



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

U.S. Small Business  
Administration (SBA)



U.S. Small Business  
Administration

# Leveraging America's Seed Fund



**SBIR • STTR**

America's Seed Fund

POWERED BY SBA

# 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 women and socially/economically disadvantaged individuals
- Foster **technology transfer** through cooperative R&D between small businesses and research institutions (STTR)





## Small Business Innovation Research (SBIR)

**3.2%** of external research budgets

(extramural R&D budgets greater than \$100 million/year)

**~\$3.28 billion** (FY19)

## Small Business Technology Transfer (STTR)

**0.45%** of external research budgets

(extramural R&D budgets greater than \$1 billion/year)

**~\$453 million** (FY19)

Requires small businesses to subcontract with a nonprofit U.S. research institution

Combined **~5,000 new awards** to small businesses each year

# Key Elements of SBIR/STTR Funding



## NON-DILUTED CAPITAL

The funding agency cannot take an equity position or ownership of your firm



## IP/DATA RIGHTS PROTECTION

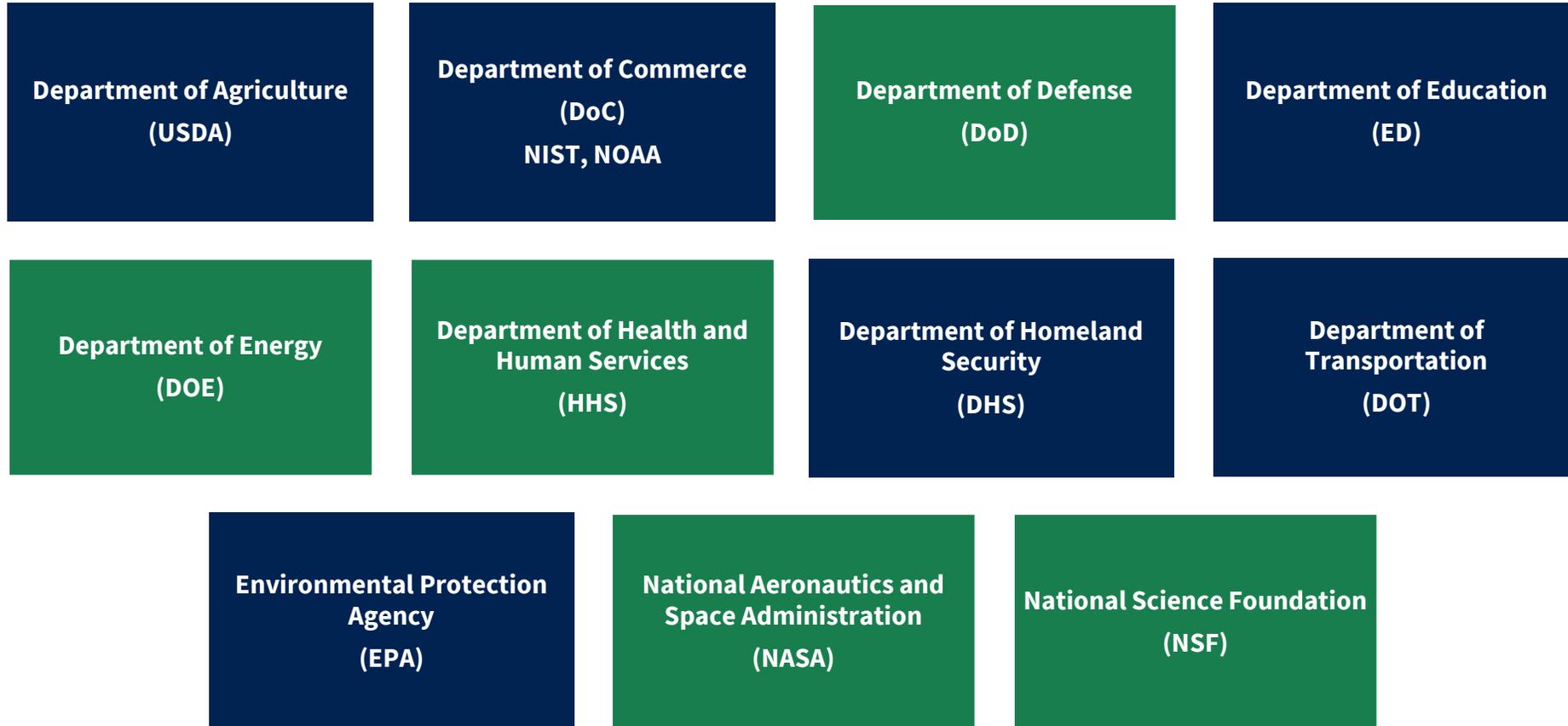
Government can't share your reports or data with anyone outside of the federal government for 20 years



## DIRECT FOLLOW ON PHASE III AWARDS

No need for further competition  
(J&A not required)

# SBIR & STTR Participating Agencies

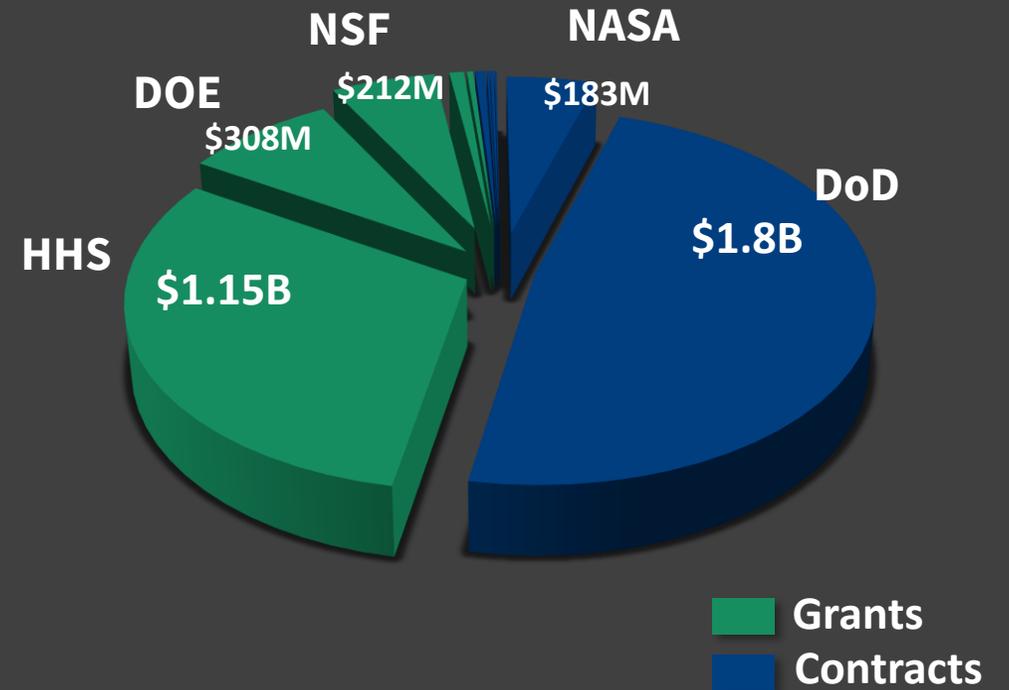


# FY2019 SBIR/STTR Budgets by Agency

Agencies	Budget
Department of Defense (DoD)*	\$1.80 B
Department of Health and Human Services (HHS)**, including the National Institutes of Health (NIH)	\$1.15 B
Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)	\$308 M
National Science Foundation (NSF)	\$212 M
National Aeronautics and Space Administration (NASA)	\$183 M
U.S. Department of Agriculture (USDA)	\$30 M
Department of Homeland Security (DHS)	\$17 M
Department of Commerce: National Oceanic and Atmospheric Administration (NOAA)	\$9.5 M
Department of Education (ED)	\$8.4 M
Department of Transportation (DOT)	\$5.2 M
Department of Commerce: National Institute of Standards and Technology (NIST)	\$3.9 M
Environmental Protection Agency (EPA)*	\$3.6 M

\* Budgeted Amount; other Agencies Obligated Amount

\*\* Provides grants and contracts



**SBIR: \$3.28 Billion**  
**STTR: \$453 Million**



## Contracting Agencies

- Agency establishes plans, protocols, requirements
- Highly focused topics
- Procurement mechanism
- More fiscal requirements
- Invoiced on progress
- Binding agreement between a buyer & seller for goods/services

**DoD, DHS, NASA, EPA, DOT, DoED**

## Granting Agencies

- Principal Investigator initiates approach
- Less-specified topics
- Assistance mechanism
- More flexibility
- Allows upfront payment
- Funds support a public purpose, best efforts in research

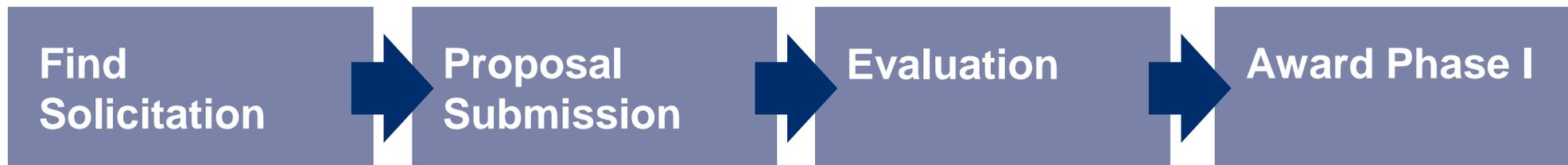
**NSF, DoE, USDA, NIST, NOAA**

Contracting and Granting: **HHS/NIH** (mostly grants)

# Three Phase Process



## Solicitation to Award Process



# Differences Between SBIR and STTR

	SBIR	STTR
<b>Partnering Requirement</b>	Permits partnering	Requires a non-profit research institution partner
<b>Principal Investigator</b>	Primary employment (>50%) must be with the small business	PI may be employed by either the research institution partner or small business (check solicitation)
<b>Work Requirement</b>	May subcontract up to: 33% (Phase I) 50% (Phase II)	Minimum: 40% Small Business 30% Research Institution Partner
<b>Program Size</b>	3.2% (FY19 - \$3.28B)	0.45% (FY19 - \$453M)
<b>Majority VC ownership</b>	Allowed by some agencies	Not allowed
<b>Participating Agencies</b>	11 agencies (extramural R&D budget > \$100M)	5 agencies (extramural R&D budget > \$1B)

# 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

**The small business is ALWAYS the applicant and awardee!**



# SATELLITE DERIVED REFLECTIVITY

Thu Sep 7, 2017 3:00 PM

Indianapolis  
Lightning Strikes

Positive: 238

Negative: 4797

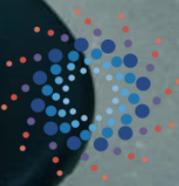
Total: 5035





# Principal Investigator (PI)

- Must be employed by the small business (or partnering research institution for STTR) at **time of award** (check solicitation)
- Should have appropriate expertise to oversee project scientifically and technically
- Expertise of the PI and team are one of the three evaluation factors



# Where to Begin? – Topic Searches

The screenshot shows the SBA SBIR search website. The 'FUNDING' menu item is circled in red. A red arrow points to the search input field. The search results are for 'Closed Topic Search' and show two results: PA-14-157: HHS STTR PA-14-157 and PA-14-154: HHS SBIR PA-14-154. The search interface includes a search bar with 'Search Keywords' and a 'Search' button, a 'Reset' button, and a 'Download' button. A note indicates that the solicitations are copies from various SBIR agency solicitations and are not necessarily the latest and most up-to-date. The search results display the number of results (1 - 10 of 7720) and the release, open, due, and close dates for each result. The results are filtered by Agency, Phase, and Program.

→ Keyword searches –  
**Learn which agencies  
fund your technology  
area!**

[www.sbir.gov/sbirsearch/topic/past](http://www.sbir.gov/sbirsearch/topic/past)

# Where to Begin? – Award Searches

- Identify successful firms
- Identify agency investments in technology areas

HOME LINKS ▾ ABOUT ▾ FUNDING ▾ **AWARDS ▾** NEWS ▾ TUTORIALS ▾ RESOURCES ▾

Home / Award Information

**FILTER BY:**

Agency

- Department of Agriculture (105)
- National Institute of Food and Agriculture (0)
- Department of Commerce (47)
- National Institute of Standards and Technology (8)
- National Oceanic and Atmospheric Administration (3)

Phase

- Phase I (9864)
- Phase II (4651)

Program

- SBIR (13013)
- STTR (1502)

Year

- 2017 (85)
- 2016 (618)
- 2015 (975)

**Awards Information** View As: [List](#) [Chart](#) [Map](#)

Search Keywords Company Name Topic Code Search Reset

**!** The Award database is continually updated throughout the year. As a result, data for the given year is not complete until April of the following year. Annual Reports data is a snapshot of agency reported information for that year and hence might look different from the live data in the Awards Information charts.

Displaying 1 - 10 of 14515 results Download Awarded Year (descending)

**Metal Digital Direct Manufacturing (MDDM) for Close-Out of Combustion Chambers and Nozzle Fabrications**  
*SBC: Keystone Synergistic Enterprises, Inc. Topic: T12.04*

This NASA sponsored STTR project will investigate methods for close-out of large, liquid rocket engine, nickel or stainless steel nozzle, coolant channels utilizing robotic laser and pulsed-arc additive manufacturing (AM) methods. Structural jacket to coolant channel land area interface strength will be quantified and metallurgical characterization completed. Process optimizations will be conducted ...

STTR Phase II 2017 National Aeronautics and Space Administration

**Wideband Autonomous Cognitive Radios for Networked Satellites Communications**  
*SBC: Bluecom Systems And Consulting, LLC Topic: T5.01*

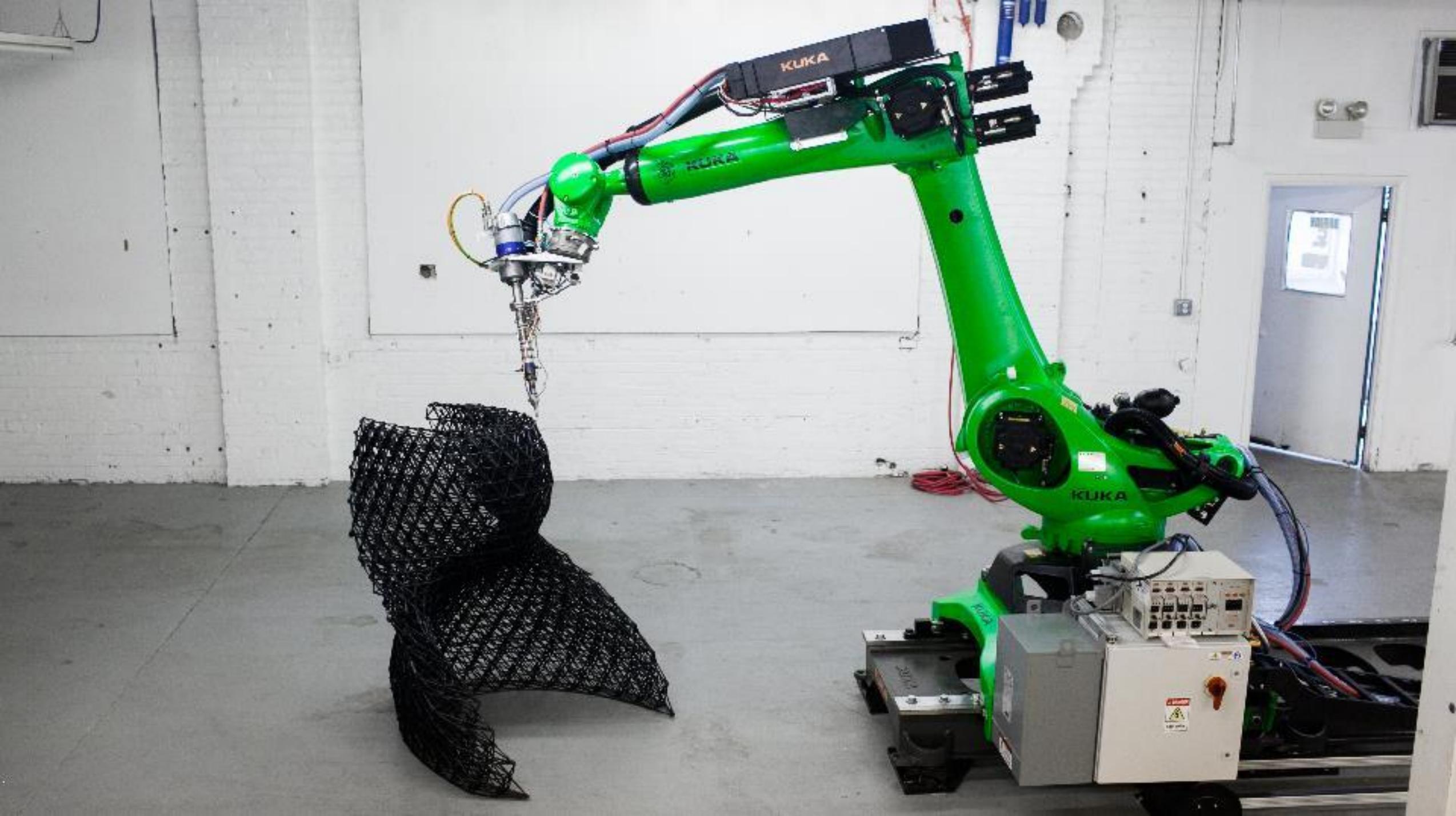
Wideband Autonomous Cognitive Radios (WACRs) are advanced radios that have the ability to sense state of the RF spectrum and the network and self-optimize its operating mode in response to this sensed state. During the just

[www.sbir.gov/sbirsearch/award/all](http://www.sbir.gov/sbirsearch/award/all)

# Why We Work on America's Seed Fund



[www.sbir.gov/news/success-stories](http://www.sbir.gov/news/success-stories)





# Online Tutorials

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

[www.sbir.gov/tutorials](http://www.sbir.gov/tutorials)

The screenshot shows a web page for a tutorial. At the top, a green banner contains the text "COURSE 4 FINDING TOPICS" and "TUTORIAL 1 HOW DO I FIND THE APPROPRIATE TOPIC?". Below this is a "Back to Tutorials" button with a left-pointing arrow. On the left side, there are two sections: "FORMATS" with options for "Audio/Video", "Multimedia" (highlighted), and "PDF"; and "TOOLS" with options for "Glossary", "Links", and "Quiz". At the bottom of the left sidebar is a "Hide Options" button. The main content area contains two paragraphs of text. The first paragraph discusses the requirement to find a relevant topic at one of the participating agencies, noting that unsolicited proposals are not accepted. The second paragraph describes the evolution of the search process from paper copies to electronic search engines. At the bottom right, there is a video player with a play button and a green banner that says "SBIR/STTR TOPIC SEARCH ENGINES".

