

SBIR/STTR
Rapid Sessions

[Monday]

9:00 NaThanya Ferguson – USPTO

9:20 Jeff DiTullio – FLC

9:40 Matt Portnoy/Sean Griffiths – NIH/CDC

10:00 Ruth Shuman – NSF

10:20 Vince Garcia/J'aime Maynard – NIST/NOAA

10:40 Kim Cannon – NASA

11:00 Manny Oliver – DOE

11:20 Elden Hawkes – USDA

11:40 Ed Metz (DoED)





#### NaThanya Ferguson- USPTO

[9:00 - 9:20am]



UNITED STATES
PATENT AND TRADEMARK OFFICE



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

NaThanya Ferguson Supervisory Innovation Development Program Specialist



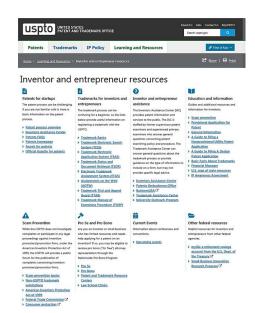
### Types of intellectual property





### Inventor and entrepreneur resources

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





## 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 homepage
  - New to IP? Find help in your are

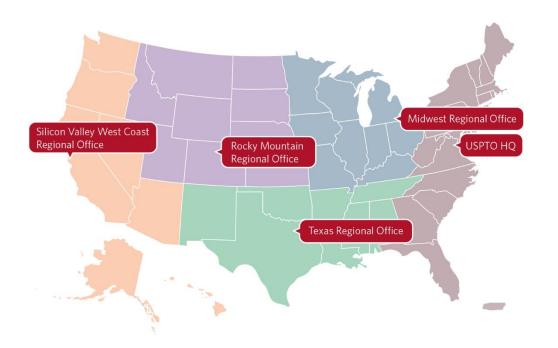








### **USPTO** offices



#### **USPTO Headquarters**

Alexandria, VA

#### **Midwest Regional Office**

Detroit, MI Stroh Building

#### **Rocky Mountain Regional Office**

Denver, CO Byron G. Rogers Federal Building

#### **Silicon Valley Regional Office**

San Jose, CA
San Jose City Hall Building

#### **Texas Regional Office**

Dallas, TX Terminal Annex Federal Building



### Office of Innovation Development (OID)

- Targeted support to connect independent inventors, small business owners, and entrepreneurs with helpful and relevant resources and information.
- Dedicated personnel for assisting inventors who are filing an application without an attorney (pro se applicant).
  - Explanation of different types of application filings
  - Assistance with completing forms
  - Review of application (e.g., specification, drawings, and claims)
     for compliance with current regulations
- In-person assistance at USPTO headquarters and virtual assistance from select Patent and Trademark Resource Centers (PTRCs).

### **Pro Se Assistance Program**

#### Hours of Operation

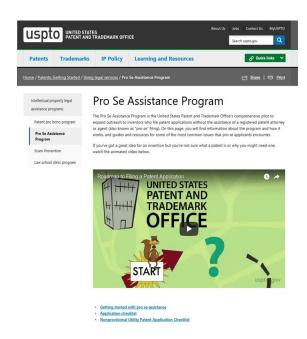
8:30 a.m. – 5 p.m. (ET),Monday through Friday

#### Email

innovationdevelopment@uspto.gov

#### Phone

- **–** (866) 757-3848
- Webpage <u>www.uspto.gov/ProSePatents</u>





### **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: <u>www.uspto.gov/TrademarkAssistance</u>



### 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.



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



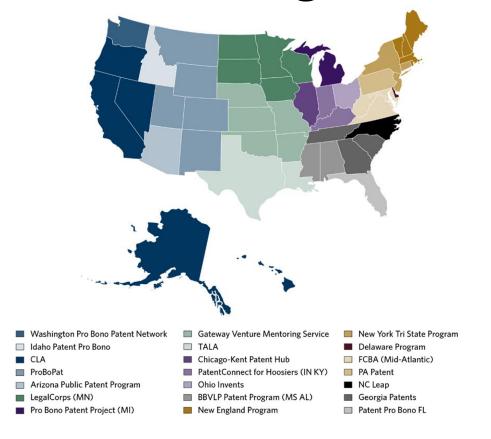
- Nationwide network of 21 independently operated regional not-for-profit programs
- Matches financially under-resourced independent inventors and small businesses with patent practitioners who volunteer their legal services
  - Patent legal services are free; applicant is responsible for other costs (filing fees, drawings, etc.)



## 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







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



## **Law School Clinic Certification Program**

- Independent law school clinics that provide free patent and/or trademark legal services to qualified applicants
  - Law school students provide the services under the supervision of an experienced law school supervising attorney
  - Students practice in patent and trademark law
- 60 law schools currently participate in the program
- Website: <u>www.uspto.gov/learning-and-resources/ip-policy/public-information-about-practitioners/law-school-clinic-1</u>
- Phone: (571) 272-4097
- Email: lawschoolinformation@uspto.gov



### 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: <a href="https://www.uspto.gov/MicroEntity">www.uspto.gov/MicroEntity</a>



### **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



## Thank you!

Office Of Innovation Development

innovationdevelopment@USPTO.GOV (571) 272-8877

For upcoming USPTO events, please visit: <a href="www.uspto.gov/events">www.uspto.gov/events</a>







Jeff DiTullio – FLC

[9:20 - 9:40am]





#### THE FLC'S MISSION

**PROMOTE** awareness and foster dialogue about federal R&D and the significant economic benefits of T2 among government, industry academia and external partners.

