SBIR Success Stories

2018 Small Business Training Workshop

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Gated Process - Three Phases

Phase I
Concept Development
6 months – 1 year
~ $150,000

Phase II
Prototype Development
24 months
~ $1,000,000

Phase III
Commercialization
No SBIR funding

Solicitation to Award

- Find Solicitation
- Proposal Submission
- Evaluation
- Award Phase I
Program Goals

→ Meet Federal research and development needs
→ Increase private-sector commercialization of innovation derived from Federal research and development funding
→ Stimulate technological innovation
→ Foster and encourage participation in innovation and entrepreneurship by socially and economically disadvantaged persons
→ Foster technology transfer through cooperative R&D between small businesses and research institutions (STTR)
### SBIR/STTR Budget by Agency, FY2015

<table>
<thead>
<tr>
<th>Agencies with SBIR/STTR Programs</th>
<th>Budget</th>
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</thead>
<tbody>
<tr>
<td>Department of Defense (DOD)</td>
<td>$1.070 B</td>
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<tr>
<td>Department of Health and Human Services (HHS), including the National Institutes of Health (NIH)*</td>
<td>$797.0 M</td>
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<tr>
<td>Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)</td>
<td>$206.1M</td>
</tr>
<tr>
<td>National Aeronautics and Space Administration (NASA)</td>
<td>$180.1 M</td>
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<tr>
<td>National Science Foundation (NSF)</td>
<td>$176.0 M</td>
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<tr>
<td>U.S. Department of Agriculture (USDA)</td>
<td>$20.3M</td>
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<tr>
<td>Department of Homeland Security (DHS): Science and Technology Directorate (S&amp;T) and Domestic Nuclear Detection Office (DNDO)</td>
<td>$17.7 M</td>
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<tr>
<td>Department of Commerce: National Oceanic and Atmospheric Administration (NOAA) and National Institute of Standards and Technology (NIST)*</td>
<td>$8.4M</td>
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<tr>
<td>Department of Transportation (DOT)</td>
<td>$7.9 M</td>
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<tr>
<td>Department of Education (ED)</td>
<td>$7.5 M</td>
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<tr>
<td>Environmental Protection Agency (EPA)</td>
<td>$4.2 M</td>
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**Total Budget:**
- **SBIR:** $2.25B
- **STTR:** $296M
- **All Others:** $1.070B

**Funding Breakdown:**
- **DOD:** $206M
- **NASA:** $180.1M
- **NSF:** $176.0M
- **HHS:** $797.0M
- **DOE:** $206M
- **All Others:** $1.070B

**Grants & Contracts:**
- Grants: $2.25B
- Contracts: $296M
What does an SBIR/STTR firm look like?

• 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
Phase III - Commercialization

Justification: Commercializing work that DERIVES FROM, EXTENDS OR COMPLETES an effort performed under prior SBIR/STTR agreements, including:

- Activity in the military or private sector
- SBIR/STTR-derived products or services
- Continuation of R&D

Participation

- SBIR/STTR funds CANNOT be used for Phase III contracts
- Only businesses that were awarded Phase I or II are eligible to participate in Phase III

Derives from means that the requirement or contract has its origins in or traces to the previous SBIR efforts of an SBIR firm.

Extends means that the requirement or contract applies or advances prior SBIR efforts to a different application, or uses the prior SBIR efforts in a new way.

Completes means that the requirement or contract involves commercialization or productizing of the prior SBIR efforts.
Phase III - Commercialization

- No limit on number, award amount, or duration of Phase III contracts
- May be awarded as Direct Award (we used to say sole source)
- Small business size standards do not apply (a large firm can purchase the SBIR or STTR firm and still receive Phase IIIIs for the SBIR firm’s technologies because of this exemption from the size standards)
- Subcontracts can be Phase IIIIs and Phase IIIIs can be subcontracts.
Susie has been working with a small business to develop an encoded 10GHz transmit-receive module for a tactical radio used in battlefield deployment. The small business is near completion of a second Phase II SBIR for development of the prototype module which has passed field testing and is considered to be at technology readiness level (TRL) 8. Susie visits Dan because she wants to issue a follow on award to this company using non-SBIR funding to integrate 20 transmit-receive modules into fielded tactical radios improving functionality.