COURSE 4  
FINDING TOPICS

TUTORIAL 1  
HOW DO I FIND  
THE  
APPROPRIATE  
TOPIC?

← Back to Tutorials

FORMATS

- ▶ Audio/Video
- ▶ **Multimedia**
- ▶ PDF

TOOLS

- Glossary
- 🔗 Links
- 📝 Quiz

← Hide Options

If you want to submit an SBIR/STTR proposal, you must first find a relevant topic at one of the participating agencies. The SBIR/STTR programs do not accept "unsolicited proposals," but instead require that you respond to one of their current topics, even if they are very broad like topics found at many of the agencies that make their SBIR/STTR awards as grants vs. contracts. All of the agencies list their topics in their solicitation or Funding Opportunity Announcement (FOA). The only exception is the Department of Energy which publishes a separate topic list several weeks before it releases its FOA.

In the early days of SBIR/STTR, you had to read a paper copy of the solicitation from beginning to end to see if there were any relevant topics. Now that the solicitations are all distributed electronically, it is much faster, easier, and more productive to find topics by using search engines. You type in your key word(s), and the search engine goes through the currently open topics (or, at your option, topics that closed in the recent past) and tells you which topics contain your key word(s).

SBIR/STTR  
TOPIC  
SEARCH  
ENGINES

# Connect to Your Network of Local Support

## Local Resources Locator

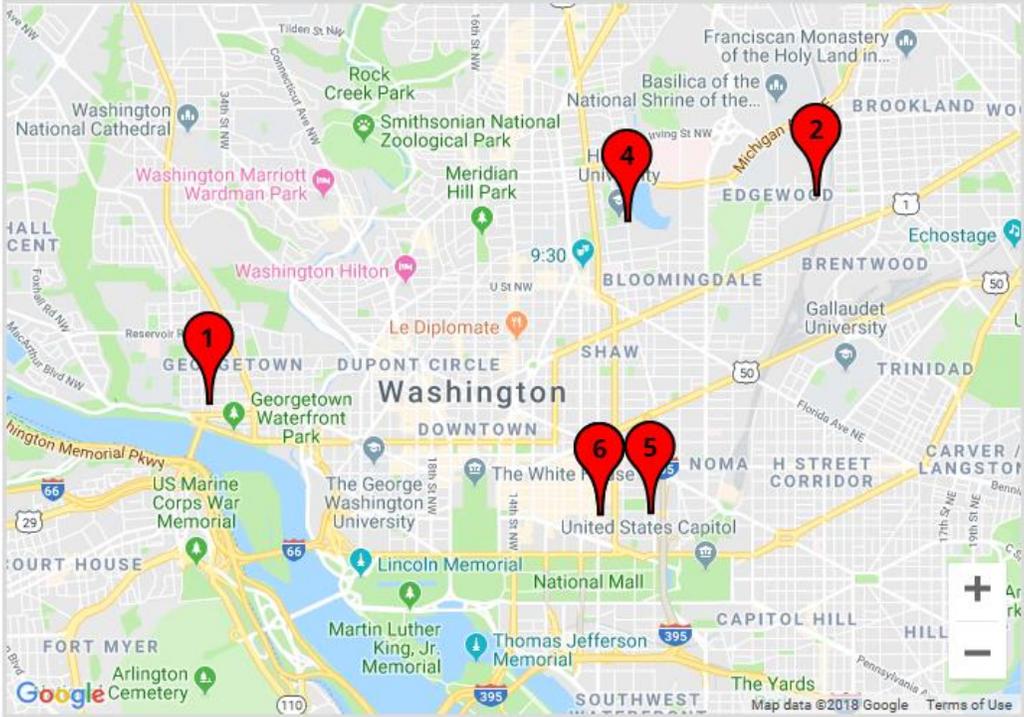
District of Columbia

**State Contact Type**

- Manufacturing Extension Partnership (MEP)
- Procurement Technical Assistance Center (PTAC)
- SBA Cluster
- SBA Growth Accelerator
- Small Business Development Center (SBDC)
- State Contact
- Current FAST Funding
- Previous FAST Funding

Apply

Local Resources Glossary



The map shows Washington, DC with six red location pins numbered 1 through 6. Pin 1 is in Georgetown, Pin 2 is in Edgewood, Pin 3 is in the National Mall area, Pin 4 is near the University of the Holy Land, Pin 5 is near the United States Capitol, and Pin 6 is near the Lincoln Memorial.

SBA works with a number of local partners to counsel, mentor, and train small businesses in the innovation ecosystem.

[www.sbir.gov](http://www.sbir.gov)



Login/Register Contact Us Search

Home Links About Funding Awards News Events Tutorials Resources

FIND FUNDING

Search Open Funding Topics Search

SUCCESS STORIES

GET THE 411



### Learn About

- Overview
- Policy Directive
- Authorization Act
- Intellectual Property
- Commercialization Successes
- FAQs
- Performance Benchmarks
- Participating Agencies
- How to Apply
- Report Fraud, Waste & Abuse



### I'm a(an)...

- Applicant
- Awardee
- Investor
- Large Business
- Agency Representative



### I Want to...

- Start a Small Business
- Register my company
- Update my company profile/commercialization
- Contact an SBIR Agency
- Submit an SBIR/STTR related event
- File for IP Protection
- Learn more about Global Innovation Exchange
- View Self Help Online Tutorials



# Stay In Touch

[Brittany.Sickler@sba.gov](mailto:Brittany.Sickler@sba.gov)

 [@SBIRgov](https://twitter.com/SBIRgov)  
[#seedthefuture](https://twitter.com/hashtag/seedthefuture)

[www.sbir.gov](http://www.sbir.gov)





# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

U.S. Patent and  
Trademark Office (USPTO)  
NaThanya Ferguson (MD)

**UNITED STATES  
PATENT AND TRADEMARK OFFICE**

**uspto**

# USPTO Resources for Independent Inventors, Small Business Owners, and Entrepreneurs

NaThanya Ferguson

Supervisory Innovation Development Program Manager

UNITED STATES  
PATENT AND TRADEMARK OFFICE



# Types of intellectual property

	 <b>Trademark</b>	 <b>Copyright</b>	 <b>Trade secret</b>
New, inventive ideas	Identifies the origin of goods or services	Creative expression stored in a tangible form	Any information that is valuable & kept confidential
	 	 	 

# Visit us at [www.uspto.gov](http://www.uspto.gov)



The screenshot shows the USPTO website homepage. At the top left is the 'uspto' logo and the text 'UNITED STATES PATENT AND TRADEMARK OFFICE'. To the right are links for 'About Us', 'Jobs', 'Contact Us', and 'MyUSPTO'. A search bar contains the text 'Search uspto.gov' and a magnifying glass icon. Below the header is a navigation bar with four tabs: 'Patents', 'Trademarks', 'IP Policy', and 'Learning and Resources'. The main content area features a large image of a woman in a red shirt sitting with a herd of black cows. Below the image is a blue banner with the text 'Thinking like the herd' and a link to 'FULL STORY >'. To the right of the image is a blue box titled 'Find It Fast' with the text 'Quick links to applications and tools.' and two buttons: 'Patents >' and 'Trademarks >'. Below this is a white box titled 'New to IP?' with the text 'Learn the basics of intellectual property.' and a list of links: 'Patent basics >', 'Trademark basics >', and 'Find help in your area >'. A question mark icon is positioned to the left of these links.

**uspto** UNITED STATES PATENT AND TRADEMARK OFFICE

About Us | Jobs | Contact Us | MyUSPTO

Search uspto.gov

Patents Trademarks IP Policy Learning and Resources

**Thinking like the herd**  
A trip to the farm changed Temple Grandin's life forever [FULL STORY >](#)

**Find It Fast**  
Quick links to applications and tools.

Patents > Trademarks >

**New to IP?**  
Learn the basics of intellectual property.

Patent basics >  
Trademark basics >  
Find help in your area >



# Inventor and entrepreneur resources

- USPTO's hub for resources and information for inventors, entrepreneurs, and small businesses.
- Webpage: [www.uspto.gov/inventors](http://www.uspto.gov/inventors)



## Inventor and entrepreneur resources

The image shows the main content area of the USPTO website for inventor and entrepreneur resources. It is organized into four columns of links and information. The first column, "Patents for startups", includes links for "Patent process overview", "Inventors Assistance Center", "Patents FAQs", "Patents homepage", "Search for patents", and "Official Gazette for patents". The second column, "Trademarks for inventors and entrepreneurs", includes links for "Trademark Basics", "Trademark Electronic Search System (TESS)", "Trademark Electronic Application System (TEAS)", "Trademark Status and Document Retrieval (TSDR)", "Electronic Trademark Assignment System (ETAS)", "Assignments on the Web (AOTW)", "Trademark Trial and Appeal Board (TTAB)", and "Trademark Manual of Examining Procedure (TMEP)". The third column, "Inventor and entrepreneur assistance", includes links for "Inventors Assistance Center", "Patents Ombudsman Office", "BusinessUSA", "Trademark Assistance Center", and "University Outreach Program". The fourth column, "Education and information", includes links for "Scam prevention", "Provisional Application for Patent", "General Information", "A Guide to Filing a Nonprovisional Utility Patent Application", "A Guide to Filing a Design Patent Application", "Basic Facts About Trademarks", "Financial Manager", "U.S. map of state resources", and "IP Awareness Assessment". Below these columns are four additional sections: "Scam Prevention" (with links for "Scam prevention basics", "Non-USPTO trademark solicitations", "American Inventors Protection Act of 1999", "Federal Trade Commission", and "Consumer protection"); "Pro Se and Pro Bono" (with links for "Pro Se", "Pro Bono", "Patent and Trademark Resource Centers", and "Law School Clinics"); "Current Events" (with a link for "Upcoming events"); and "Other federal resources" (with links for "myRA: a retirement savings account from the U.S. Dept. of the Treasury" and "Small Business Innovation Research Program").



# Inventor and entrepreneur resources by state

Resources and assistance in your state for filing for a patent or registering a trademark

- Free patent and trademark legal assistance
- Learn to search inventions and trademarks
- Attend events in your region
- Network with inventor and entrepreneur organizations in your state
- Accessible via [uspto.gov](https://www.uspto.gov) homepage

There are lots of resources and assistance to make filing for a patent or registering a trademark easier, more affordable, and ultimately result in strong legal protection for your invention or brand. For example, if you can't afford an attorney, there are several programs that provide free legal representation. Use the map below to find out what is available in your state.

And remember, our [Inventor and entrepreneur resources page](#) is the USPTO hub for resources and information for inventors, entrepreneurs, and small businesses.

Select your state below to find resources

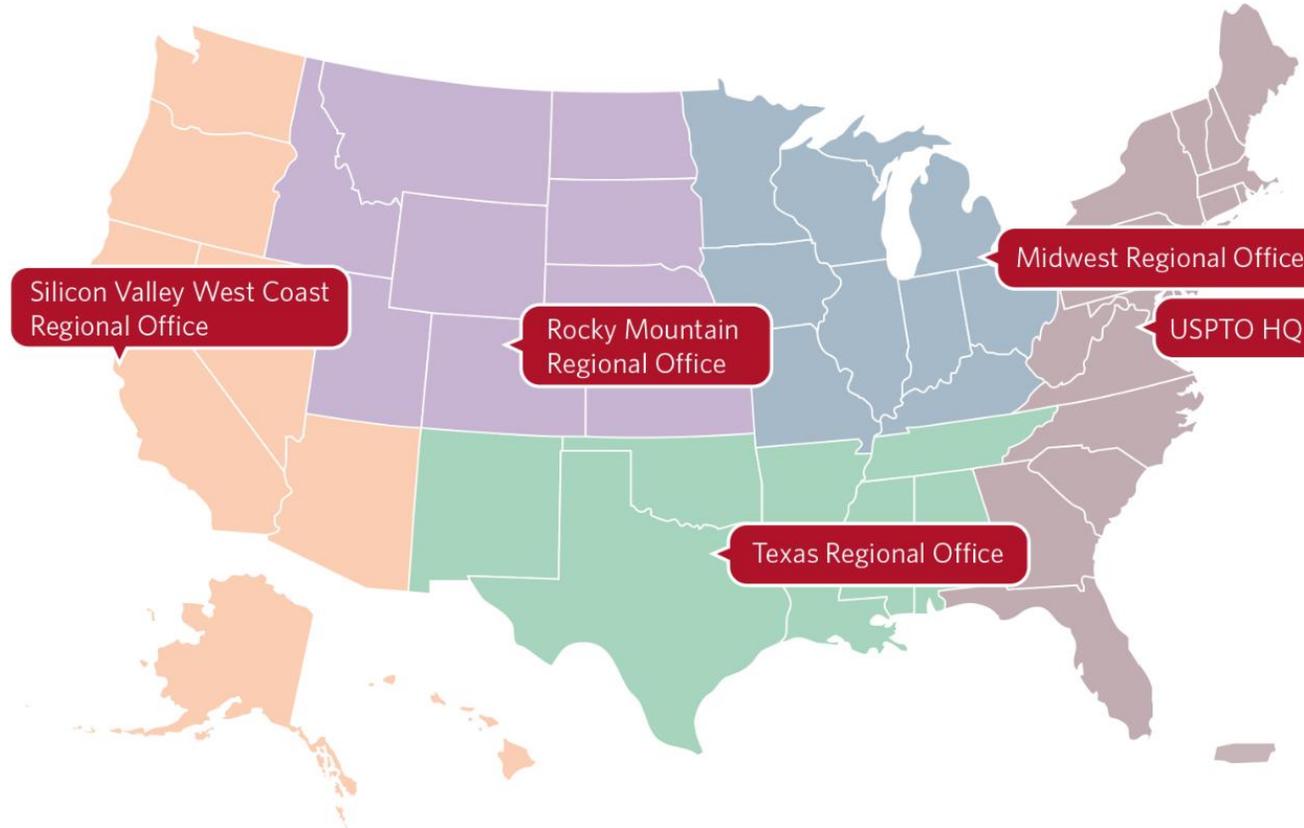


This map derived from [commons.wikimedia.org](https://commons.wikimedia.org)

List of State Names

Alabama	Georgia	Maryland	New Jersey	Rhode Island	Wisconsin
Alaska	Hawaii	Massachusetts	New Mexico	South Carolina	Wyoming
Arizona	Idaho	Michigan	New York	South Dakota	
Arkansas	Illinois	Minnesota	North Carolina	Tennessee	
California	Indiana	Mississippi	North Dakota	Texas	
Colorado	Iowa	Missouri	Ohio	Utah	
Connecticut	Kansas	Montana	Oklahoma	Vermont	
Delaware	Kentucky	Nebraska	Oregon	Virginia	
District of Columbia	Louisiana	Nevada	Pennsylvania	Washington	
Florida	Maine	New Hampshire	Puerto Rico	West Virginia	

# USPTO offices



## **Detroit**

- Operational since July 2012

## **Denver**

- Byron G. Rogers Federal Building
- Operational since July 2014

## **Silicon Valley**

- San Jose City Hall Building
- Operational since October 2015

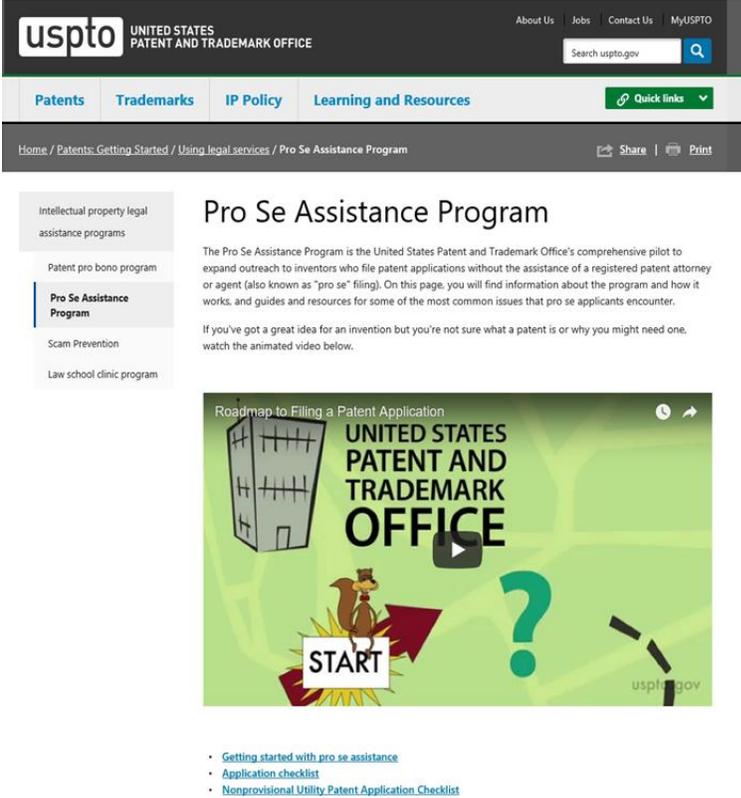
## **Dallas**

- Terminal Annex Federal Building
- Operational since November 2015



# Pro Se Assistance Program

- Hours of Operation
  - 8:30 a.m. – 5 p.m. (ET),  
Monday through Friday
- Email
  - [innovationdevelopment@uspto.gov](mailto:innovationdevelopment@uspto.gov)
- Phone
  - (866) 757-3848
  - Webpage  
[www.uspto.gov/ProSePatents](http://www.uspto.gov/ProSePatents)



The screenshot shows the USPTO website's Pro Se Assistance Program page. The header includes the USPTO logo and navigation links for Patents, Trademarks, IP Policy, and Learning and Resources. The main content area features a sidebar with links to various assistance programs, including the Pro Se Assistance Program. The main text describes the program's purpose and provides a link to an animated video titled "Roadmap to Filing a Patent Application". Below the video, there are links to "Getting started with pro se assistance", "Application checklist", and "Nonprovisional Utility Patent Application Checklist".

uspto UNITED STATES PATENT AND TRADEMARK OFFICE

Patents Trademarks IP Policy Learning and Resources

Home / Patents: Getting Started / Using legal services / Pro Se Assistance Program

Intellectual property legal assistance programs

Patent pro bono program

**Pro Se Assistance Program**

Scam Prevention

Law school clinic program

## Pro Se Assistance Program

The Pro Se Assistance Program is the United States Patent and Trademark Office's comprehensive pilot to expand outreach to inventors who file patent applications without the assistance of a registered patent attorney or agent (also known as "pro se" filing). On this page, you will find information about the program and how it works, and guides and resources for some of the most common issues that pro se applicants encounter.