**EDUCATE** the federal T2 professionals on commercialization best practice strategies through various training opportunities and resources.

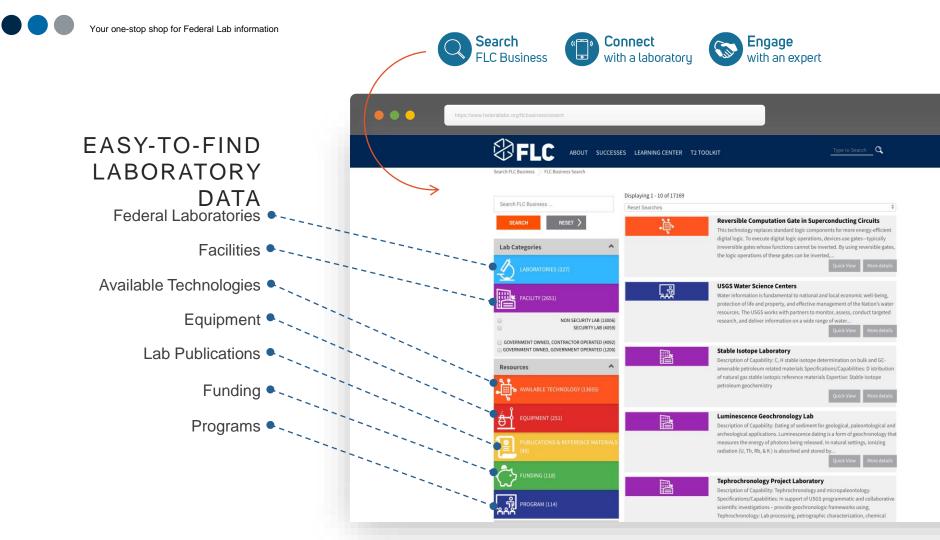
**FACILITATE** federal laboratories T2 goals through FLC-created tools and services that enable an accessible path for getting technologies from lab to market.

Foster lab-to-market strategies and connections to accelerate federal technologies.













#### **COLLABORATIVE RESEARCH ACCESS**

- National Experts
- State of the Art Facilities
- Specialized Equipment
- Innovation

#### LABS CAN PARTNER WITH:

- Businesses?
- **✓YES**
- Academia? YES
- Nonprofits? ✓YES
- GOV Entities? YES

- Foreign Entities?
- Individuals?
- Other?

**✓YES** 

**√YES** 

**√YES** 

### SBIR Example – NSWC CRANE

- US Army Phase II SBIR Project Flex Force Enterprises
- CRADA with NSWC Crane
  - Joint Research & Development of Improved Stabilized Weapons Platforms
  - Allows for the exchange of information, intellectual property, guidance and ideas on how to provide improved accuracy of stabilized weapon platforms.
- Mutual Benefit for both parties
  - Access to expertise and end users
  - Fed lab involved in cutting edge R&D Efforts in a critical tech area











### SBIR Example – Naval Medical Center

- Phase II SBIR Grant
- CRADA with the Naval Medical Center in San Diego
  - Allowed for a California-based small business to utilize the facilities and expertise at the Naval Medical Center to advance the technology and develop a clinically useful tool that could benefit patients with amputations in gait training
- Mutual Benefit for both parties
  - Access to expertise and state of the art facilities
  - Fed lab involved in cutting edge R&D Efforts in a critical tech area

