION**
  Government can't share your reports or data with anyone outside of the federal government for 20 years

- **DIRECT FOLLOW-ON PHASE III AWARDS**
  No need for further competition (J&A not required)

https://www.sbir.gov/tutorials/data-rights/
What does an SBIR firm look like?

 ubiquitous
 ENERGY

Experience
 Truly
 Transparent
Solar

UBIQUITOUS ENERGY IS
POWERING THE FUTURE OF WHAT
A WINDOW CAN BE

PRODUCT

Built upon years of development, Ubiquitous Energy's transparent photovoltaic window coating harnesses solar energy from glass surfaces to generate electricity, all while remaining visibly indistinguishable from traditional windows.

LEARN MORE

SBA
What does an SBIR firm look like?
What does an SBIR firm look like?
What’s the difference between SBIR and STTR?

The small business is ALWAYS the applicant and awardee!
STTR is a smaller program

- There are 5 agencies that have a Small Business Technology Transfer (STTR) program
- These agencies have over a billion dollars of extramural R&D
- They provide .45% of the extramural R&D budget for STTR awards

Five agencies have this program
- Department of Defense (DoD)
- Department of Health and Human Services (HHS)
- Department of Energy (DOE)
- National Science Foundation (NSF)
- National Aeronautics and Space Administration (NASA)

The small business is ALWAYS the applicant and awardee!
Which agencies fund both SBIR and STTR?

- Defense
- Energy
- Health and Human Services
- National Aeronautics and Space Administration
- National Science Foundation
Which agencies fund SBIR only?

- Agriculture
- Education
- Environmental Protection Agency
- Homeland Security
- National Institute of Standards and Technology*
- National Oceanic and Atmospheric Administration*
- Transportation

* Branches of Department of Commerce (DOC)
Which program is better? SBIR or STTR

- It depends....
- The SBIR program has more funding than STTR.
- It can be very helpful for a small business to have strong ties with a university.
- The five largest SBIR programs also have an STTR program.
- The Principal Investigator can be from the University, although the applicant is always the small business
Who SHOULDN’T consider the SBIR/STTR programs?

- Needs money for marketing
- Needs money for manufacturing
- Needs money for cash flow
- Doesn’t conduct innovative research
How much funding does SBIR/STTR program provide?
FY20 SBIR/STTR Budgets (Combined)

FY20 ACROSS ALL AGENCIES
SBIR: $3.53B
STTR: $485M

<table>
<thead>
<tr>
<th>Agencies with SBIR and STTR Programs</th>
<th>2020 Budget</th>
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</thead>
<tbody>
<tr>
<td>Department of Defense (DoD)*</td>
<td>$1.97 B</td>
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<tr>
<td>Department of Health and Human Services (HHS)**, including the National Institutes of Health (NIH)</td>
<td>$1.21 B</td>
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<tr>
<td>Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)</td>
<td>$320 M</td>
</tr>
<tr>
<td>National Science Foundation (NSF)</td>
<td>$219 M</td>
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<tr>
<td>National Aeronautics and Space Administration (NASA)</td>
<td>$219 M</td>
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<tr>
<th>Agencies with SBIR Programs</th>
<th>2020 Budget</th>
</tr>
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<tr>
<td>U.S. Department of Agriculture (USDA)**</td>
<td>$30 M</td>
</tr>
<tr>
<td>Department of Homeland Security (DHS)</td>
<td>$14 M</td>
</tr>
<tr>
<td>Department of Commerce (DOC): National Institute of Standards and Technology (NIST)</td>
<td>$3.7 M</td>
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<tr>
<td>Department of Commerce (DOC): National Oceanic and Atmospheric Administration (NOAA)</td>
<td>$10 M</td>
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<tr>
<td>Department of Transportation (DOT)</td>
<td>$12.7 M</td>
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<tr>
<td>Department of Education (ED)</td>
<td>$7.7 M</td>
</tr>
<tr>
<td>Environmental Protection Agency (EPA)*</td>
<td>$3.7 M</td>
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NIH also issues contracts; and, within DOC, NIST uses cooperative agreements.
Contract vs. Grant

- Specific Topics
- Deliverables
- Broad Topics
Only Phases I/II use SBIR/STTR $$$$.

Phase I: Up to $150,000
Phase II: Up to $1,000,000

The approval process is lengthy and highly competitive.
TYPICAL PROPOSAL TIMELINE

1 - 3 months
Submit proposal

4 - 6 months
NSF reviews proposal

5 - 6 months
NSF notifies you about acceptance or decline

If proposal accepted, NSF provides up to $256K
How do you apply for funding?
Start by checking eligibility...