If you've got a great idea for an invention but you're not sure what a patent is or why you might need one, watch the animated video below.

Roadmap to Filing a Patent Application

UNITED STATES PATENT AND TRADEMARK OFFICE

START

- [Getting started with pro se assistance](#)
- [Application checklist](#)
- [Nonprovisional Utility Patent Application Checklist](#)

# Trademark Assistance Center (TAC)

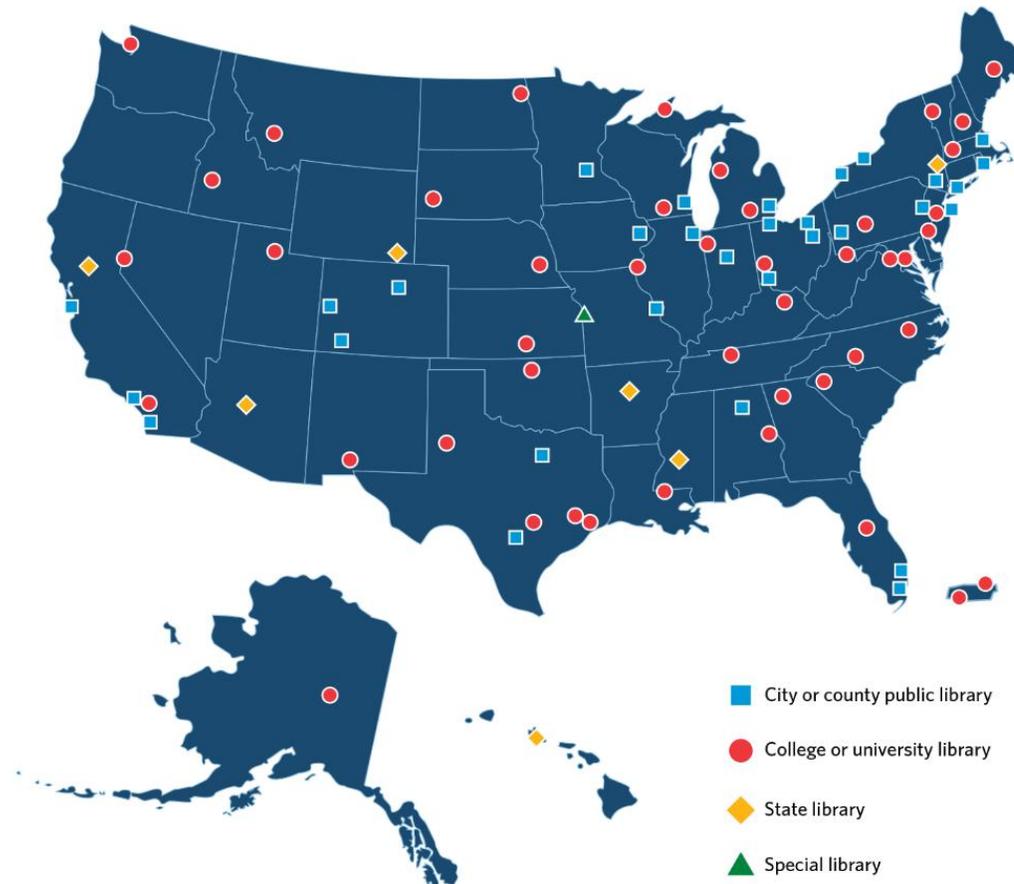
- Provides general information about the registration process
- Responds to status inquiries
- Hours of Operation
  - 8:30 a.m. – 8 p.m. (ET), Monday through Friday
- Phone
  - (571) 272-9250 or (800) 786-9199
- Email
  - TrademarkAssistanceCenter@uspto.gov
- Webpage: [www.uspto.gov/TrademarkAssistance](http://www.uspto.gov/TrademarkAssistance)



# Patent and Trademark Resource Centers (PTRC)

Nationwide network of public, state, and academic libraries that are designated by the USPTO to disseminate patent and trademark information and to support intellectual property needs of the public.

[www.uspto.gov/ptrc](http://www.uspto.gov/ptrc)



# Patent and Trademark Resource Centers (PTRCs)

- Assist in identifying relevant USPTO search tools and related resources
- Demonstrate how to use search tools to conduct a preliminary patent search
- Demonstrate how to use search tools to conduct a preliminary trademark search
- Provide access to the PubEAST and PubWEST examiner-based search systems



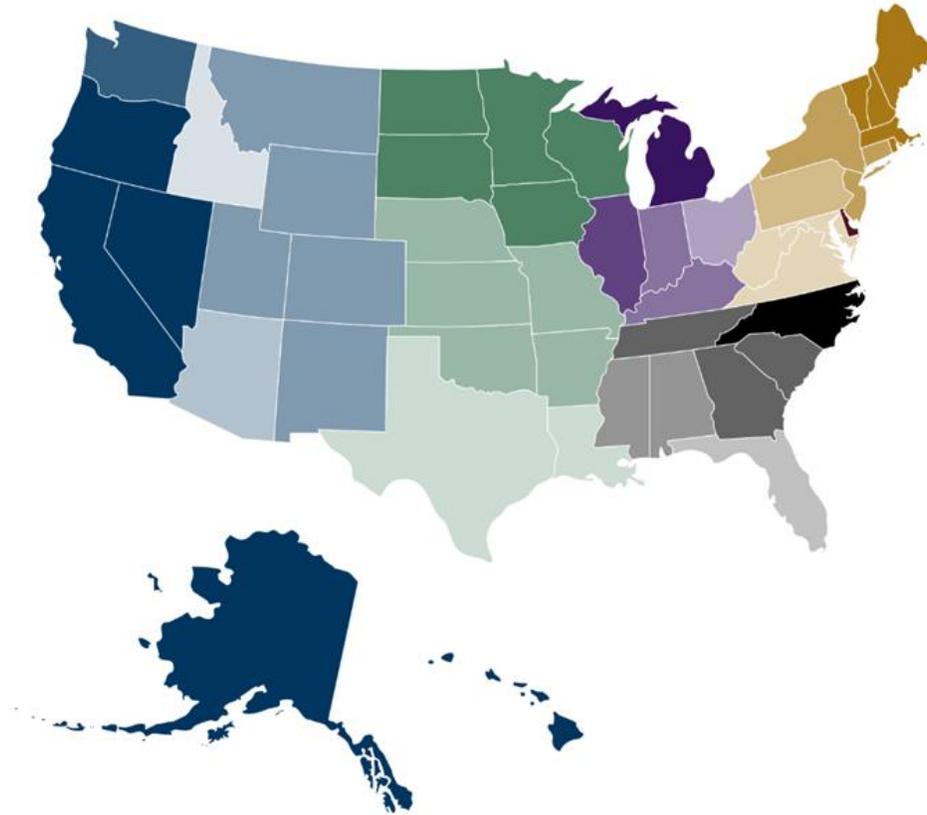
# Free legal assistance\*

- Patent Pro Bono Program
- Law School Clinic Certification Program

*\*Applicant(s) must pay for all USPTO fees*



# Patent Pro Bono Program



- |                                      |                                      |                              |
|--------------------------------------|--------------------------------------|------------------------------|
| ■ Washington Pro Bono Patent Network | ■ Gateway Venture Mentoring Service  | ■ New York Tri State Program |
| ■ Idaho Patent Pro Bono              | ■ TALA                               | ■ Delaware Program           |
| ■ CLA                                | ■ Chicago-Kent Patent Hub            | ■ FCBA (Mid-Atlantic)        |
| ■ ProBoPat                           | ■ PatentConnect for Hoosiers (IN KY) | ■ PA Patent                  |
| ■ Arizona Public Patent Program      | ■ Ohio Invents                       | ■ NC Leap                    |
| ■ LegalCorps (MN)                    | ■ BBVLP Patent Program (MS AL)       | ■ Georgia Patents            |
| ■ Pro Bono Patent Project (MI)       | ■ New England Program                | ■ Patent Pro Bono FL         |



# Patent Pro Bono Program

In general, there are 3 basic eligibility requirements:

1. Household income below a certain threshold
2. Knowledge of the patent system
3. You must have an invention—not just an idea

# Patent Pro Bono Program

- Learn more about how to apply for patent pro bono assistance:
  - [www.uspto.gov/probonopatents](http://www.uspto.gov/probonopatents)
- Questions? Please email: [probono@uspto.gov](mailto:probono@uspto.gov)



USPTO  
**Law School**  
CLINIC CERTIFICATION PROGRAM



# Reduced patent fees

## Small Entity

- 50% reduction in most patent fees
- Must be an individual or
- A small business (less than 500 employees) or a non-profit organization

## Micro-Entity

- 75% reduction in most patent fees
- Meet small entity requirement
- Filed no more than 4 previous applications
- Income not greater than 3x median income
- Not assigned to other than a micro-entity
- Inventions assigned to employer don't count against you

For more information on Micro Entity: [www.uspto.gov/MicroEntity](http://www.uspto.gov/MicroEntity)



# Patents Ombudsman Office

- Assists applicants throughout the application process including initial filing, patent examination, and post examination
- Helps applicants get their applications back on track.
- Hours of Operation: 8:30 a.m. – 8 p.m. (ET), Monday through Friday
  - Telephone: (571) 272-5555 or (855) 559-8589
  - Email: PatentsOmbudsmanProgram@uspto.gov
- Website:
  - [www.uspto.gov/Ombudsman](http://www.uspto.gov/Ombudsman)





# Thank you!

**NaThanya Ferguson**

Supervisory Innovation  
Development Program Manager

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571-272-8033

[www.uspto.gov](http://www.uspto.gov)



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

## 5 Minute Reverse Pitch



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

## U.S. Navy



# Department of Navy (DON)

## Small Business Innovation Research (SBIR)

## Small Business Technology Transfer (STTR)

[www.navysbir.com](http://www.navysbir.com)

[navy-sbir-sttr.fct@navy.mil](mailto:navy-sbir-sttr.fct@navy.mil)

- Primary Program Goals:
  - Use small business to develop innovative R&D that addresses DON need
  - Commercialize (Phase III) SBIR-developed technology into a DON platform or weapons/communication system, or for facilities use in expeditionary bases in new “pivot” locales in Africa and Asia
- About the Program:
  - Acquisition Driven Process with Strong Technology Pull
  - \$400 M+ annual funding supporting small business innovation/research
  - Wide range of SBIR/STTR topics driven by PEO/PM/FNC specific needs
  - *Making a great program better through the use of pilot efforts*

**We Succeed When You Succeed**



# Why Participate in SBIR/STTR?

- Largest source of early stage R&D funds for small businesses
- Builds credibility of company's research
- Data Rights retained for 5 years
  - STTR: small business must have data rights agreement with research institution
- Small business can maintain ownership of equipment purchased under Phase I and Phase II
- Better alternative than mortgaging the house...again!



# What is part of DON SBIR/STTR?





# Broad Agency Announcement (BAA) Schedule

- DoD BAAs are released 3 times per year. The upcoming schedule is listed below.
- The .1/A BAA typically has the most Agency participation and the largest number of topics.
- FY19.3 BAA has Standard, new Technology Acceleration, and Direct to Phase II (DP2) topics.
- FY20.1 BAA will have Standard, ADAPT 2.0, and DP2 topics.

<b>Upcoming BAA Schedule</b>			
<b>BAA</b>	<b>Pre-Release</b>	<b>Open</b>	<b>Close</b>
FY19.3/C	23 August 2019	24 September 2019	23 October 2019
FY20.1/A	26 November 2019	8 January 2020	12 February 2020
FY20.2/B	22 April 2020	20 May 2020	17 June 2020



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

## U.S. Air Force (USAF)



U.S. AIR FORCE



[www.afsbirsttr.com](http://www.afsbirsttr.com)

# From Concept to Commercialization

**Michael Bilinski**  
Portfolio Manager  
Air Force SBIR/STTR

**AF SBIR/STTR Overview**  
FY2019



## CONNECTING

INDUSTRY AND ACADEMIA WITH U.S. AIR FORCE NEEDS

SMALL BUSINESS INNOVATION RESEARCH | SMALL BUSINESS TECHNOLOGY TRANSFER

DISTRIBUTION A: APPROVED FOR PUBLIC RELEASE (Case #: 88ABW-2018-3378)



# United States Air Force Mission

**Fly, Fight, and Win...In *Air, Space, and Cyberspace***

**“The first essential of air power is preeminence in research.”**

**- General Henry “Hap” Arnold**

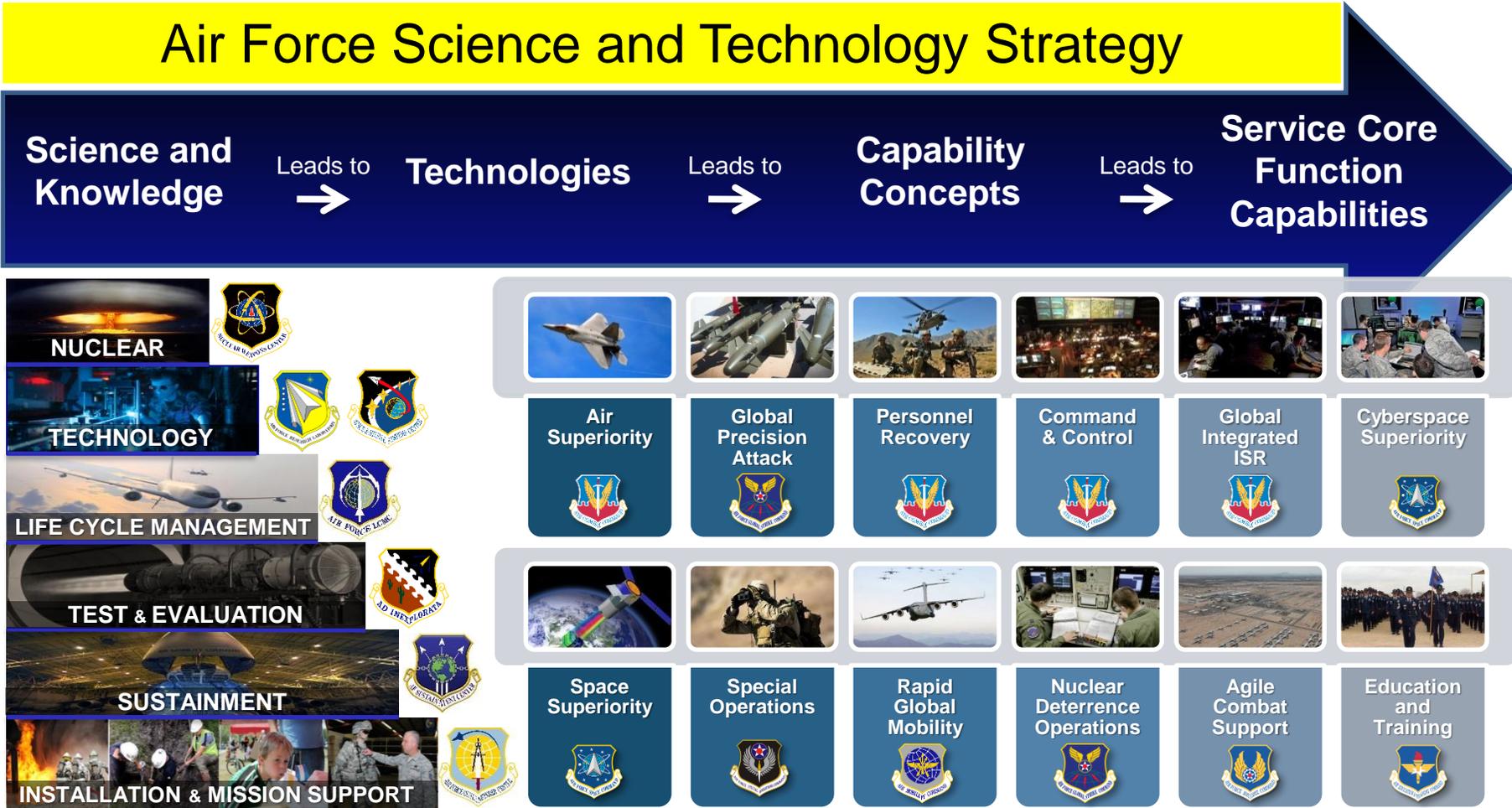
**“...innovation – fueled by intelligent, creative Airmen – will remain a key part of who we are and what we value as a service.”**