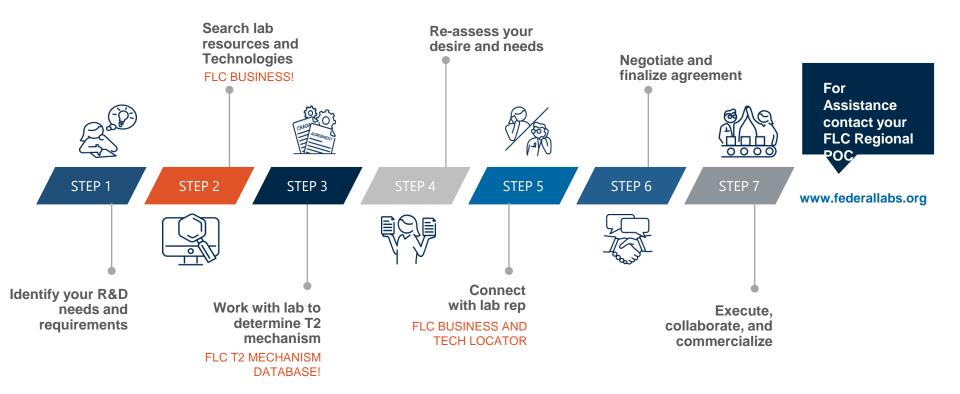


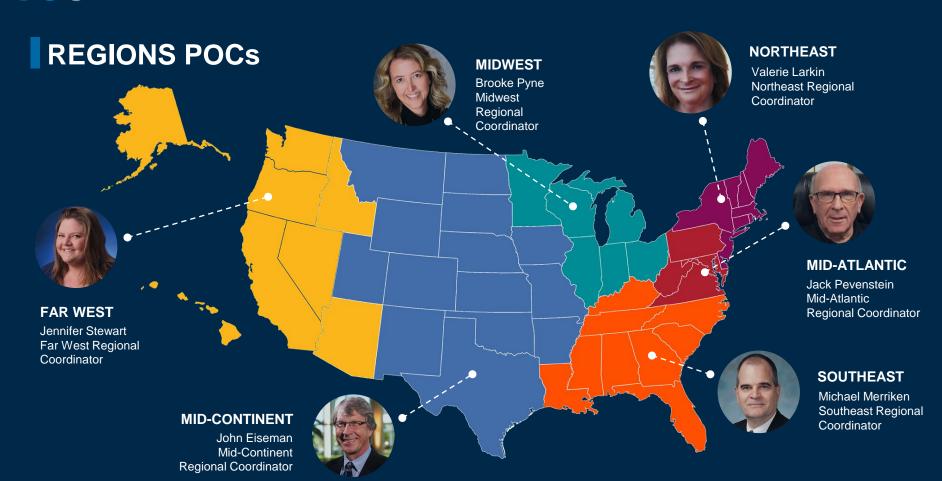






#### **T2 SUCCESS TRACK**





## CONNECT WITH US!

flcbusiness.org





## ? QUESTIONS

Thank you!



**Matt Portnoy – NIH** 

Sean Griffiths - CDC

[9:40 - 10:00am]



#### Why NIH SBIR/STTR?

2019 SBIR Road Tour

SBIR.NIH.GOV SBIR@od.nih.gov

24 Different Funding NIH
Institutes and Centers
And CDC, FDA, and ACL
(NIDILRR)

Women Owned &
Socially/Economically
Disadvantaged Small
Businesses
IDeA States

NIH 2019 SBIR/STTR Budget \$1.1 billion: SBIR - \$861 million STTR - \$121 million Omnibus AND Targeted Funding Opportunity Announcements (FOAs)

Includes Clinical Trial **NOT** Allowed + Clinical
Trial **REQUIRED** FOAs

#### **NIH-ONLY Options:**

Fast-Track Application
Direct to Phase II

Application Assistance
Program (AAP)

Administrative Diversity Supplement

Three Grant Receipt

Dates
(Sep 5, Jan 5, Apr 5)

One Contract Receipt

Date

(October 22) Annually

Apply Electronically using Forms OR use NIH ASSIST (Application Submission System & Interface for Submission Tracking)

NIH Technical Assistance Programs and Sponsoring Meetings: Niche, CAP, I-Corps (NCI)

### Niche Assessment Program

- Phase I Awardees

- Provides market insight and customer analysis

## Commercialization Accelerator Program (CAP)

- Phase 2 Awardees- Offers support toward commercialization

National SBIR/STTR Conference (SBA)

**SBIR Road Tours** 

**NIH Regional Seminars** 

**Free Webinars** 



#### Solicitations and Due Dates

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

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

**Clinical Trial Required** 

SBIR: <u>PA-19-273</u> STTR: <u>PA-19-271</u>

**Clinical Trial Not Allowed** 

SBIR: <u>PA-19-272</u> STTR: <u>PA-19-270</u>

Release: May, 2019

Standard Due Dates: September 5<sup>th</sup> (2019)

January 6<sup>th</sup>, April 6<sup>th</sup> (2020)



9 Different Funding Centers and NIOSH

**SBIR Funding Opportunities** 

Grant Omnibus Funding
Opportunity Announcement
(FOA)

**Contract Solicitation** 

CDC 2019 SBIR Budget \$10 million



# Centers for Disease Control and Prevention (CDC)

Small Business Innovation Research (SBIR)

Program

Website: <a href="www.cdc.gov/sbir">www.cdc.gov/sbir</a>
Questions? Send E-mail: SBIR@CDC.GOV

**CDC SBIR FACT FACTS** 

TOPICS: 20-40 SBIR topics published per year in both the grant omnibus and contract solicitation

Emerging Public Health Issues: CDC will accept investigator-initiated proposals (e.g., Ebola (EVD, Opioid overdose, etc.)



PROTECTING AMERICA'S SAFETY, HEALTH, AND SECURITY

# CDC SBIR Technical Assistance

(Niche, Commercialization Acceleration Program (CAP), I-Corps @ NIH)

#### **Tips for SBC applying**

- Talk to CDC
- Apply Early!!
- Continue to Apply

#### **How Can I Engage?**

- E-mail: SBIR@cdc.gov
- 21st Annual HHS SBIR/STTR Conference
- Apply for Technical Assistance





#### **Ruth Shuman – NSF**

[10:00 - 10:20am]





National Science Foundation
SBIR/STTR Program Overview

Ruth Shuman, Ph.D.
SBIR/STTR Program Director





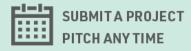
# S200 MILLION PER YEAR IN R&D FUNDING

# UP TO \$1.5 MILLION for your company

#### **PHASE I**

JP TO \$225,000

A proof-of-concept/feasibility grant that lasts from 6 to 12 months. Phase I proposals are evaluated based on the technical innovation and potential commercial/societal impact.



#### **PHASE II**

UP TO \$750,000

A two-year grant that helps companies commercialize highrisk technology innovations. A company must receive a Phase I grant before applying for a Phase II grant.