Can this be done without a competition and why?
Yes! The work “derives from, extends, or completes prior SBIR Phase I or Phase II efforts” and is funded with non-SBIR dollars. This makes the award a Phase III and competition for the award has already been satisfied.
Award Searches

Keyword searches → Identify successful firms
→ Identify agency investments in technology areas

www.sbir.gov/sbirsearch/award/all
API

Searches

→ Solicitations (keywords, agencies, open, or closed)
→ Awards (keywords, agencies, companies, research institution, or year)
→ Companies (keywords, name, or DUNS)

www.sbir.gov/api
On-line Tutorials

→ Open to everyone
→ Tutorials cover Agency Introductions, Program Basics, Proposals, Accounting, and more
→ 55 Modules

www.sbir.gov/tutorials
Train the Trainer – Learning Management System

Target Audience:
→ SBDCs
→ PTACs
→ Accelerators
→ Minimum knowledge of SBIR/STTR Programs

*Next series estimated to start Jan. 2018
Evolution of E.M.I.L.Y.
Emergency Integrated Lifesaving Lanyard
A Navy SBIR/STTR Success

The Start (2001)
Marine Mammal Detection & Mitigation

The Leveraging (Silver Fox UAV)
• Video Communications
• Threat Warning System
• Sensor Classification

Realization (Today)

Combat Tested 2007

Swift Water Rescue in USA

Refugee Rescue in Greece

Worldwide Use by Lifeguards

$5M (STTR)

$7M (SBIR)

$4M in Phase 3 Funds

$6M+ Commercial Sales

$5M (STTR)

$7M (SBIR)

$4M in Phase 3 Funds

$6M+ Commercial Sales

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What's Unique About DoD

- Focused on the WARFIGHTER
- Largest SBIR program in the Federal Government
- DoD is both an investor and a customer
- Sole-sourcing allowed for follow-on awards
- Issues contracts not grants
- Retain data rights for 5 years
- Does not allow majority-owned by multiple VCOCs, equity, or hedge funds to participate
## Path To Success

### Starting with:

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<th>600+ topics</th>
<th>3 solicitations</th>
<th>7,000 Phase I proposals</th>
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### Resulting in:

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<th>1,500 Phase I awards</th>
<th>950 Phase II awards</th>
<th>&gt;$31B in commercialized products &amp; services</th>
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Technology Areas

Advanced Electronics
Air Platforms
Ground & Sea Platforms
Biomedical (ASBREM)
Information Systems
Chem Bio

Human Systems
Materials & Manufacturing Processes
Sensors
Space Platforms
Weapons
Nuclear

Battlespace
Participating DoD Components

- Army
- Navy
- Air Force
- Missile Defense Agency (MDA)
- Defense Threat Reduction Agency (DTRA)
- Defense Microelectronics Activity (DMEA)
- Defense Advanced Research Projects Agency (DARPA)
- Defense Health Agency (DHA)
- Chemical and Biological Defense (CBD)
- Special Operations Command (SOCOM)
- Defense Logistics Agency (DLA)
- National Geospatial Intelligence Agency (NGA)
A DoD Agency-wide announcement includes:

- DoD Instructions
- Service/Component Unique Instructions
- Topics

- Not all Components participate in each solicitation.
- Multiple solicitations provide opportunities to participate throughout the fiscal year.
For additional information please visit http://sbir.defensebusiness.org

To subscribe to our ListServ, email sbiroutreach@bytecubed.com

Questions? Contact us!

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sbirhelp@bytecubed.com

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# Evolution of a Navy SBIR/STTR Technology

<table>
<thead>
<tr>
<th>Year</th>
<th>Technology Details</th>
<th>Funding Details</th>
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| 2001 | Marine Mammal Detection and Mitigation  
- Automatic Detection  
- Low Cost Sensors  
- Mitigation Decision Aids | $5M STTR |
| 2007 | Silver Fox UAV Combat Tested 2007  
- Video Communications  
- Threat Warning System  
- Sensor Classification | $7M SBIR |
| 2017 | Emergency Integrated Lifesaving Lanyard  
- Worldwide use by lifeguards  
- Rescue in USA  
- Swift water rescue  
- Used in Hurricane Harvey | $4.2M in Government Phase III Funds/$6M+ Commercial Sales |
| 2018 | Mobile Gateway Buoy (MGB) Operationally Tested 2017  
- Communications  
- Video Sensors  
- Sonar Sensors  
- UUV data relay  
- Bathometric mapping |