**- General Welsh**





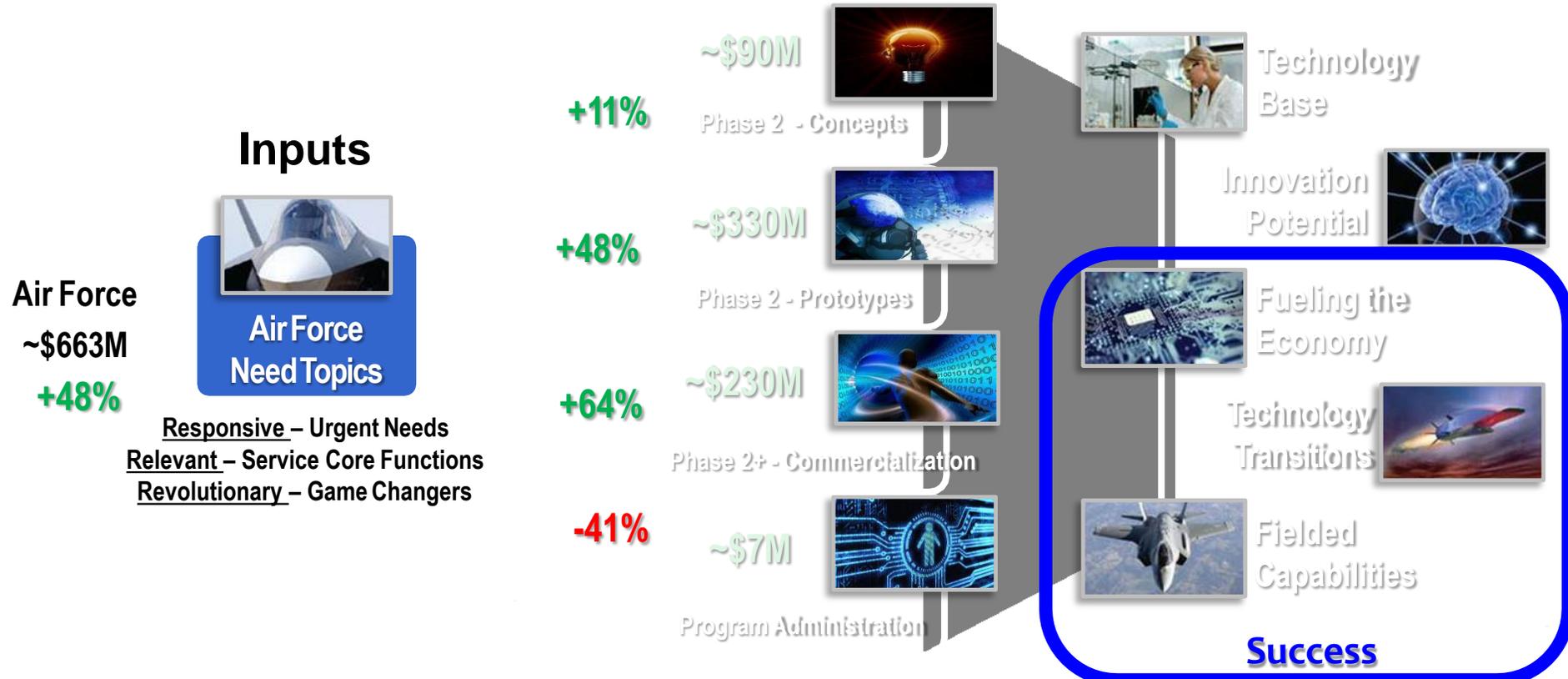
# Turning Science into Capabilities





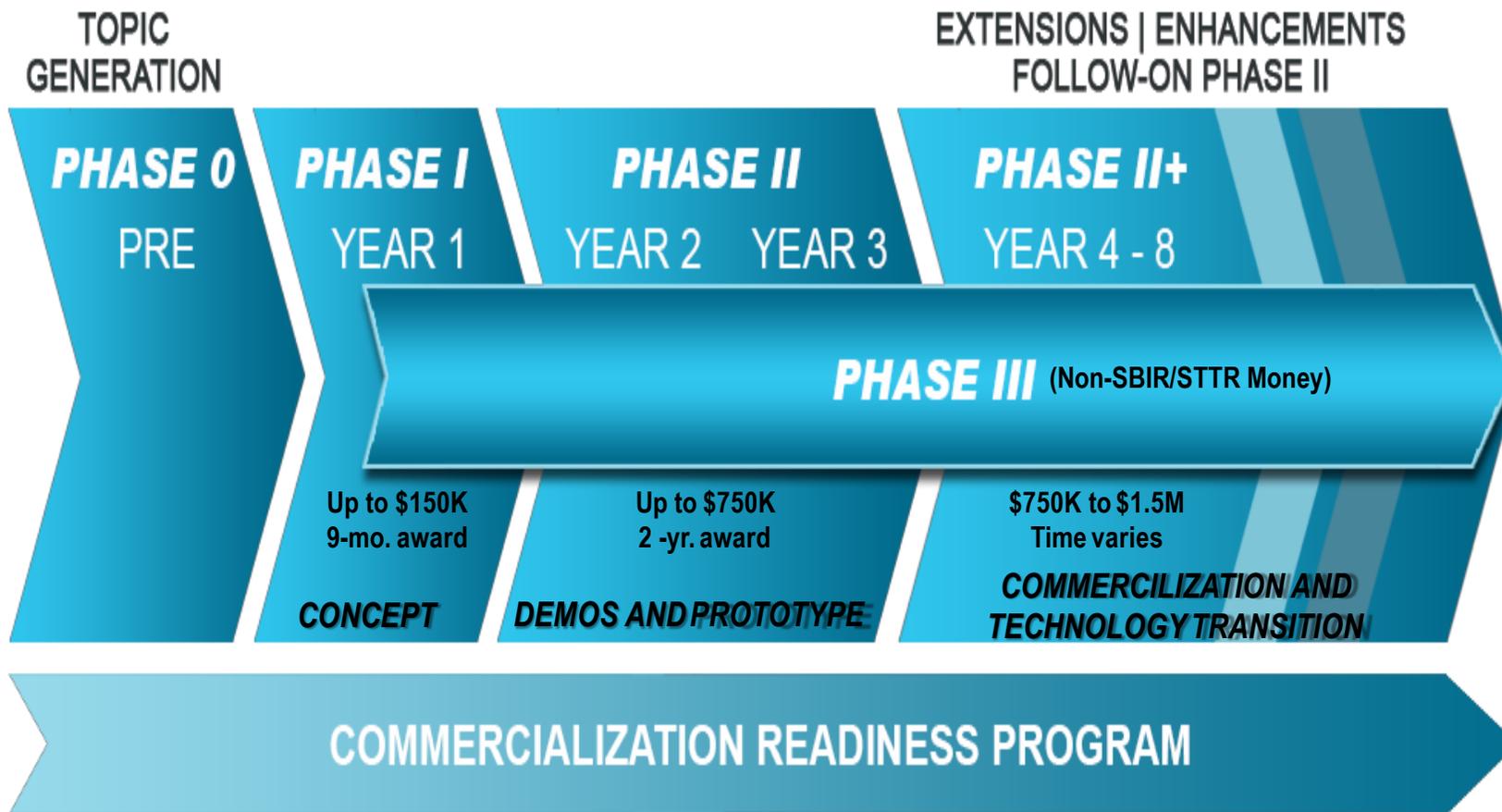
# The AF Small Business Innovation Research (AF SBIR/STTR) Program

## FY2018 Portfolio





# AF SBIR/STTR Program Structure





# AF SBIR/STTR “Special Initiatives”



Provide an opportunity for small businesses with an Air Force research and development contract, in particular SBIR/STTR contracts, to *TEST, EXPERIMENT, CONDUCT DATA COLLECTION, INSERT, and/or otherwise SHOWCASE and DEMONSTRATE* state-of-the-art warfighting technologies in a realistic operational environment.



“INVENTORS MAKE STUFF...BUT  
**INNOVATORS  
MAKE HISTORY”**

— D. Shahady





# Contact Us

- Contact the Air Force SBIR/STTR Program Office at 1-800-222-0336 - [info@afsbirsttr.com](mailto:info@afsbirsttr.com)
- Visit our website for SBIR POCs, topic info, newsletter, etc.:

[www.afsbirsttr.com](http://www.afsbirsttr.com)



**SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

Defense Advanced Research  
Projects Agency (DARPA)



# Small Business Programs Office (SBPO)



Jason Preisser  
Program Director



# Doing Business with DARPA

---

DARPA makes pivotal investments in ideas that lead to breakthrough technologies for national security.

To maximize the pool of innovative proposal concepts it receives, DARPA strongly encourages participation by all capable sources: industry, academia, and individuals.

## The DARPA Culture

- Maintain and encourage innovation and the ability to execute rapidly and effectively.
- DARPA Program Managers – “Key individuals” are:
  - selected from industry, academia, and Government agencies (longevity with DARPA 3-5 years)
  - considered at the top of their fields
  - tackles difficult challenges and takes big risks which push the limits of their disciplines.

<http://www.darpa.mil/about-us/about-darpa>



## Doing Business with DARPA (continued)

---

- Become familiar with the challenges and opportunities of National Security.
- Contact a DARPA Program Manager (PM) about your idea prior to submitting a white paper or proposal to gain insight into the general need for the type of effort. PMs are the key to working with DARPA.
- Ideas should be compelling with potential for revolutionary change.
- Visit [www.grants.gov](http://www.grants.gov) or [www.fedbizopps.gov](http://www.fedbizopps.gov) to view DARPA Broad Agency Announcements (BAAs), Research Announcement (RAs), and Requests for Proposals (RFPs).
- Visit <https://sbir.defensebusiness.org/> to view DoD SBIR and STTR Program Announcements.

Think **boldly**. Embrace risk.



# Technology Offices

---

## **BTO** **Biological Technology**

Bio-complexity | Bio-systems | Disease | Health | Med-Devices | Syn-Bio

## **DSO** **Defense Sciences**

Autonomy | Complexity | Fundamentals | Materials | Math | Sensors

## **I2O** **Information Innovation**

Algorithms | Cyber | Data | ISR | Networking | Processing | Programming

## **MTO** **Microsystems**

Decentralization | Electronics | EW | Globalization | Microsystems | Mobile | Photonics | PNT | Spectrum

## **STO** **Strategic Technology**

Air | Communications | Countermeasures | EW | ISR | Mobile | Spectrum | Tech-Foundations

## **TTO** **Tactical Technology**

Air | Ground | ISR | Maritime | Munitions | Robotics | Space



# Streamlined and Competitive Process

---

## Broad Agency Announcement (BAA) Characteristics:

- No common Statement of Work (SOW)
- Varying technical approaches/solutions are anticipated
- Proposals are evaluated with technical quality and approach as the main factor
- Communication with proposers allowed during the open period of the BAA
- White papers or proposal abstracts may be solicited
- Usually have Industry Days where Program Managers brief interested communities on the research program solicitation

## BAA Types:

- Tech Offices will issue program-specific BAAs throughout the year
- Tech Offices will also issue one or two year-long BAAs with a more general scope (rolling submission process)



# Seedlings vs. Programs vs. SBIR/STTR

---

## Seedlings

- Open to all capable sources
- Usually submitted through Office-Wide BAA
- Small short duration (6-9 months) projects
- Move concepts from “disbelief” to “mere doubt”
- May lead to the next generation of program ideas

## Programs

- Open to all capable sources
- Proposals solicited through specific program BAAs
- Often multi-year, multi-disciplinary efforts
- Technology development to move from “possibility” to “capability”

## SBIR/STTR

- Open to eligible small business concerns
- Usually submitted through DoD SBIR/STTR BAA
- Phase I feasibility up to \$225K
- Phase II prototype development up to \$1.5M
- May lead to the next generation of program ideas



## How we think: The Heilmeier Catechism

---

Important questions to consider when approaching DARPA with ideas:

- What are you trying to do? (no jargon!)
- How does this get done today?
- What is new about your approach?
- If you succeed, what difference do you think it will make?
- How long do you think it will take?
- Can your work transition (to the DoD or others)?
- How much will it cost?

**<http://www.darpa.mil/work-with-us/heilmeier-catechism>**



## Contact Information

---

Small Business Programs Office (SBPO)  
675 North Randolph Street  
Arlington, VA 22203-1714

<http://www.darpa.mil/work-with-us/for-small-businesses>

Jason Preisser  
Program Director

Small Business Support Team  
(703) 526-4170  
[sbir@darpa.mil](mailto:sbir@darpa.mil)



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

## Missile Defense Agency (MDA)



# MISSILE DEFENSE AGENCY

## *Advanced Research Overview*



**DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.**



**Approved for Public Release  
18-MDA-9585 (12 Apr 18)**



# Missile Defense Agency Mission

To develop and deploy a **layered** Missile Defense System to **defend** the United States, its deployed forces, allies, and friends from hypersonic and ballistic missile attacks of **all ranges** and in **all phases** of flight



**Missile Defense Capability  
Globally Deployed**



# Missile Defense Agency Lines of Effort

## In Support Of The National Defense Strategy

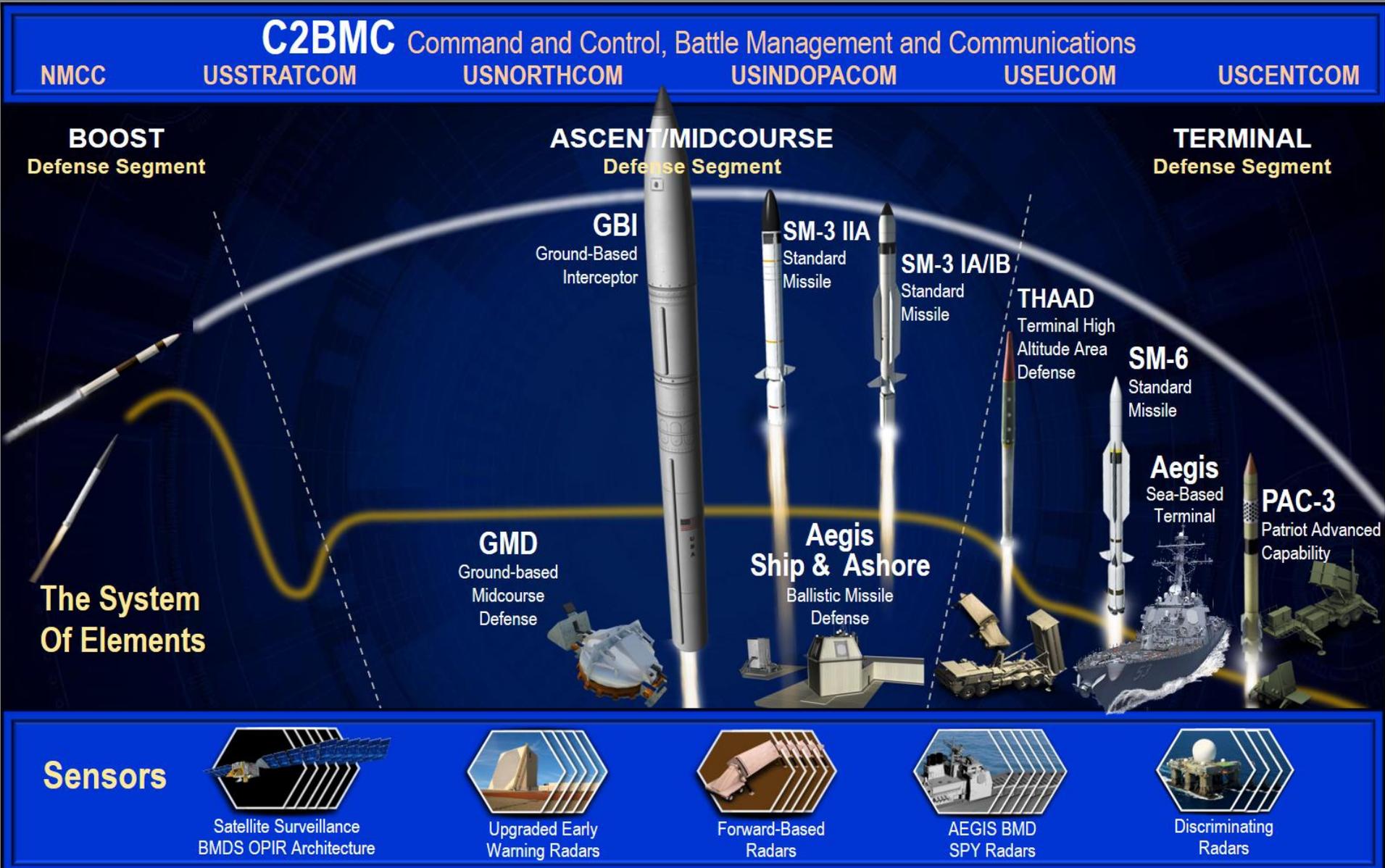
- Build **Warfighter confidence** through focus on **readiness and sustainment**
- Increase engagement **capability and capacity** to outpace emerging threats
- Increase **speed of delivery** of new capability to address the **evolving threat**



**Today's Missile Defense System Meets Today's Threat  
but Requires Additional Capacity and Advanced Capability  
to Outpace the Evolving Threat**



# Missile Defense Agency Mission





# MDA Advanced Research

- **Pursue a broad range of high-risk technologies**
  - Capitalize on the innovation and creativity of the Nation's small businesses and universities
  - Develop and transform cutting edge technologies into actual applications for insertion into the BMDS
- **Technology insertion into the BMDS is critical**
- **Advanced Research utilizes the following research vehicles:**
  - Small Business Innovation Research / Small Business Technology Transfer (SBIR/STTR) program
    - 4<sup>th</sup> largest SBIR/STTR program in the Department of Defense
  - Rapid Innovation Funding (RIF)
  - Broad Agency Announcements (BAA)
    - Missile Defense Science & Technology Advanced Research (MSTAR)
    - Advanced Technology Innovation (ATI)





# Technology Interest Areas

## • Interceptor Technology

- Guidance, navigation, & control
- Batteries & power systems
- Advanced materials
  - High temperature
  - Light weight
- Seeker technology
- Rad-Hard technology
- Deployment systems
- Lightweight composites
- Propulsion & control technologies
  - Improved specific impulse



## • C2BMC

- Advanced tracking & discrimination algorithms
- Command & control algorithms
- Low latency and secure communications
- Battlespace management
- Data fusion
- Warfighter training

## • Modeling & Simulation

- Lethality
- Battlespace environments
- Engagement
- Aerothermal environments
- Technology investment evaluation
- Test verification

## • BMDS Testing

- Affordable targets
- Scene generation
- HWIL
- Rapid analysis SW toolkits
- Predictive analysis & modeling
- Range safety

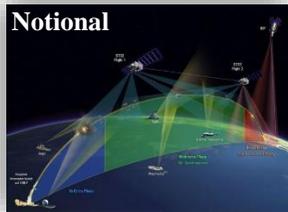
## • Sensors

- EO/IR and radar
  - T/R modules
  - FPAs
- Signal & data processing algorithms
- Rad-Hard technology
- Telescopes & antennas
- Windows & radomes



# Solicitation Process

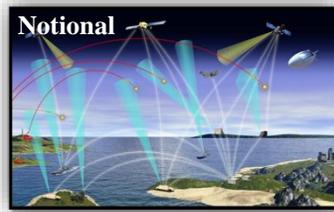
- **SBIR / STTR program is a four step process**
  - Phase I: feasibility and concept development
  - Phase II: technology and prototype development
    - Technology may receive one sequential Phase II
  - Phase II Enhancement: Prototype testing and technology demonstrations and validation
  - Phase III: Commercialization and Transition