### **Agency Focus**

- Pre-seed funding for small businesses to catalyze the commercialization of high-risk technological innovations
- Typically, first money into the company to fund proof-of-concept
- \$200 million annual budget in 2019
- Fund about 400 companies each year
- Grants not contracts, not loans equity-free investment for R&D

#### **Aims of the Program:**



- Provide funding to startups and small businesses developing high-impact engineering and science-based products and services
- De-risk technology development to encourage private investment
- De-risk value proposition and business model
- Long-term economic growth in the US and other societal benefits





#### What we fund:

- Novel, disruptive, gamechanging technologies for a commercial product, process, or service
- High-risk, high-impact, high-payback projects
- Enabling technologies, especially with broad societal benefits

#### We Don't Fund:

- Basic research
- Incremental (evolutionary)
   optimization of existing
   products and processes,
   or straightforward
   modifications to broaden
   the scope of an existing
   product or process
- Business development, including market research



# PROPOSAL TOPICS

We accept proposals in any area of technology

```
TECHNOLOGY TOPIC AREAS
Advanced Manufacturing (M)
                                                                  Advanced Materials (AM)
Artificial Intelligence (AI)
                                                                  Biological Technologies (BT)
Biomedical Technologies (BM)
                                                                  Chemical Technologies (CT)
Digital Health (DH)
                                                                  Distributed Ledger (DL)
Educational Technologies and Applications (EA)
                                                                  Energy and Power Systems (EP)
Environmental Technologies (ET)
                                                                  Information Technologies (IT)
Instrumentation and Hardware Systems (IH)
                                                                  Internet of Things (I)
Medical Devices (MD)
                                                                  Nanotechnology (N) ↓
Other Topics (OT)
                                                                  Photonics (PH)
Quantum Information Technologies (QT)
                                                                  Robotics (R)
Semiconductors (S)
                                                                  Sensors (SE)
Space (SP)
                                                                  Wireless Technologies (W)
                                                           seedfund.nsf.gov/portfolio/
```



- 1. See what we fund
- 2. Determine your eligibility
- 3. Preview the Project Pitch (optional)
- 4. Submit your Project Pitch (required)
- 5. Register your company (FREE and required)
- 6. Read the call for proposals (solicitation)
- 7. Submit your full proposal (if invited)

https://seedfund.nsf.gov/apply/



#### Anytime

See what we fundDetermine your eligibilityPreview the Project Pitch

Prior to the end of the submission window

Submit your Project Pitch

Upon invitation

Register your companyRead the call for proposalsSubmit your full proposal

1-3 months after the window closes ---> Applications undergo merit reviews

4-6 months after the window closes ---> We'll notify you about our funding decision

5-6 months after the window closes ---> If your proposal is funded, you'll receive up to \$225,000



# **Project Pitch**

The required Project Pitch allows startups and small businesses to get quick feedback at the start of their application for Phase I funding from America's Seed Fund powered by NSF.

Good Fit – You will be invited to submit a Phase I proposal



# Submission Windows – rather than deadlines

A company submits a full proposal after invite

March 4 - June 13

June 14 – December 12

Submit your proposal anytime you are ready!





- 91% never had a SBIR/STTR Phase II award (from any agency)
- 85% five or fewer employees
- 72% founded in past three years
- >75% first-time SBIR/STTR winners

(NSF Award Search)



#### **Awardees since 2014:**

- \$6.5 billion in follow-on equity financing
- 90 successful exits (acquisitions, mergers, IPOs)

(Based on public data only, 2014-present)

#### SBIR/STTR Phase I Solicitations –



#### **Guides to Proposal Preparation**

- Read the solicitation!
- It's everything you need to know – from eligibility information to proposal preparation and submission guides.
- Find it on our website at: <a href="https://seedfund.nsf.gov/ap">https://seedfund.nsf.gov/ap</a>
   ply/

Small Business Innovation Research Program (SBIR) Phase I
Program Solicitation NSF 19-554

Small Business Technology Transfer Program (SBIR) Phase I Program Solicitation NSF 19-555





### **Register Early**

- Data Universal Numbering System (DUNS)\* www.dnb.com
- System for Award Management (SAM)\* www.sam.gov
- 3. SBIR.GOV Company Registry\* www.sbir.gov/registration

\*We recommend completing the registrations in this order.



#### On our website -

NSF's SBIR/STTR website home page: <a href="https://seedfund.nsf.gov/">https://seedfund.nsf.gov/</a>

How to Apply Information: <a href="https://seedfund.nsf.gov/apply">https://seedfund.nsf.gov/apply</a> /

Resources For Applicants: <a href="https://seedfund.nsf.gov/resources/applicants/">https://seedfund.nsf.gov/resources/applicants/</a>

The SBIR Solicitation nsf19554 may be found at: <a href="https://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=nsf19554">https://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=nsf19554</a>.

The STTR Solicitation nsf19555 may be found at: <a href="https://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=nsf19555">https://www.nsf.gov/publications/pub\_summ.jsp?ods\_key=nsf19555</a>.

Direct link to Project Pitch Form – https://nsfgov.secure.force.com/sbir/



Our goal is to help startups funded by NSF to become successful commercially and have a positive economic impact and benefit society.