- Company must be for profit, U.S. owned and operated, and under 500 people
- Work must be done in the U.S.
- Focus is on performing R&D – Not purchasing equipment, commercializing a technology that has already been developed, or one that has very low risk and only needs capital

The small business is ALWAYS the applicant and awardee!
Do some topic searches:

And learn which agencies fund different technology areas!

www.sbir.gov/sbirsearch/topic/past
Is there a form that I complete?

- NO, you provide a proposal package in response to a solicitation
- There are 11 participating agencies in the SBIR program
- Their solicitations are available for about 10 weeks at a time
- You need to follow the guidelines explicitly
- The SBIR programs do NOT accept unsolicited proposals
# Approximate Schedule

<table>
<thead>
<tr>
<th>Agency</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<td></td>
<td>OCT</td>
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**Agencies and Release Dates:**

- **DHS**
- **DOC - NIST**
- **DOC - NOAA**
- **DoD**
- **DOE**
- **DOT**
- **ED**
- **EPA**
- **HHS - Omnibus**
- **HHS - R&D Contracts**
- **NASA**
- **NSF**
- **USDA**

**Notes:**

- Solicitations are released at different times by each agency.
- Pre-Release and Topic Release indicators are shown.

**Additional Notes:**

- Multiple Due Dates across various months.
Online Tutorials

- 55 Courses including:
  - Agency overviews
  - Program basics
  - Data rights
  - IP protection

www.sbir.gov/tutorials
# How do I know when solicitations are released?

**SIGN UP TO RECEIVE ANNOUNCEMENTS FROM AGENCIES**

<table>
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<tr>
<th>AGENCY</th>
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</tr>
</thead>
<tbody>
<tr>
<td>DHS</td>
<td><a href="https://sbir2.st.dhs.gov/portal/SBIR/">https://sbir2.st.dhs.gov/portal/SBIR/</a></td>
</tr>
<tr>
<td>DOE</td>
<td><a href="https://science.osti.gov/sbir/Funding-Opportunities">https://science.osti.gov/sbir/Funding-Opportunities</a></td>
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<tr>
<td>ED</td>
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<tr>
<td>HHS</td>
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<tr>
<td>NASA</td>
<td><a href="https://sbir.nasa.gov/">https://sbir.nasa.gov/</a></td>
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<tr>
<td>NIST</td>
<td><a href="https://www.nist.gov/tpo/small-business-innovation-research-program-sbir">https://www.nist.gov/tpo/small-business-innovation-research-program-sbir</a></td>
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<tr>
<td>NOAA</td>
<td><a href="https://techpartnerships.noaa.gov/SBIR">https://techpartnerships.noaa.gov/SBIR</a></td>
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<tr>
<td>USDA</td>
<td><a href="https://nifa.usda.gov/program/small-business-innovation-research-program-sbir">https://nifa.usda.gov/program/small-business-innovation-research-program-sbir</a></td>
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You apply in response to a Solicitation

Learn About SBIR/STTR

Download Solicitations

Find Local Assistance
Why should you try?

- Significant funding
- Award sizes vary
  - Over $3M per project potential in 3-4 years
- Off-sets your expenses
- Learn a new skill-set that you can apply repeatedly
150 Hours
Learning to write proposals is an investment in one’s future
What skills are involved with preparing an SBIR/STTR proposal?

- An innovative concept
- Understanding your agency customer’s needs
- The application of the scientific method to a work plan
- Developing a business case
- Explicitly following agencies guidelines
- Multiple registrations
- Developing a team and/or partnerships
- Financial preparation
- Time management
Required Registrations

- Three registrations are required by all agencies
  - D-U-N-S number through dun & bradstreet
    - … will transition to Unique Entity Identifier (UEI) by April 2022
  - SAM.gov
    - Be sure to look for the government identifier
    - No charge to register; caution – many look alikes on-line
  - SBA Company Registration with SBIR.gov
    - https://sbir.gov/registration

- Agencies also have additional required registration that are unique to them
What are the elements of an application?

- A technical proposal (called by various names)
- A qualified Principal Investigator (PI)
- Resumes of Key Personnel
- Facilities description
- Budget with cost justifications
- Other documents unique to each agency
Why do proposals get rejected?

• **It’s not all about you!**
  • There must be synergy between your goals and those of the agency
  • You must follow their instructions explicitly
  • The project must be genuinely innovative
  • You must have the right team and facilities for the project
What are my chances of winning an award?

- The average award rate for Phase I is 15% across all agencies
- There is variability among Agencies
- Very experienced and novice companies apply
- It takes time to learn how to prepare a winning application
Stay In Touch

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www.sbir.gov