(SBIR/STTR Funded)

**Phase I**

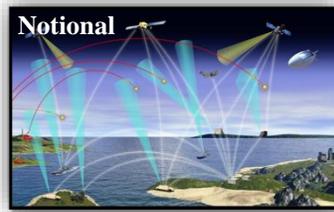
Feasibility Study



(SBIR/STTR Funded)

**Phase II**

Technology Development & Prototype Demonstration



(SBIR/STTR Funded)

**Phase II Enhancement**

Prototype Testing & Evolution Technology Demo & Validation



**(Program Funded)**

**Phase III**

Commercialization Transition



# Broad Agency Announcement (BAA)

- **A competitive research and development contracting approach in the form of a general agency announcement:**
  - Identifies areas of research interest
  - Evaluates proposals based on peer or scientific reviews against individual merits rather than against each other
- **Meets full and open competition requirements of "The Competition in Contracting Act of 1984"**
- **The following slides give more information regarding specific BAA programs**



# Rapid Innovation Fund (RIF) Program

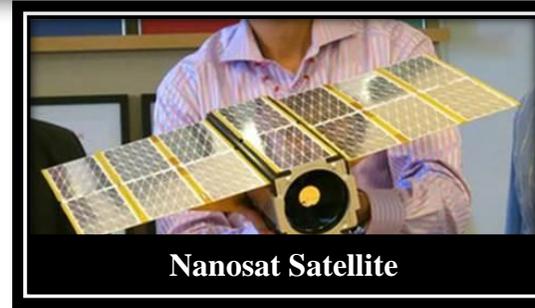
- **Established under FY11 Defense Authorization Act (Section 1073)**
  - A competitive, merit-based program
  - Accelerate fielding of innovative technologies into military systems
  - Typically, all MDA RIF projects are a SBIR Phase II follow-on
  - Prioritization is given to small business
- **Key Requirements:**
  - Satisfy an operational or national security need
  - Accelerate or enhance military capability
  - Reduce
    - Technical risk
    - Cost: Development, acquisition, sustainment, or lifecycle
  - Improve timeliness and quality of test and evaluation outcome
  - Provide approach for use by an acquisition program
  - Typical award length 24 months
  - Award values up to \$3M



# Recent SBIR / RIF / BAA Research Accomplishments

Sponsored

- Inaugurated a nanosat testbed program to demonstrate notional Kill Vehicle communication architecture
- Executed structural test series to validate SBIR developed lightweight unitary nosecone
- Near Net Shape Manufacturing Non-Eroding, Thin Walled, Tungsten
- Completed radiation testing on hardened mirrors
- Developed high-speed test instrumentation



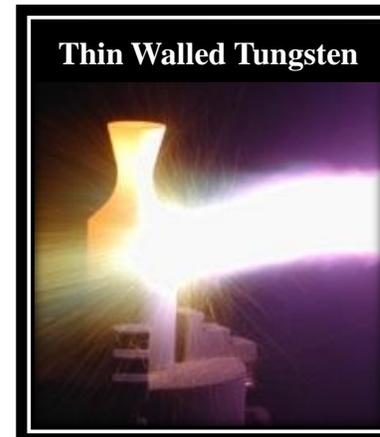
Nanosat Satellite



Rad-hardened Mirror



Unitary Nosecone



Thin Walled Tungsten





# For More Information

[www.mda.mil](http://www.mda.mil)

- Missile Defense News, Images, Videos, Fact Sheets
- BMDS Overview, BMD Basics
- MDA Business Opportunities  
([https://www.mda.mil/business/advanced\\_research.html](https://www.mda.mil/business/advanced_research.html))
- DoD SBIR/STTR website: <https://sbir.defensebusiness.org>
- SBA SBIR/STTR website: <https://www.sbir.gov>

## To Contact MDA

- SBIR / STTR            256-955-2020 [sbirsttr@mda.mil](mailto:sbirsttr@mda.mil)
- University / BAA    256-450-3800 [Advanced\\_Research@mda.mil](mailto:Advanced_Research@mda.mil)
- Commercialization 256-450-5343 [SBIR-PhaseIII@mda.mil](mailto:SBIR-PhaseIII@mda.mil)



# Questions





# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

DoD Joint Science & Technology Office  
for Chemical & Biological Defense  
(JSTO-CBD)

# ***Chemical and Biological Defense (CBD)***

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

***at The Joint Science and Technology Office  
for Chemical and Biological Defense (JSTO-CBD)***

***Mr. Larry Pollack  
CBD SBIR/STTR Program Manager***





# So What's This "CBD" All About?





# Technology Areas of Interest

- BLUF: Very niche specific technology requirements
- Physical Science & Technology
  - Detection (Point & Standoff)
  - Individual Protection; Collective Protection & Hazard Mitigation (e.g., Decontamination)
- Medical Science & Technology
  - Vaccines/Pre-treatments
  - Biological Countermeasures (Therapeutics primarily targeting CDC Category A&B pathogens)
  - Chemical Countermeasures (Therapeutics primarily targeting nerve agents, vesicants, and select Toxic Industrial Chemicals)
- Digital Battlespace Management
  - Modeling & Simulation; Data Fusion; Health & Human Effects



# Biological Countermeasures Vaccines/Therapeutics Division





# Chemical Countermeasures Advanced and Emerging Threat Division





# Detection/Medical Diagnostics Division





# Digital Battlespace Management



## Mission

Provide the warfighter with comprehensive CB data fusion and analysis capabilities to support situational awareness, decision making and threat management



# Protection and Hazard Mitigation Division



Provide our warfighters with enhanced protection and hazard mitigation tools for chemical, biological and radiological threats.



# Individual CB Protection Continuum

## Lightweight



- ✓ General-purpose
- ✓ Open-air battlefield levels of CB agents
- ✓ DoD specific requirements

## Medium Weight



- ✓ Compatible with civil response needs
- ✓ Higher concentrations
- ✓ NFPA 1994 class 2/3; ISO 16604:2004

## Full Encapsulation



- ✓ High hazard response
- ✓ Interior & confined space
- ✓ NFPA 1991/1994 class 1



# Decontamination



Sprayable slurry chemical decontaminant that effectively reduces the residual hazard of chemical agents in tactical settings.



# DoD SBIR/STTR Announcements

Dates established by Assistant Secretary of Defense/Research & Engineering (ASD R&E); not all DoD Components participate in each Announcement

Solicitation SBIR / STTR	Pre-Release	Open	Close *
FY19.3 / FY19.C	23 Aug 2019	24 Sep 2019	23 Oct 2019
FY20.1 / FY20.A	26 Nov 2019	8 Jan 2020	12 Feb 2020
FY20.2 / FY20.B	22 Apr 2020	30 May 2020	17 Jun 2020

\* All proposals due No Later Than 8:00pm Eastern Time for all DoD SBIR and STTR Announcements

**DoD SBIR/STTR website address changing for FY20.1/FY20.A and beyond**

**ALL INFORMATION (dates, etc.) SUBJECT TO CHANGE!**



## Joint Science & Technology Office for Chemical and Biological Defense/CBD SBIR & STTR Programs

- **Topics**
  - Average 8 new SBIR topics annually and 1 new STTR topic every other year
- **Proposal Selection**
  - Phase I: 2 - 4 awards per topic; average 3 Phase I projects
  - Phase II: 50% of Phase I projects transition to a Phase II project award
- **Contract Awards**
  - Phase I: up to \$167,500 per award; 6-month Period of Performance (no option period)
  - Phase II: up to \$1.1M per award (beginning FY19); 24-month Period of Performance



# CBD SBIR/STTR Program Manager

**Mr. Larry Pollack**  
**Chemical and Biological Defense SBIR/STTR Program Manager**  
**Joint Science & Technology Office for Chemical and Biological Defense**  
**Fort Belvoir, VA 22060-6201**

[lawrence.p.pollack2.civ@mail.mil](mailto:lawrence.p.pollack2.civ@mail.mil)

**(571) 616-6037**

**[WWW.CBDSBIR.NET](http://WWW.CBDSBIR.NET)**



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

U.S. Department of  
Homeland Security (DHS)

# DHS Small Business Innovation Research (SBIR) Programs Overview



## 2019 SBIR Road Tour

*Seeding America's Future Innovations*™

SBIR-STTR Central Plains

*May 20-24, 2019*



**Homeland  
Security**

**John Pucci**  
**DHS SBIR Program Director**  
**Science and Technology Directorate**

# Homeland Security Missions



- Prevent Terrorism and Enhance Security
- Secure and Manage Our Borders
- Enforce and Administer Our Immigration Laws
- Safeguard and Secure Cyberspace
- Strengthen National Preparedness and Resilience



# DHS SBIR Supports.....

- Federal Emergency Management Agency (FEMA)
- Customs and Border Protection (CBP)
- U.S. Coast Guard (USCG)
- Transportation Security Administration (TSA)
- Immigration and Customs Enforcement (ICE)
- Cybersecurity and Infrastructure Security Agency (CISA)
- U.S. Secret Service (USSS)
- Countering Weapons of Mass Destruction Office (CWMD)
- First Responders



**Homeland  
Security**

# Today DHS will...

## U.S. Immigration and Customs Enforcement

REMOVE **645** CRIMINALS

OBTAIN **5** CONVICTIONS FOR HUMAN SMUGGLING

SEIZE **\$1.4M** IN ILLICIT CURRENCY AND ASSETS

## U.S. Citizenship and Immigration Services

NATURALIZE **2,000** NEW U.S. CITIZENS  
GRANT **1,723** PEOPLE PERMANENT RESIDENCE, ASYLUM, AND REFUGEE STATUS

## Federal Law Enforcement Training Centers

TRAIN **2,800** FEDERAL, STATE, LOCAL, TRIBAL, AND INTERNATIONAL LAW ENFORCEMENT PERSONNEL

## Federal Protective Service

PROTECT **1.4 MILLION** FEDERAL EMPLOYEES AND VISITORS IN **9,000 FACILITIES** ACROSS THE COUNTRY

## Transportation Security Administration

SCREEN **2 MILLION** PASSENGERS AND **1 MILLION** PIECES OF LUGGAGE

ENROLL **4,500** IN TSA Pre✓

SEIZE **7** FIREARMS

## U.S. Coast Guard

SAVE **10 LIVES** IN MORE THAN **45** SEARCH AND RESCUE OPERATIONS

SEIZE AND REMOVE **874 LBS** OF COCAINE AND **214 LBS** OF MARIJUANA WITH A WHOLESALE VALUE OF **\$11.8 MILLION**

## Cyber

BLOCK **1,900** POSSIBLE INTRUSIONS



ISSUE **50** CYBERSECURITY WARNINGS

## Law Enforcement Support

SUPPORT STATE AND LOCAL LAW ENFORCEMENT EFFORTS AT **28** SPECIAL EVENTS

## U.S. Customs and Border Protection

PROCESS **282,000** PRIVATELY OWNED VEHICLES & **72,000** TRUCK, RAIL, AND SEA CONTAINERS



**282,000** PRIVATELY OWNED VEHICLES

**72,000** TRUCK, RAIL, AND SEA CONTAINERS



**9,400 LBS** OF ILLICIT DRUGS

SEIZE

**\$356,000** CURRENCY

## U.S. Secret Service

PROVIDE SECRET SERVICE PROTECTION FOR AN AVERAGE OF **30** PROTECTEES AND FOREIGN DIGNITARIES

PREVENT CIRCULATION OF **\$160,000** IN COUNTERFEIT CURRENCY

PREVENT **\$5.4 MILLION** IN POTENTIAL LOSSES THROUGH FINANCIAL CRIMES AND CYBER INVESTIGATIONS

## Federal Emergency Management Agency

PROVIDE **\$17.6 MILLION** IN FEDERAL ASSISTANCE TO STATE, LOCAL, AND TRIBAL GOVERNMENTS



SUPPORT LOCAL COMMUNITIES WITH **\$4.4 MILLION** IN HOMELAND SECURITY ASSISTANCE



# S&T's Visionary Goals



## **SCREENING AT SPEED:**

Security that Matches the Pace of Life



## **A TRUSTED CYBER FUTURE:**

Protecting Privacy, Commerce, and Community



## **ENABLE THE DECISION MAKER:**

Actionable Information at the Speed of Thought



## **RESPONDER OF THE FUTURE:**

Protected, Connected, and Fully Aware



## **RESILIENT COMMUNITIES:**

Disaster-Proofing Society



**Homeland  
Security**

# FY18 and 19 Topics

## S&T

- Reach-Back Capability for Fielded Rapid DNA Systems
- ICAM On-the-Fly
- On Body Power Module for First Responders
- Modeling-based Design of Sensors for Chemical Detection in Complex Environment
- Synthetic Training Data for Explosive Detection Machine Learning Algorithms
- Cybersecurity Peer-to-Peer Knowledge/Lessons Learned Tool
- Network Modeling for Risk Assessment
- Blockchain Applications for Homeland Security Forensic Analytics
- Development of a Wearable Fentanyl Analog Sensor
- Cell Phone Location Finder for Maritime and Remote Search and Rescue
- Device to Detect Interference of Communications Systems
- Deterministic Augmentation of RF Transmissions for PNT

## S&T continued

- LMR-P25 and LTE Mission Critical Push to Talk Interface Service
- Improved Human Systems for Computed Tomography
- Automated & Scalable Analysis of Mobile & IoT Device Firmware

## CWMD

- Detector Integration with Current and Emerging Networked Systems
- Unmanned Aerial System Autonomous Search of Limited Area for Radiological Threats
- Ground-Based Autonomous Robotic Inspection of General Aviation for Radiological Threats
- Exploitation of Security Networks and Video Management Systems for Nuclear Threat Identification and Tracking
- Semiconductor-Based Thermal Neutron Detector Module for Incorporation into Radiation Detector Systems
- Inorganic Microscopy Standardization and Training for Image Analysis



**Homeland  
Security**

**Details available under “Past Solicitations” at <https://sbir2.st.dhs.gov/>**

# DHS SBIR Program Specifics

- Two Directorates in DHS manage SBIR
  - Science & Technology (S&T) Directorate
  - Countering Weapons of Mass Destruction Office (CWMD)\*
- FY2018 Budgets:
  - S&T Directorate's SBIR: \$15.7M
  - CWMD's SBIR: \$2.0M
- Topics determined by the government in response to component and HSE needs
  - Solicitation released in early December each year
  - 7-14 topics per year
  - 10 topics in December 2018 solicitation
- Phase I contracts: \$150,000
- Phase II contracts \$1,000,000

\* - CWMD Office data includes Domestic Nuclear Detection Office data through FY17



# DHS SBIR Points of Contact

## S&T Directorate

**John Pucci**

SBIR Program Director  
john.pucci@hq.dhs.gov  
202-254-8764

### **S&T Program email**

stsbir.program@hq.dhs.gov

## CWMD

**Marissa Giles**

SBIR Program Manager  
marissa.giles@hq.dhs.gov  
202-254-7615

**Roger Gima**

SBIR Program/Technical Analyst  
roger.gima@associates.hq.dhs.gov  
202-254-7033

### **DNDO SBIR Program email**

dndosbir@hq.dhs.gov

## SBIR Portal Help Desk

Email: dhssbir@reisystems.com  
Phone: 703-480-7676

### **To report DHS SBIR fraud, waste and abuse:**

- Anonymous Hotline: 1-800-323-8603
- Fax: 202-254-4297
- Mail: DHS Office of Inspector General/Mail Stop 0305  
Attn: Office of Investigations - Hotline  
245 Murray Drive SW  
Washington, DC 20528-0305



**Homeland  
Security**

I asked for dedicated staff that knew DHS operational needs and this is what they gave me!