## **Questions?**

sbir@nsf.gov

@NSFSBIR

https://seedfund.nsf.gov/resources/applicants/





Vince Garcia – NIST J'aime Maynard – NOAA

[10:20 - 10:40am]





# National Institute of Standards and Technology

# **U.S. Department of Commerce**

Mary Clague NIST SBIR Program Manager J'aime Maynard SBIR Administrator



# Mission

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



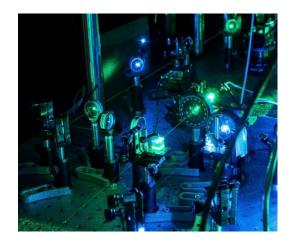
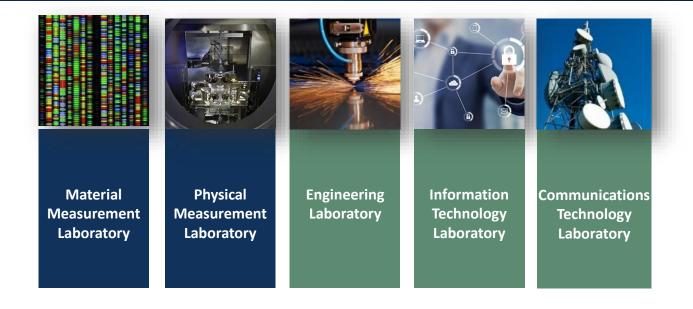


Photo Credit: Curt Suplee/NIST





# Laboratories & Programs



#### User Facility & Extramural Programs:

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





### **Research & Programmatic Areas**

**Advanced Communications** 

Bioscience

Chemistry

Cybersecurity

**Electronics** 

Energy

**Environment** 

Fire

**Forensic Science** 

Healthcare

Information Technology

Infrastructure

Manufacturing

**Materials** 

**Mathematics & Statistics** 

Metrology

Nanotechnology

**Neutron Research** 

Performance Excellence

**Physics** 

**Public Safety** 

Resilience

**Standards** 

Transportation





# SBIR 3-Phase Program

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





# Program Timeline (tentative)

Phase I Solicitation Release Date: ~January

(available at www.nist.gov/sbir & 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.





# FY 2019 Research Areas

- 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
- Applicants will need to identify where their technology fits with NIST.



# Success Story

# 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.

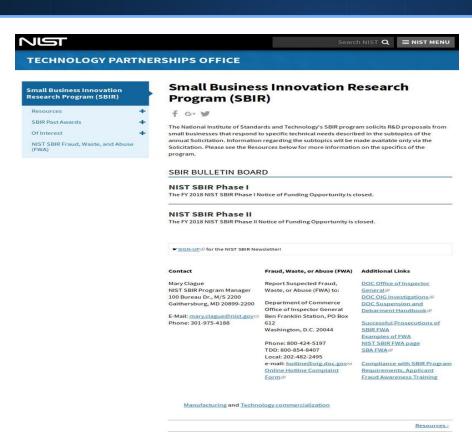


Photo Credit: NIST/PML





# NIST SBIR website



http://www.nist.gov/sbir





## Contact Information

Mary Clague, NIST SBIR Program Manager

mary.clague@nist.gov 301-975-4188

J'aime Maynard, SBIR Administrator

Jaime.Maynard@nist.gov 301-975-8408

NIST SBIR website: <a href="http://www.nist.gov/sbir">http://www.nist.gov/sbir</a>





# Small Business Innovation Research Program

**Rapid Session** 

Vince Garcia NOAA SBIR Program Manager Technology Partnerships Office









#### **NOAA SBIR Program**

Awards Funding Announcement

Released Proposals due

Available via

Grants

One per fiscal year

October

January

grants.gov / DoC Grants-Online

Typical Phase I Awards
Typical Phase II Awards

Proposal Success Rates

\$120K, 20 to 30

\$400K, 10 to 20

Phase I: 20-25%, Phase II: 50-60%



#### **NOAA SBIR Insider Tips - EARTH**

Early and Complete Submission

Apprehend the Rules

Read Funding Announcement Thoroughly

Think Commercialization, Propose Innovation

Homework





# **Vince Garcia NOAA SBIR Program Manager** vincent.garcia@noaa.gov sbir.inquiry@noaa.gov techpartnerships.noaa.gov @NOAASBIR





#### Kim Cannon - NASA

[10:40 - 11:00am]





## **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**

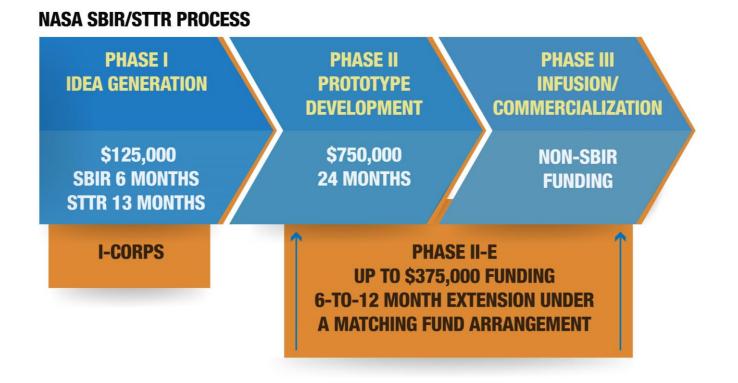
Create opportunities through SBIR/STTR awards to leverage small business knowledge and technology development for maximum impact and contribution

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 todate.

### **SBIR/STTR Program Structure**



## Learning about NASA's Needs

#### Focus Areas

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

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

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		
<b>FA 4:</b> Robotic Systems for Space Exploration	FA 16: Ground and Launch Processing		
<b>FA 5:</b> Communications and Navigation	FA 17: Thermal Management Systems		
<b>FA 6:</b> 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	<b>FA 20:</b> 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			

## **National Science Foundation (NSF) Space Topic**

## **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-topicwhat-you-need-know





#### SBIR/STTR Success

#### **PHASE III SUCCESS**

IRIS AO products derived from SBIR funding are available for world-wide distribution by Edmund Optics - approximately \$2 million revenue generated annually from the technology developed from NASA SBIR. NASA's SBIR program invested \$875,000.

#### **SNAPSHOT**

Since the first exoplanet discovery in 1995, NASA has dedicated resources to develop deformable mirrors for powerful telescopes to determine if there are signs of life beyond Earth on planets outside our solar system.

https://sbir.nasa.gov/success-stories

#### SPECIAL MIRRORS HELP NASA DETECT PLANETS

IRIS AO, Inc., Berkeley, CA

#### Challenge

Starlight can lower the contrast in images sent back to Earth from a telescope traveling in space, making it harder to detect planets light years away.

#### Innovation

IRIS AO, Inc. helped NASA to develop deformable mirror (DM) technology that can filter out direct light from stars that limit the visibility of exoplanets. The technology is a key component of starlight blocking instruments on telescopes. The DM is used to correct optical aberrations that otherwise reduce the resolution of an image.



### Contact us and let's innovate together

Website www.sbir.nasa.gov

Sign up for our Newsletter <a href="https://sbir.nasa.gov/info">https://sbir.nasa.gov/info</a>

NASA Help Desk **301.937.0888** 



## Manny Oliver – DOE

[11:00 - 11:20am]





## DOE SBIR/STTR Programs

Manny Oliver
Director, SBIR/STTR Programs Office
manny.oliver@science.doe.gov, (301) 903-0309

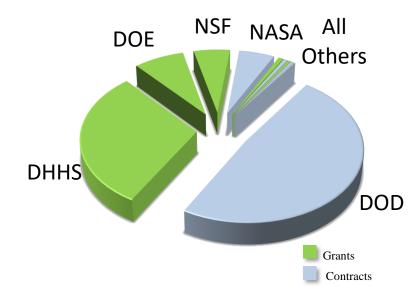
SBIR/STTR Spring Innovation Conference

Boston, MA

June 18, 2019



## Estimated SBIR/STTR Budgets by Agency, FY 2018



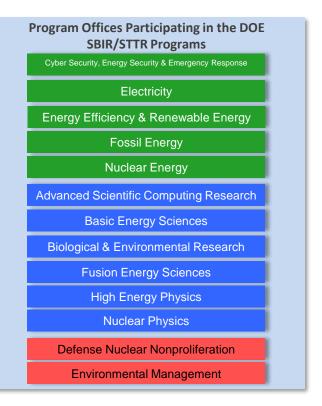
~ \$3.6B in FY 2018 across all agencies



#### **APPROX AGENCIES WITH SBIR & STTR PROGRAMS** BUDGET Department of Defense (DOD) \$ 1.750 B \$1.088 B Department of Health and Human Services (DHHS), including the National Institutes of Health (NIH)\* \$280.0 M Department of Energy (DOE), including Advanced Research Projects Agency - Energy (ARPA-E) \$ 202.4 M National Science Foundation (NSF) National Aeronautics and Space Administration \$198.0 M (NASA) **APPROX AGENCIES WITH ONLY SBIR PROGRAMS** BUDGET Department of Agriculture (USDA) \$27.0M Department of Homeland Security (DHS): \$20.8 M Science and Technology Directorate (S&T) & Countering Weapons of Mass Destruction Office (CWMD) Department of Commerce: National Oceanic \$14.2M and Atmospheric Administration (NOAA) & National Institute of Standards and Technology (NIST) Department of Transportation (DOT) \$8.5 M Department of Education (ED) \$7.5 M \*DHHS also issues contracts \$4.2 M Environmental Protection Agency (EPA)

### **U. S. Department of Energy Mission**

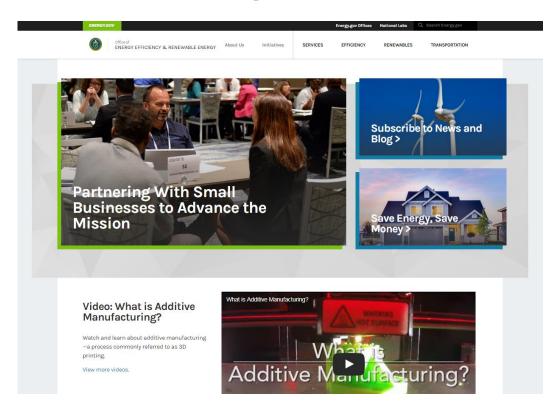
- DOE's Mission is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions.
  - Goal 1: Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in energy technologies.
  - Goal 2: Maintain a vibrant U.S. effort in science and engineering as a cornerstone of our economic prosperity, with clear leadership in strategic areas.
  - Goal 3: Enhance nuclear security through defense, nonproliferation, and environmental efforts.