**Homeland  
Security**



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

U.S. Department of  
Agriculture (USDA)

download now

**U.S. Department of Agriculture Small Business  
Innovation Research Program**

**Elden Hawkes**  
**SBIR Program Coordinator \*Acting\***

**USDA**

**SBIR**

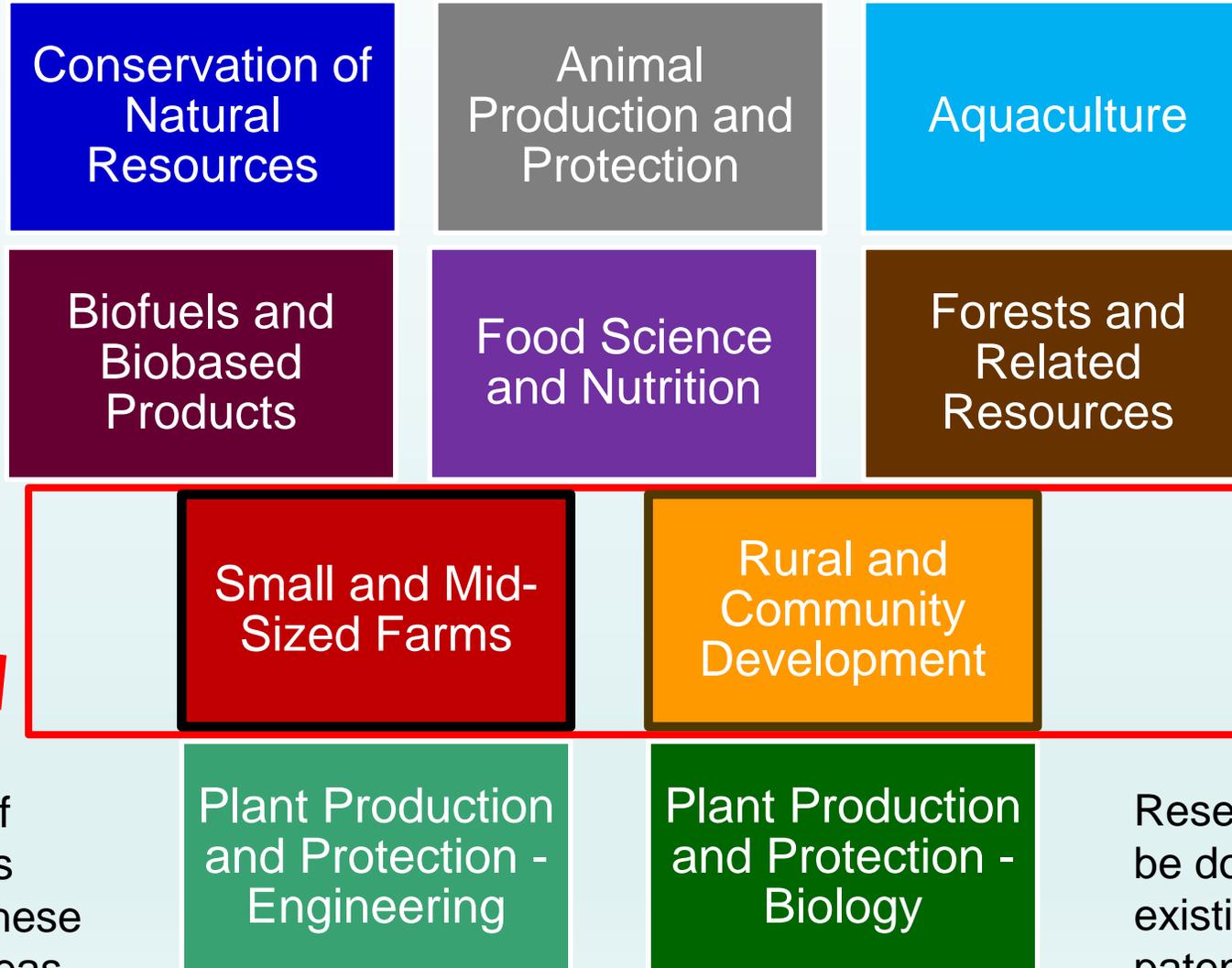
# USDA SBIR Program

- Annual Budget ~\$24 M
- Funding Opportunities for Grants – SBIR only
  - Phase I Grants = 8 Months/\$100,000
  - Phase II Grants = 2 Years/\$600,000
- Commercialization Assistance Programs for Phase I Winners
- Phase I can request up to \$6,500 for commercialization (opt out)
- Phase II Winners can request up to \$50,000 for commercialization.
- Research can be done with existing ARS patents via ARS CRADAs
- FY 2019: Phase I
  - 532 Phase I applications submitted
  - 80 Phase I awards
- Phase II
  - 64 Phase II applications submitted
  - 26 Phase II awards





# SBIR Topic Areas



Conservation of Natural Resources

Animal Production and Protection

Aquaculture

Biofuels and Biobased Products

Food Science and Nutrition

Forests and Related Resources

Small and Mid-Sized Farms

Rural and Community Development

Plant Production and Protection - Engineering

Plant Production and Protection - Biology

Off the Shelf technologies allowed in these two topic areas

Research can be done with existing ARS patents via ARS CRADAs

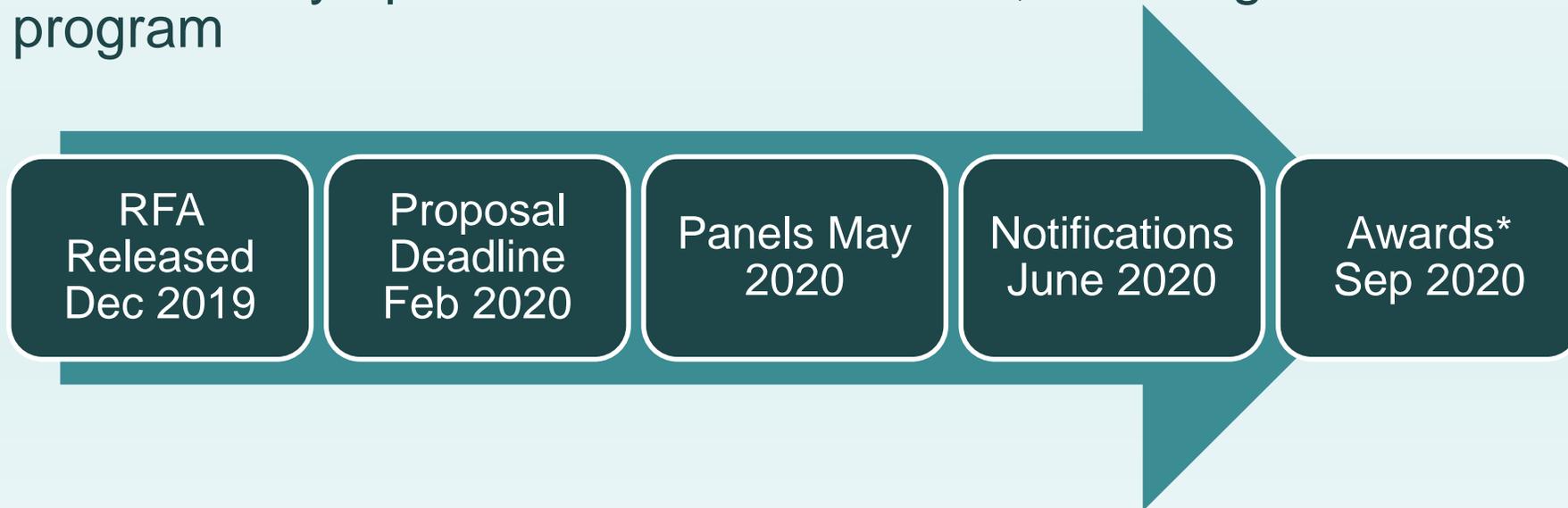
# FY 2020 Timeline



## Phase I



Phase II – Only open to Phase I awardees, no straight to Phase II program



# Freund's Farm, Inc.

**CowPots™**  
*The pots you plant!*



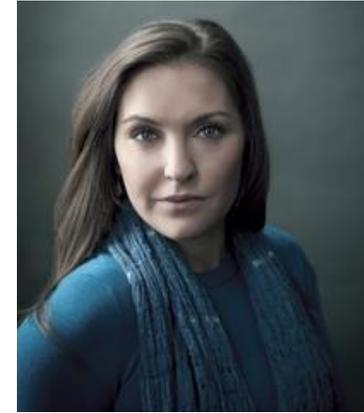
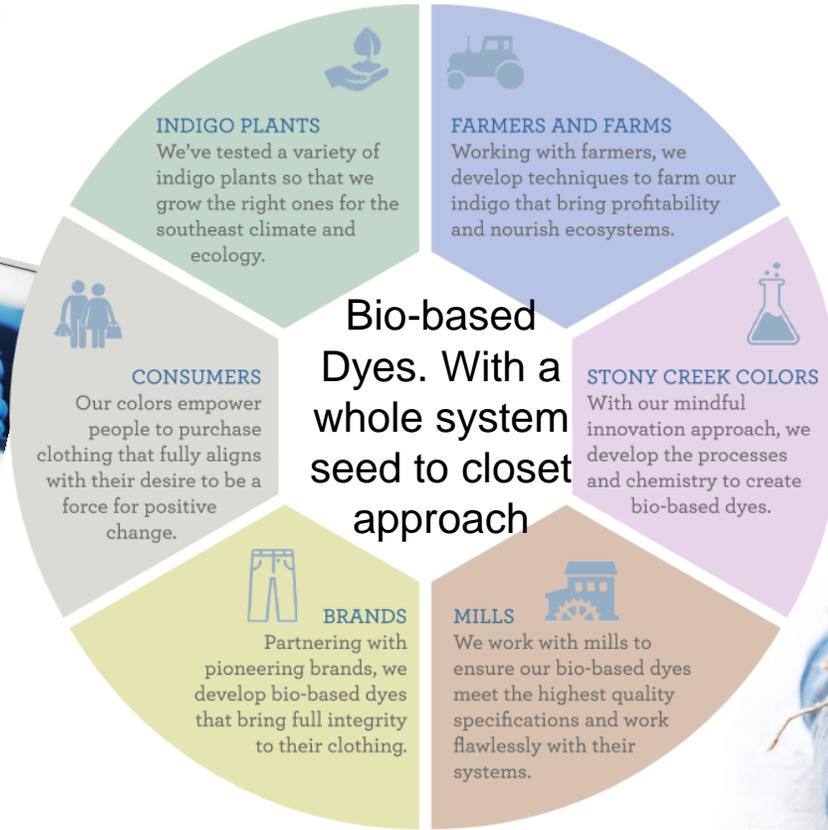
**DIRTY JOBS**  
with Mike Rowe



**USDA**

**SBIR**

# Stony Creek Colors



2016 American  
Made Honoree  
United States of  
Innovation 2017



Featured in  
Forbes, NPR,  
Huffington Post

**USDA SBIR**



 **ecovative**  
We grow materials.



**USDA** **SBIR**

# Altaeros Energies

## Technology Developed

- Altaeros Buoyant Airborne Turbine (BAT) leverages proven aerospace technology to lift a wind turbine into the strong, consistent winds beyond the reach of traditional towers.

## Commercialization Success

- First commercial products sold in 2015.
- Technology was featured in CNN's 2014 edition of THE CNN 10: Inventions and in the New York Times.
- Telecoms group SoftBank has invested \$7m in Altaeros Energies for future deployment of the BAT technology in Japan.

## SBIR History

- Phase I – 2011 (\$150K)
- Phase II – 2012 (\$450K)
- 8.6 Rural Development



# USDA SBIR

Contact with SBIR Program Available Anytime

Elden Hawkes – Program Coordinator (Acting)

[Elden.Hawkes@usda.gov](mailto:Elden.Hawkes@usda.gov)

General SBIR

[sbir@nifa.usda.gov](mailto:sbir@nifa.usda.gov)

Web Site: <https://nifa.usda.gov/sbir>





# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

U.S. Environmental  
Protection Agency (EPA)



# Environmental Protection Agency's Small Business Innovation Research (**SBIR**) Program

April Richards, Program Manager  
Eastern Road Tour  
September 2019



# EPA-SBIR Mission

## EPA

Protect human health  
and the environment

## EPA SBIR

Support development and  
commercialization of innovative  
technologies to meet Agency's  
mission





# EPA SBIR Budget & Awards

Award Budget for FY19 = ~\$5 M

## PHASE I:

*Proof Of Concept*

\$100,000

6 Months

Awards  
=  
Contracts

## PHASE II:

*Develop & Commercialize  
Technology*

\$400,000

2 Years

Commercialization Option = \$100,000

# EPA'S SBIR Program



One of the small SBIR Programs



Provide awardees with EPA technical connection



Focus on commercialization: \$6,500 & \$100,000



Communicate successful projects



Help to protect the planet



# Annual Solicitation- Next Opening Planned for June 2020



Information at: [www.epa.gov/sbir](http://www.epa.gov/sbir)

Apply at: FedConnect

Subscribe to SBIR listserv:

<https://www.epa.gov/sbir/sbir-listserv>



- Clean & Safe Water



- Air Quality



- Land Revitalization



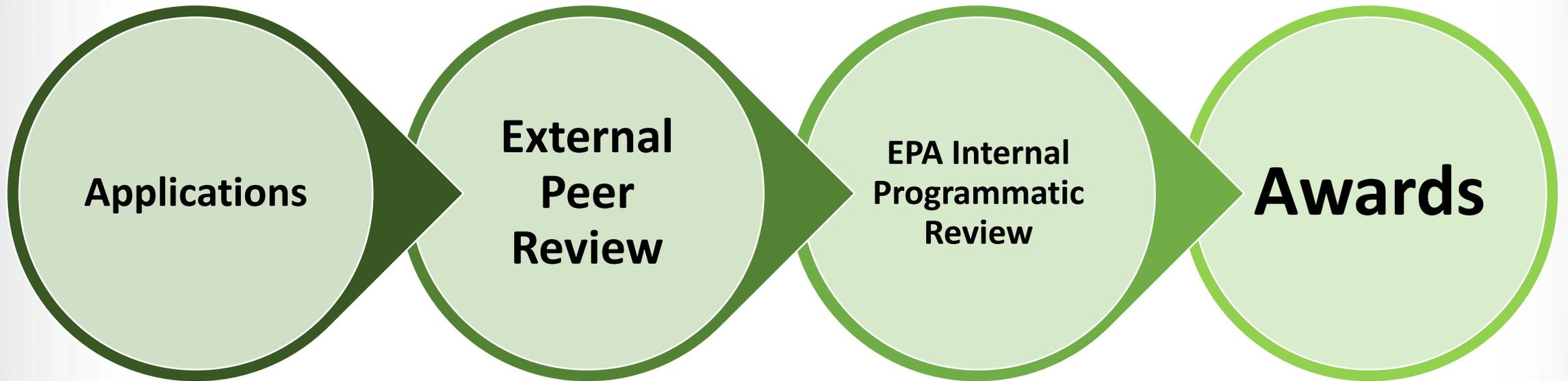
- Homeland Security



- Sustainable Materials Management



- Safer Chemicals





# External Peer Review: Phase I

## RATINGS

Highly Recommend

Recommend

Do Not Recommend

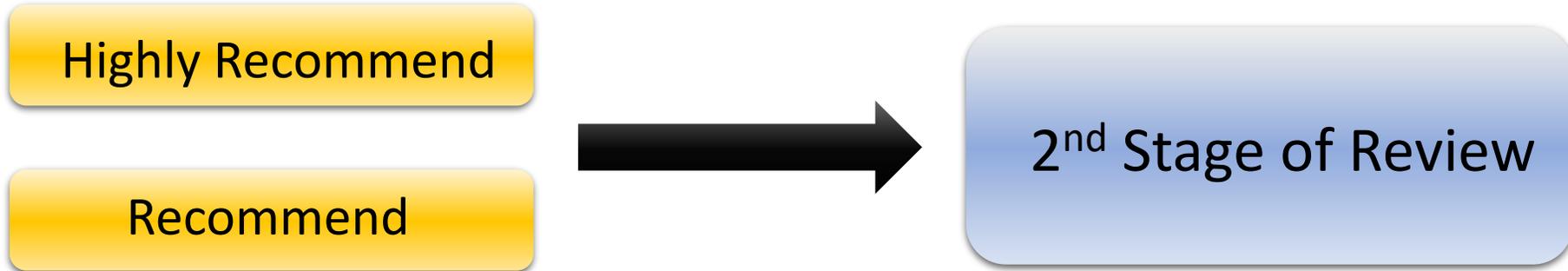
## REVIEW CRITERIA

### Commercialization Criteria

- Market Opportunity
- Company/Team
- Commercialization Approach

### Technical Criteria

- Innovation
- Technical Approach
- Technical Challenges



## EVALUATION CRITERIA

- Relevance to Topics & Agency priorities
- Advance Sustainability
- Wide use, broad application/impact





# EPA SBIR Success Stories

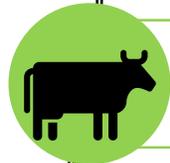




Mushroom materials for packaging, insulation, & structural cores



A replacement for Styrofoam



Utilizes fungal mycelium grown on agricultural waste



Renewable, Biodegradable, Compostable

Recently licensed “leather” biomaterial to Bolt Threads (Forbes, 4/2018)



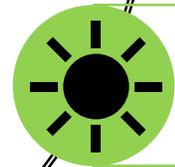
# EP Purification: Champaign, IL



Design/manufacture ozone-producing water disinfection systems



Systems generate any amount of ozone for precise disinfection



Available with solar panel, this allows use in +24 countries

Received the 2014 Wells Fargo Clean Energy Challenge Prize & Entrepreneurial Excellence New Venture Award



# For More Information

**SBIR Program Manager:** April Richards [richards.april@epa.gov](mailto:richards.april@epa.gov)

**Website:** [www.epa.gov/sbir](http://www.epa.gov/sbir)

**Listserv:** <https://www.epa.gov/sbir/sbir-listserv>

**SBA SBIR website:** [www.SBIR.gov](http://www.SBIR.gov)



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

U.S. Department of  
Transportation (DOT)

# Stimulating Innovation and the U.S. Economy through the U.S. DOT's Small Business Innovation Research (SBIR) Program

*SBIR Eastern Road Tour  
September 2019*



# How SBIR Supports the Mission of DOT

**Mission:** To ensure a fast, safe, efficient, accessible, and convenient transportation system that meets vital national interests and enhances the quality of life of the American people.

SBIR addresses high priority research gaps within DOT's R&D Program.

SBIR topics are developed to align with Secretary's strategic priorities, specific modal priorities, and SBA.