#### **Information Available at DOE Program Office Websites**

- Mission
- Technical Reference Data and Reports
- Conference Proceedings
- Contact
   Information



## DOE Program Offices supporting Goal 1: Energy Technologies

- Office of Cybersecurity, Energy Security and Emergency Response
- Office of Electricity
- Office of Energy Efficiency and Renewable Energy
- Office of Fossil Energy
- Office of Nuclear Energy



#### **R&D Topic Areas**

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

## DOE Program Offices Supporting Goal 2: Science and Engineering Leadership

- Advanced Scientific Computing Research
- Basic Energy Sciences
- Biological and Environmental Research
- Fusion Energy Sciences
- High Energy Physics
- Nuclear Physics



#### **R&D Topic Areas**

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

## **DOE Program Offices Supporting**

## **Goal 3: Nuclear Security**

- Office of Defense Nuclear
   Nonproliferation
- Office of Environmental Management



#### **R&D Topic Areas**

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

## **Operation of the DOE SBIR and STTR Programs**

#### **DOE Program Office**

- Develop Topics
- Identify Reviewers
   (Scientific Peer Review)
- Recommend Awardees
- Manage Projects

Technical Expertise Leveraged
Throughout DOE



#### **DOE Chicago Office**

- Negotiate Grants
- Issue New and Continuation
   Awards
- Grant Closeout



#### **DOE SBIR/STTR Programs Office**

- Develop Funding Opportunity Announcements
- Administer Review and Selection Process
- Ensure Compliance with SBIR/STTR Legislation
- Conduct Outreach

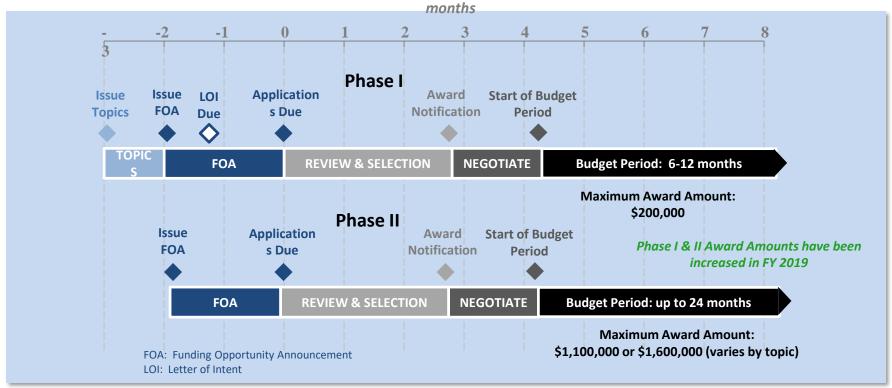
Single Administrative Office for Applicants



## **Award Sequence**



## **Application & Award Timelines**





# FY 2020 SBIR/STTR Phase I Funding Opportunity Announcements

#### Phase I Release 1

- Office of Advanced Scientific Computing Research (ASCR)
- Office of Basic Energy Sciences (BES)
- Office of Biological and Environmental Research (BER)
- Office of Nuclear Physics (NP)

#### Phase I Release 2

- Office of Cyber Security, Energy Security, and Emergency Response (CESER)
- Office of Defense Nuclear Nonproliferation (NA)
- Office of Electricity (OE)
- Office of Energy Efficiency and Renewable Energy (EERE)
- Office of Fossil Energy (FE)
- Office of Fusion Energy Sciences (FES)
- Office of High Energy Physics (HEP)
- Office of Nuclear Energy (NE)

## Schedule: FY 2020 Phase I, Releases 1 & 2

Phase I FOA Schedule	Release 1	Release 2
Topics Issued	Monday, July 15, 2019	Tuesday, October 12, 2019
Webinar(s)	Week of July 22, 2019	Week of November 18, 2019
FOA Issued	Monday, August 12, 2019	Monday, December 16, 2019
Webinar(s)	Friday, August 16, 2019	Friday, December 20, 2019
Letters of Intent (LOI) Due	Tuesday, September 3, 2019	Monday January 6, 2020
Non-Responsive LOI Feedback Provided	Tuesday, September 24, 2019	Monday, January 27, 2020
Applications Due	Tuesday, October 15, 2019	Monday, February 24, 2020
Award Notification	Monday, January 6, 2020*	Monday, May 18, 2020*
Projected Grant Start Date *preliminary dates subject to change	Tuesday, February 18, 2020	Monday, June 29, 2020



## **Assistance for the Application Process**

- We have an online learning system to assist new applicants:
  - https://science.osti.gov/SBIRLearning
- First time applicants are also eligible to utilize of Phase 0 Application Assistance Program:
  - Services
    - Letter of Intent (LOI) writing assistance
    - Phase I Proposal Preparation, Review and Registration Assistance
    - Market Research Assistance
    - Small Business Development Training, Mentoring and Registrations
    - Technology Advice and Consultation
    - Intellectual Property Consultation
    - Indirect Rates and Financials



#### Commercialization

- DOE topics are drafted by program managers who are aware of the technology roadblocks but may not be aware of the commercialization challenges
- Small business applications are expected to address the commercialization challenges and ensure that there is a profitable business opportunity
  - Phase I & II Applications must include Commercialization Plans
  - Commercialization Plans accommodate long commercialization timeframes: emphasis on first 10 years of commercialization beginning with first sale
  - Commercialization in adjacent markets can also be included
- DOE performs follow-up surveys to track commercialization outcomes of its SBIR/STTR awards
- Commercialization Assistance provided to Phase I/II grantees:
  - \$6500 for Phase I; \$50,000 for Phase II
  - You may use the DOE vendor or your own vendor(s)