# Phase I Participation by Agency

DOT Operating Administration	2014	2015	2016	2017	2018	2019
Federal Aviation Administration*	X					
Federal Highway Administration / Intelligent Transportation Systems-Joint Program Office (ITS JPO)	X	X	X	X	X	X
Federal Railroad Administration	X	X		X	X	X
Federal Transit Administration	X	X	X	X	X	X
Federal Motor Carrier Safety Administration						X
National Highway Traffic Safety Administration	X	X		X	X	X
Office of the Secretary	X			X		
Pipeline and Hazardous Material Safety Administration	X				X	

\*Excused by Legislation: FAA contributed to the U.S. DOT's SBIR Program from 1985 to 2005

# DOT's SBIR Topics



# DOT's SBIR Program Details

- Annual SBIR budget approx. \$9M
- 5-10 topics per year (11 topics in FY19)
  - Phase 1 – Up to \$150K
  - Phase II – \$200K to \$1M
  - Phase IIB – \$250K to \$1M
- Number of awards per year
  - Phase I – based on solicitation topics
  - Phase II – 50-60% of Phase 1 awards
  - Phase IIB – ~25% of Phase 2 awards

# DOT SBIR Program Details

- One solicitation per year
- Next solicitation expected Winter 2019-20
  - Sign up on our website to receive notifications of when topics are posted, as well as solicitation open and close dates
- Administer Contracts, not Grants
- Majority VC firms not eligible
- Program Office does not accept unsolicited proposals

# DOT SBIR Program Details

- Technical and Business Assistance (TABAs) available to U.S. DOT SBIR awardees

*Focus on increasing commercialization potential for the Phase I award and preparing for entry into the marketplace for Phase II*

- Pre-proposal conference calls for Phase II
- Funding for CORs to travel to project sites

# FY19 Phase I Awards Announced

- Award recommendations for the FY19 Solicitation topics were announced July 9, 2019
- See our website for a list of the projects recommended for award: <https://www.volpe.dot.gov/work-with-us/small-business-innovation-research/fy19-phase-i-and-ii-awards>
- **13** awards were recommended, for a total of **\$1.95 million**
- The projects fall under **9** different research topics and **5** different DOT operating administrations

# DOT Solicitation Process

- Solicitations are posted at [volpe.dot.gov/sbir](https://volpe.dot.gov/sbir) and [fbo.gov](https://fbo.gov)
- Requests for clarifications/questions on research topics can be submitted to the Program Office staff
- Offers must be submitted via secured website
- Sign up for email notifications at:  
[https://public.govdelivery.com/accounts/USDOTVOLPE/subscriber/new?topic\\_id=USDOTVOLPE\\_44](https://public.govdelivery.com/accounts/USDOTVOLPE/subscriber/new?topic_id=USDOTVOLPE_44)

# DOT SBIR Project Examples

## SBIR-Funded Sensors Detect Pipeline Stresses Early, Mitigating Future Problems



**Agency:** Pipeline and Hazardous Materials Safety Administration

**Company:** Generation 2 Materials Technology, LLC (G2MT)

**Product:** Non-destructive pipeline stress analysis sensor

## Evaluating Fatigue in Individual Drivers



**Agency:** Federal Motor Carrier Safety Administration

**Company:** Pulsar Informatics, Inc.

**Project:** Advanced Fatigue Modeling for Individual Differences

# Opportunities Outside of the DOT SBIR Program

- DOT Office of Small and Disadvantaged Business Utilization: [osdbu.dot.gov](https://osdbu.dot.gov)
- Fed Biz Ops: [fbo.gov](https://fbo.gov)
- University Transportation Centers: [utc.dot.gov](https://utc.dot.gov)
- Transportation Research Board: [trb.org](https://trb.org)
- Challenge.gov
- Check DOT agency websites for BAAs, RFIs and other research opportunities



# U.S. DOT SBIR Contact Information

<http://www.volpe.dot.gov/sbir>

**DOT SBIR Hotline**

**617-494-2051**

[DOTSBIR@dot.gov](mailto:DOTSBIR@dot.gov)

## ***SBIR Road Tour Representatives***

Darren Shaffer, U.S. DOT Volpe Center

Joshua Arnold, PHMSA

Kenneth Blacks, FTA





# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

# National Institutes of Health (NIH)



*Small Business Innovation Research (SBIR)*  
*Small Business Technology Transfer (STTR)*



# Eastern SBIR Road Tour

September 16-20, 2019

Burlington, VT >> Albany, NY >>

New Brunswick, NJ >>

University Park, PA >> College Park, MD

**Robert Vinson**

SBIR/STTR Program Manager, Office of Extramural Research, NIH





<https://sbir.nih.gov>





2019 Budget	SBIR	STTR
NIH	\$1B	\$141M
CDC	~\$12M	N/A
ACL (NIDILRR)	~\$3M	N/A
FDA	~\$1M	N/A



# SBIR/STTR Three-Phase Program



*Discovery*

Phase I

## Phase I Feasibility Study

Budget Guide: \$150K for SBIR and STTR

Project Period: 6 months (SBIR); 1 year (STTR)



*Development*

Phase II

## Phase II Full Research/R&D

\$1M for SBIR and STTR, over two years

Phase IIB

## Phase IIB Competing Renewal/R&D

Clinical R&D; Complex Instrumentation/to FDA

Many, but not all, IC's participate

Varies~\$1M per year; up to 3 years



*Commercialization*

Phase III

## Phase III Commercialization

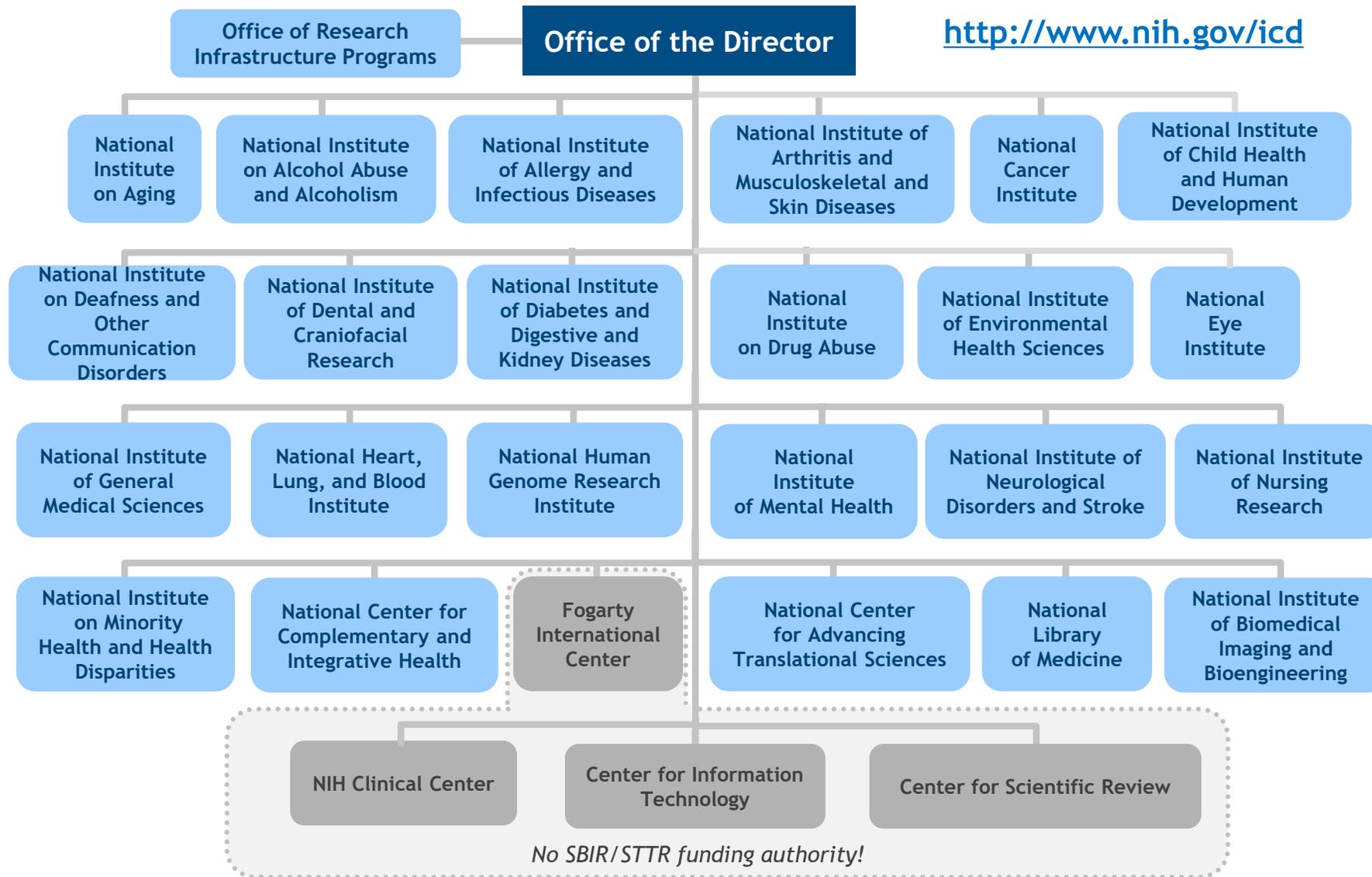
NIH, generally, not the “customer”

Consider partnering and exit strategy early



*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.***

<http://www.nih.gov/icd>



# NIH, CDC, FDA, & SBIR/STTR Grant Solicitation “Parent” FOAs:

<https://sbir.nih.gov/funding#omni-sbir>

## Clinical Trial Required

SBIR: [PA-19-273](#)      STTR: [PA-19-271](#)

## Clinical Trial Not Allowed

SBIR: [PA-19-272](#)      STTR: [PA-19-270](#)

Solicitation Released:      May 7, 2018

Standard Due Dates:      Sept. 5, 2019

**January 6, 2020**

April 6, 2020



## Contracts

SBIR Contract Solicitation (NIH, CDC) - **OPEN**  
Closing Date: October 23, 2019 5:00PM EDT  
Program Solicitation [PHS 2020-1](#) (SBIR Only)

R&D Contract Solicitation:  
SBIR Phase I, Direct Phase II,  
Fast-Track Contract  
Solicitation, PHS 2020-1

Closing Date: October 23, 2019, 5:00PM EDT

- PHS 2020-1 (PDF - 1 MB)
- PHS 2020-1 (MS Word - 373 KB)
- Contract Proposal Forms

NIH Guide Notice: [NOT-OD-19-121](#)  
[NIH Guide for Grants and Contracts](#)

Release: Weekly receipt dates specified in each FOA



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

## Some of our Home Runs!



[www.sbir.gov/news/success-stories](http://www.sbir.gov/news/success-stories)





# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

# Department of Energy (DOE)



# U.S. Department of Energy

## SBIR Road Tour

SEEDING AMERICA'S FUTURE INNOVATIONS™



U.S. DEPARTMENT OF  
**ENERGY**

SBIR/STTR Programs  
Office

# WHAT DO WE FUND?

- Mission

- *Leadership in clean energy technologies*
- *Leadership in basic science and engineering in the physical sciences*
- *Enhancement of nuclear security*

- SBIR/STTR Research Areas

- *Renewable energy, energy efficiency, grid modernization, advanced fossil fuel technologies, nuclear energy, fusion energy*
- *Advanced scientific instrumentation in the physical sciences, advanced computing, atmospheric and environmental monitoring, accelerator technology*
- *Nuclear nonproliferation, environmental remediation and clean up*
- *More details: <https://science.energy.gov/sbir/research-areas-and-impact/>*



# HOW DO WE OPERATE?

- Phase I
  - *Issue two Funding Opportunities Announcements annually—DOE issues grants*
  - *Typically very focused topics areas, approximately 70 topics per year*
  - *Awards up to \$200,000, 6-12 months duration, ~ 400 per year*
- Phase II
  - *Phase I awardees compete Phase II Awards the following year*
  - *Awards up to \$1,100,000 or \$1,600,000 (varies by topic), up to 2 years duration, ~180 per year*
- Second & Third Phase II
  - *These award focus on follow-on R&D to achieve commercialization. Third Phase II requires investor matching funds.*
  - *Awards up to \$1,100,000, up to 2 years duration*
- Schedule: <https://science.energy.gov/sbir/funding-opportunities/>



# TAKE ADVANTAGE OF . . .

- Applicants

- *Phase 0 Application Assistance program for first time applicants*
- *Online application tutorials ([www.doesbirlearning.com](http://www.doesbirlearning.com))*
- *Partnership with DOE National Labs (<https://science.energy.gov/sbir/applicant-resources/national-labs-profiles-and-contacts/> and <https://www.labpartnering.org/partnering>)*

- Awardees

- *Select your own commercialization assistance provider or utilize the DOE Commercialization Assistance Program (<http://www.larta.org/doecap>). Up to \$6500 available for Phase I and \$50,000 available for Phase II.*



# CONTACT US

- DOE SBIR/STTR Website: [www.science.energy.gov/sbir](http://www.science.energy.gov/sbir)
  - *You can join our mailing list on our homepage*
- Telephone: 301-903-5707
- Email: [sbir-sttr@science.doe.gov](mailto:sbir-sttr@science.doe.gov)



U.S. DEPARTMENT OF  
**ENERGY**

SBIR/STTR Programs  
Office





# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

# National Science Foundation (NSF)



# Small Business Innovation Research Program

*National Science Foundation*

*September 2019*



America's  
**SEED FUND**  
SBIR.STTR

**A federal agency that supports fundamental research and education across all fields of science and engineering, currently with an annual budget of approximately \$8B**

- ✓ **Approximately \$200M program that focuses on getting-to-market; NSF not a customer**
- ✓ **Funds roughly 400 companies each year**
- ✓ **Program Directors have startup/industry/university/private equity experience**
- ✓ **All grants, no contracts**
- ✓ **Phase I, II and Phase II supplements can add up to approximately \$2M**

# Technology Areas

---

- **Advanced Manufacturing and Nanotechnologies**
- **Advanced Materials and Instrumentation**
- **Artificial Intelligence**
- **Biological Technologies**
- **Biomedical Technologies**
- **Chemical and Environmental Technologies**
- **Digital Health and Medical Devices**
- **Distributed Ledger**
- **Educational Technologies and Applications**
- **Electronic Hardware, Robotics, Sensors, and Wireless Technologies**
- **Energy and Power Systems**
- **Information and Quantum Information Technologies**
- **Internet of Things, Semiconductors, and Photonics**
- **Space**
- **Other Topics**

## Program Statistics

- **Company Size:** 90% of awardees have 10 or fewer employees
- **History:** 90% of awardees have never had a prior SBIR/STTR Phase II award from any agency
- **Company Age:** 80% of awardee companies were incorporated within the past 5 years
- **Start-up Creation:** Many Phase I awardees have only recently been incorporated

## R&D to overcome significant technical hurdles

- ✓ Novel, proprietary
- ✓ Prove feasibility/viability of a new product/process/service
- ✓ High technical risk, early-stage development

## A significant commercial opportunity

- ✓ Game-changing technology in chosen market segment
- ✓ Product-market fit validated by customers/partners

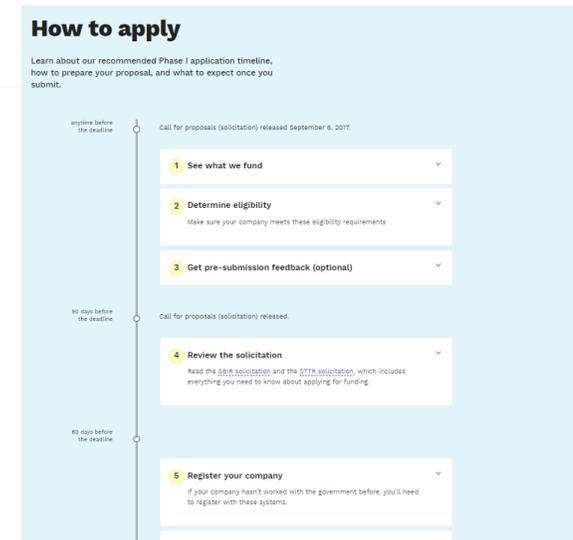
# What We Do Not Fund

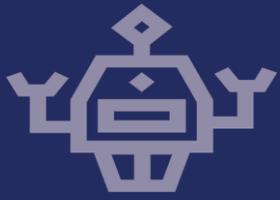
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- x Basic research (primary goal being knowledge creation)**
- x Incremental improvement to an existing product/service/process**
- x Projects that lack strong chance of commercial success**
- x NSF funding cannot make a big impact on company's prospects**
- x Analytical/market studies of existing technology/product/service/process**

# Proposal Submission

- Read the steps on the Apply page of NSF SBIR/STTR website, [seedfund.nsf.gov/apply](https://seedfund.nsf.gov/apply)
- Submit a 2-3 page Project Pitch and a Program Director will respond to it in < 3 weeks
- Proposals are accepted when there's an open window
- Windows close in June and December
- Next window closes December 12, 2019





# THANK YOU!

*Kerstin Mukerji, [kmukerji@nsf.gov](mailto:kmukerji@nsf.gov)*

*Gracie Narcho, [gnarcho@nsf.gov](mailto:gnarcho@nsf.gov)*

*Ben Schrag, [bschrag@nsf.gov](mailto:bschrag@nsf.gov)*

**[sbir@nsf.gov](mailto:sbir@nsf.gov)**

**[@NSFSBIR](https://twitter.com/NSFSBIR)**

**[seedfund.nsf.gov](https://seedfund.nsf.gov)**



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

National Aeronautics and  
Space Administration (NASA)



Small Business Innovation Research   Small Business Technology Transfer

Mark Davidson & Virginia Garrison | NASA SBIR/STTR Program Overview | September, 2019

# The SBIR / STTR Programs



## **Small Business Innovation Research (SBIR)**

- A set-aside program for small business to engage in Federal R&D – with potential for commercialization
- Currently, 3.2% of Federal agencies Extramural R&D budgets greater than \$100M per year

## **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
- Currently, 0.45% of the extramural research budget for all agencies with a budget greater than \$1B per year

# 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

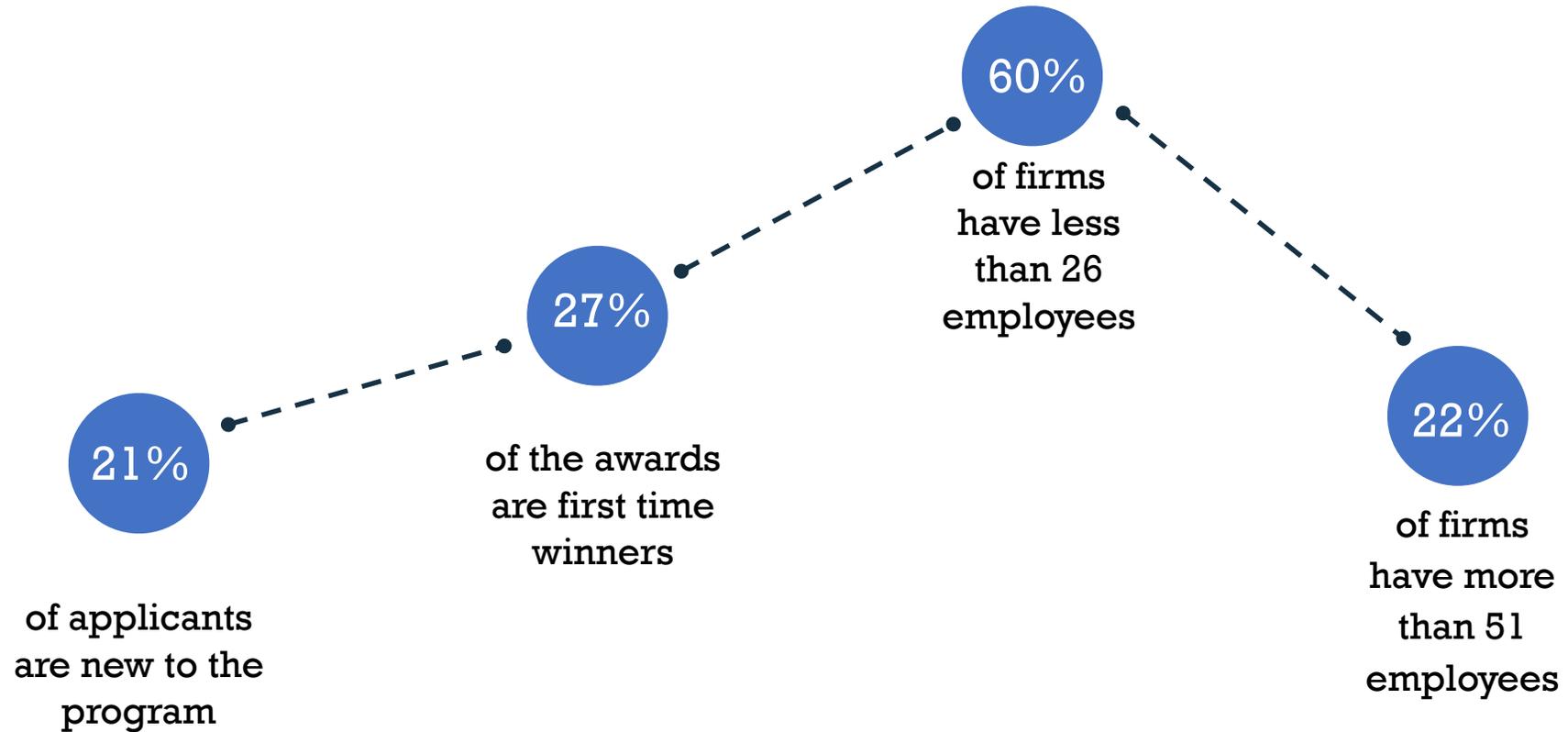
NASA's SBIR and STTR programs have awarded **more than \$3.75 billion** to research-intensive American small businesses.

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.

# Working with Small Businesses

## FY18 Phase I SBIR/STTR Awards Data Points



# SBIR/STTR Program Structure

## NASA SBIR/STTR PROCESS



Go to [sbir.nasa.gov/guide](https://sbir.nasa.gov/guide) for details

The NASA SBIR/STTR website is located at [www.sbir.nasa.gov](http://www.sbir.nasa.gov)

**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

The screenshot shows the NASA SBIR/STTR website homepage. At the top is a navigation menu with links: HOME, ABOUT SBIR/STTR, SOLICITATIONS, SCHEDULE & AWARDS, HANDBOOKS, RESOURCES, and CONTACT US. Below the menu is a large banner image featuring a magazine titled 'SPINOFF MAGAZINE' and a NASA logo. A callout box on the right points to the 'CONTACT US' link, containing the text: 'Contact the Program SBIR/STTR Helpdesk and Program Points of Contact'. Below the banner is a text block: 'NASA Spinoff is an annual publication that highlights commercial products and services derived from NASA technology. Since 1976, Spinoff has featured more than 2,000 such technologies. Check out the latest issue of Spinoff to see 15 of our very own SBIR/STTR technologies now commercially available!' followed by a 'READ SPINOFF' button. At the bottom, there are three image-based sections: 'Proposers' (a woman at a computer), 'Awardees' (two people shaking hands), and 'Publications' (a stack of papers).

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



Proposers



Awardees



Publications

## 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

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

2019 Focus Areas (FA)	
FA 1: In-Space Propulsion Technologies	FA 13: Information Technologies for Science Data
FA 2: Power Energy and Storage	FA 14: In-Space and Advanced Manufacturing
FA 3: Autonomous Systems for Space Exploration	FA 15: Materials, Materials Research, Structures, and Assembly
FA 4: Robotic Systems for Space Exploration	FA 16: Ground and Launch Processing
FA 5: Communications and Navigation	FA 17: Thermal Management Systems
FA 6: Life Support and Habitation Systems	FA 18: Air Vehicle Technology
FA 7: Human Research and Health Maintenance	FA 19: Integrated Flight Systems
FA 8: In-Situ Resource Utilization	FA 20: Airspace Operations and Safety
FA 9: Sensors, Detectors and Instruments	FA 21: Small Spacecraft Technologies
FA 10: Advanced Telescope Technologies	FA 22: Low Earth Orbit Platform Utilization and Microgravity Research
FA 11: Spacecraft and Platform Subsystems	FA 23: Digital Transformation for Aerospace
FA 12: Entry, Descent and Landing Systems	

# Program SBC Development Initiatives

## I-Corps

In partnership with the National Science Foundation (NSF), NASA is offering the I-Corps program to educate selected teams on how to translate technologies from the laboratory into the marketplace.

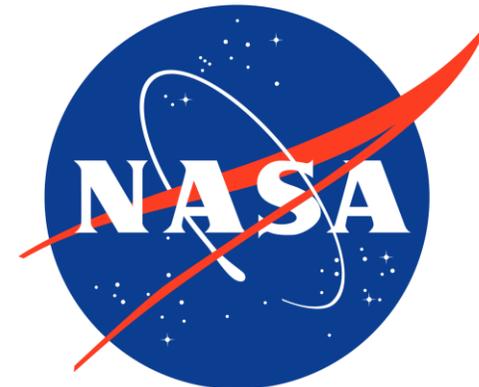
<http://sbir.nasa.gov/content/I-Corps>



## NSF Space Topic

- NSF is including a Space topic in its SBIR/STTR Program
- Given different program goals and criteria, it's likely that one agency would be a much better fit for any specific project.
- Learn more about the differences between the NSF SBIR/STTR and NASA SBIR/STTR Programs at:

<https://sbir.gsfc.nasa.gov/content/nsf-sbirsttr-space-topic-what-you-need-know>



# SBIR/STTR Success at JPL

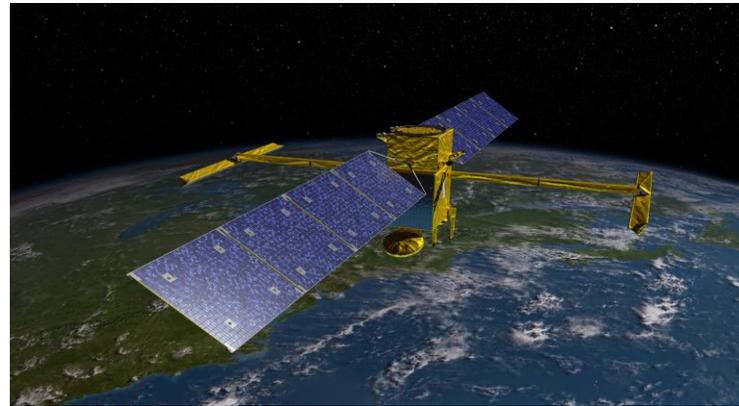
## Surface Water and Ocean Topography (SWOT)

Managing ~\$70M in technology with small businesses across ~100 subcontracts

Run Commercial Peer Reviews for NASA SBIR/STTR Program

Lead ~16 and participate in ~34 subtopics

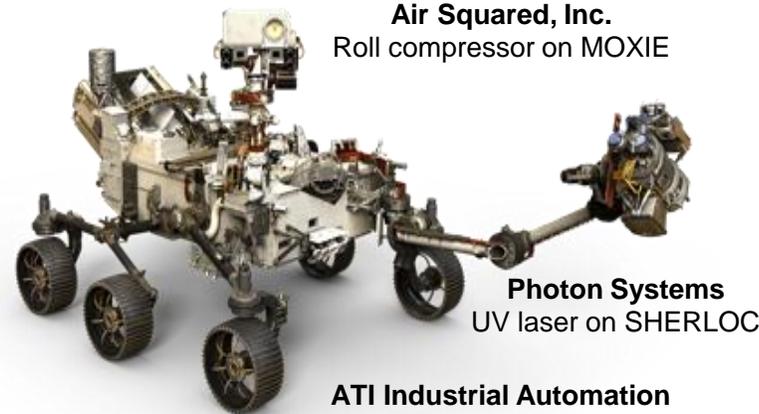
Ongoing commercial space impacts research



**Remote Sensing Solutions (RSS)**  
AirSWOT/Ka-band SWOT Phenomenology  
Airborne Radar (KaSPAR)

## NuSTAR

## Mars 2020 Rover

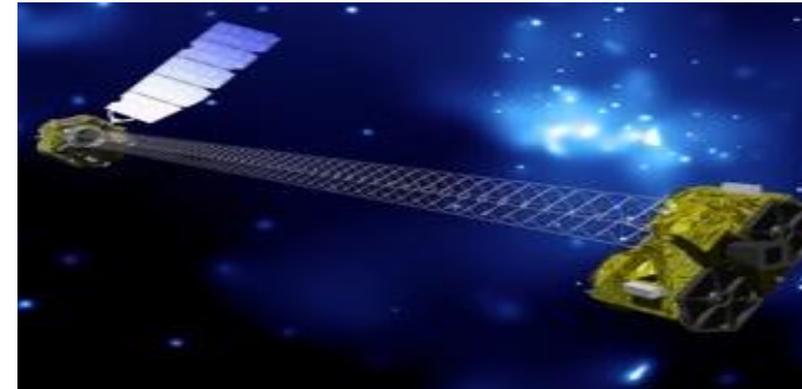


**Air Squared, Inc.**  
Roll compressor on MOXIE

**Photon Systems**  
UV laser on SHERLOC

**ATI Industrial Automation**  
Six-Axis Force-Torque Sensor

**Yardney (Eagle Pitcher)**  
Li-Ion Re-chargeable Batteries



**AEC-Able Engineering (purchased by ATK)**  
Deployable Mast

# Innovation and Opportunity Conference

INNOVATION &  
OPPORTUNITY  
CONFERENCE  
NOVEMBER 14-15, 2019 | AURORA, COLORADO



<https://innovation-opportunity-conference.com/>

# Contact Us and Let's Innovate Together

Website

**[www.sbir.nasa.gov](http://www.sbir.nasa.gov)**

Sign up for our Newsletter

**<https://sbir.nasa.gov/info>**

NASA Help Desk

**301.937.0888**



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

National Institute of Standards  
and Technology (NIST)

# National Institute of Standards and Technology

## U.S. Department of Commerce

Mary Clague  
NIST SBIR Program Manager

To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.



Photo Credit: A. Holt/NIST

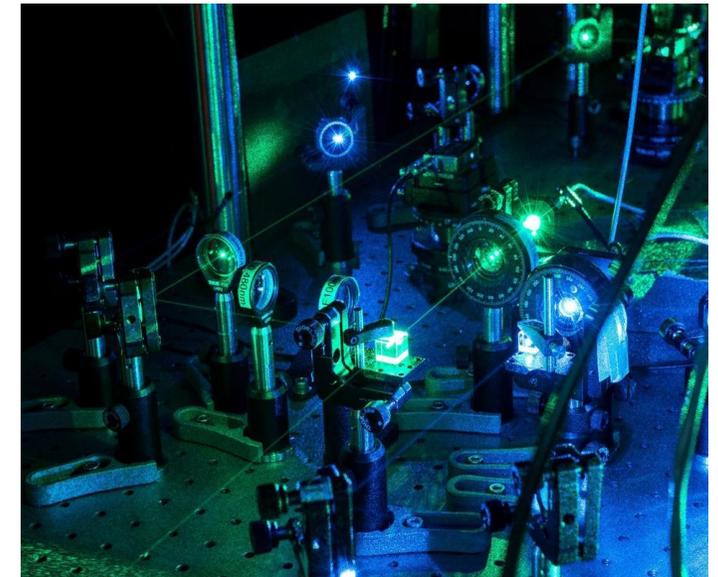
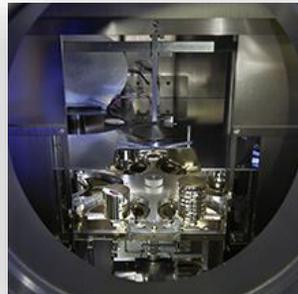


Photo Credit: Curt Suplee/NIST



**Material  
Measurement  
Laboratory**



**Physical  
Measurement  
Laboratory**



**Engineering  
Laboratory**



**Information  
Technology  
Laboratory**



**Communication  
Technology  
Laboratory**

## User Facility & Extramural Programs:

- NIST Center for Neutron Research
- Advanced Manufacturing Office
- Hollings Manufacturing Extension Partnership
- Baldrige Performance Excellence Program
- Special Programs Office

# SBIR 3-Phase Program

	<b>Purpose</b>	<b>Duration</b>	<b>Funding Amount</b>
<b>Phase I</b>	Feasibility	6 months	Up to \$100,000
<b>Phase II</b>	R&D	2 years	Up to \$400,000
<b>Phase III</b>	Commercialization	No Limit	Non-SBIR funds

- Phase I Solicitation Release Date: January  
*(available at [www.nist.gov/sbir](http://www.nist.gov/sbir) & [grants.gov](http://grants.gov))*
- Phase I Proposals Due: April
- Phase I Awards: June/July
- Phase II Proposals Due: April
- Phase II Awards: June/July

**NIST awards are cooperative agreements.**

- Advanced Communications, Networks and Scientific Data Systems
- Advanced Manufacturing and Material Measurements
- Cybersecurity and Privacy
- Fundamental Measurement, Quantum Science and Measurement Dissemination
- Health and Biological Systems Measurements
- Physical Infrastructure and Resilience
- Exploratory Measurement Science
- Technology Transfer

## **Administrative Review**

## **Merit/Technical Evaluation**

- (1) Technical Approach (20 points)
- (2) Appropriateness of staff and facilities (5 points)
- (3) The likelihood that the proposed research program will lead to a successful product or service (30 points)
- (4) Anticipated commercial benefits of the resulting product or service. (20 points)
- (5) Relationship to the goals of a NIST technical program and the NIST mission. (20 points)
- (6) SBIR Programmatic priorities (5 points):
  - a) manufacturing-related and energy-efficiency research
  - b) women, socially and economically disadvantaged SBCs, and SBCs from HUBZones or under-served states

## High Precision Devices (Boulder, Colorado)

### New Tool for Breast Cancer Screening

*The new breast phantom consists of two components. The one at left is designed to provide a standard for measuring proton spin relaxation time, which varies with different kinds of tissue. The one at right provides references for imaging diffusion.*

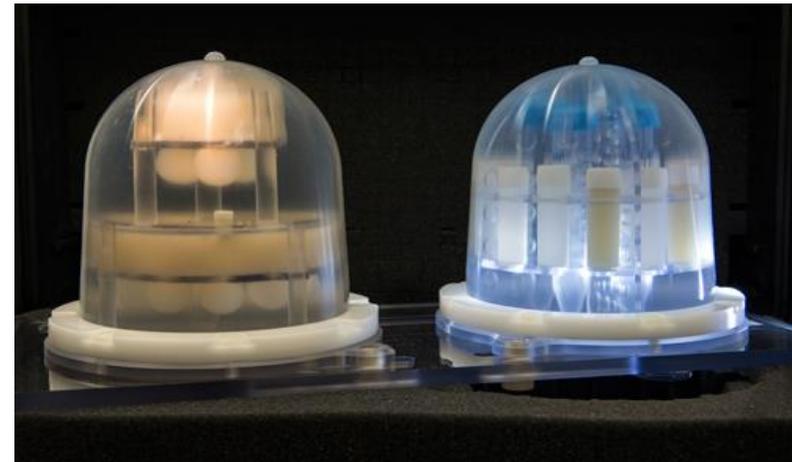


Photo Credit: NIST/PML

**Small Business Innovation Research Program (SBIR)**

- Resources +
- SBIR Past Awards +
- Of Interest +
- NIST SBIR Fraud, Waste, and Abuse (FWA)

## Small Business Innovation Research Program (SBIR)



The National Institute of Standards and Technology's SBIR program solicits R&D proposals from small businesses that respond to specific technical needs described in the subtopics of the annual Solicitation. Information regarding the subtopics will be made available only via the Solicitation. Please see the Resources below for more information on the specifics of the program.

### SBIR BULLETIN BOARD

#### NIST SBIR Phase I

The FY 2018 NIST SBIR Phase I Notice of Funding Opportunity is closed.

#### NIST SBIR Phase II

The FY 2018 NIST SBIR Phase II Notice of Funding Opportunity is closed.

▼ [SIGN-UP](#) for the NIST SBIR Newsletter!

#### Contact

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Phone: 301-975-4188

#### Fraud, Waste, or Abuse (FWA)

Report Suspected Fraud, Waste, or Abuse (FWA) to:  
Department of Commerce  
Office of Inspector General  
Ben Franklin Station, PO Box 612  
Washington, D.C. 20044

Phone: 800-424-5197  
TDD: 800-854-8407  
Local: 202-482-2495  
e-mail: [hotline@oig.doc.gov](mailto:hotline@oig.doc.gov)  
[Online Hotline Complaint Form](#)

#### Additional Links

- [DOC Office of Inspector General](#)
- [DOC OIG Investigations](#)
- [DOC Suspension and Debarment Handbook](#)
- [Successful Prosecutions of SBIR FWA](#)
- [Examples of FWA](#)
- [NIST SBIR FWA page](#)
- [SBA FWA](#)
- [Compliance with SBIR Program Requirements, Applicant Fraud Awareness Training](#)

[Manufacturing and Technology commercialization](#)

[Resources >](#)

<http://www.nist.gov/sbir>

Thank you!

**Mary Clague, NIST SBIR Program Manager**

[mary.clague@nist.gov](mailto:mary.clague@nist.gov) 301-975-4188



# **SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

## Navigating Funding Opportunities

# Navigating Funding Opportunities



**Moderator: SBA**  
Small Business  
Administration



**Anne Neumann**  
Defense Advanced  
Research Projects  
Agency (DARPA)



**Lynn Garrison**  
National Aeronautics  
and Space  
Administration (NASA)



**Dr. Jonathan Franca-Koh**  
National Institutes of  
Health, National Cancer  
Institute (NIH - NCI)



**Kerstin Mukerji**  
National Science  
Foundation (NSF)



**SBIR Road Tour**

SEEDING AMERICA'S FUTURE INNOVATIONS™

# Inside the Head of an Evaluator: Common Mistakes

# Inside the Head of an Evaluator: Common Mistakes



**Moderator: SBA**  
Small Business  
Administration



**Christopher O'Gwin**  
U.S Department of  
Energy (DOE)



**Dusty Lang**  
Department of  
Homeland Security  
(DHS)



**Larry Pollack**  
Joint Science &  
Technology Office for  
Chemical and  
Biological Defense  
(JSTO-CBD)



**Elden Hawkes**  
U.S. Department of  
Agriculture (USDA)



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