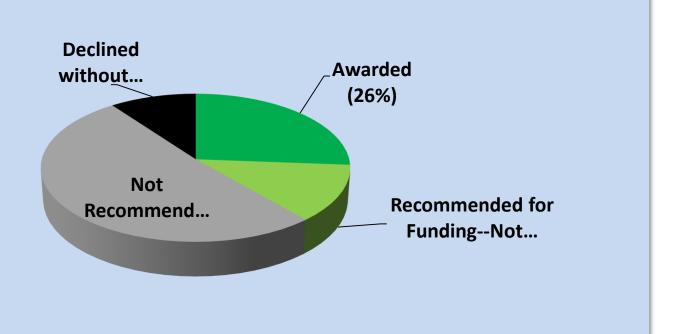
Increased in FY 2019



## Phase I Application & Award Statistics for FY 2018

#### Phase I

- 1,546 applications
- 402 awards





#### **QUESTIONS?**

#### **Contact information:**

• DOE SBIR/STTR Operations: 301-903-5707

• DOE SBIR/STTR Email: <a href="mailto:sbir-sttr@science.doe.gov">sbir-sttr@science.doe.gov</a>

#### Our Website:

• DOE SBIR/STTR main website: <a href="https://science.osti.gov/sbir">https://science.osti.gov/sbir</a>

#### Join our Mailing List:

• Join our Mailing List – this field is on every DOE SBIR/STTR web page

#### Join Mailing List

Subscribe to email updates from the SBIR & STTR Programs

Subscribe 🔀



## **Elden Hawkes – USDA**

[11:20 - 11:40am]



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



## Features of USDA SBIR Program

- Ideas are Investigator-Initiated
- Awards are Based on Scientific and Technical Merit, PI and Company Qualifications, and Commercial Potential of the innovation
- Subcontracting to Universities and USDA Labs
   Permitted and Encouraged



## **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 II Winners can request additional funds for commercialization.
- Research can be done with existing ARS patents via ARS CRADAs
- FY 2018: Phase I
  - 533 Phase I applications submitted
  - 79 Phase I awards
  - Phase II
    - 67 Phase II applications submitted
    - 35 Phase II awards



## **SBIR Topic Areas**

Conservation of Natural Resources (formerly Air, Water and Soils)

Animal Production and Protection

Aquaculture

Biofuels and Biobased Products

Food Science and Nutrition

Forests and Related Resources

Plant Production and Protection - Engineering

Plant Production and Protection - Biology

Small and Mid-Sized Farms Rural and Community Development



Off the Self Technologie s are



# Technology Areas Supported by the USDA/SBIR Program

- Information Technology
- Robotics
- Electronics
- Biotechnology
- Nanotechnology
- Microelectro
   Mechanical Systems
   (MEMS)
- Acoustics
- Remote Sensing

- Genetic Engineering
- Material/Coatings
- Food Safety
- Biofuels
- Machine Vision
- Precision Agriculture
- Engineering
- Physics
- Chemistry



## **USDA SBIR REVIEW PROCESS**

- Proposals are evaluated by confidential peer review using outside experts from academia, industry, non-profits and federal labs
  - Phase I: Panels plus ad-hoc reviewers
  - Phase II: Panels plus ad-hoc reviewers
- All Applicants Receive Verbatim Copies of Reviews
- Phase I applicants that were not selected for funding are able to reapply for Phase I funding during the next solicitation cycle.
- Phase II applicants are only able to apply one time.



# **University and Government Scientist Involvement in USDA SBIR Program**

- Strongly encouraged
- Scientists may serve as consultants or receive a subcontract (limited to no more than 1/3 of Phase I award or 1/2 of Phase II award) and continue to work full time at their home institution
- Scientists may serve as the principal investigator on an SBIR grant, <u>by</u>
   reducing employment at their home institution to 49% for the duration of the
   grant and if the SBIR research is performed someplace other than their
   research lab
- It is usually not acceptable for university or government scientists to serve as consultants and have all the research done in their lab
- Develop a Cooperative Research and Development Agreement (CRADA)
   with a USDA Lab or License USDA innovation



## **Advice for Phase I**

- Provide a VISION of where you want to be at the end of Phase II
  - What is the market opportunity?
- Focus the Phase I research on critical enabling factor(s)
- Sell the importance of your project
- Provide a detailed experimental plan and include proprietary information
- Provide insight into commercial potential
- Show connectivity with the communities you are intending to serve by including letters of support with end-users, consumers, investors, etc...

# Factors that Improve Chances for Commercial Success

- High Scientific/Technical Merit/Commercial Potential
- Good Consultants, CRADA
- Business Expertise
- Strong letters of Support from Phase III
  Partners, End-Users, Consumers and Investors
- Clear Understanding of Entry and Sustainability in the Market



# Factors that Improve Chances for Commercial Success

"Additional factors that will be considered in the review process include whether a Phase I or II application involves a CRADA with a USDA laboratory, or a license to a USDA technology. In the event that two or more applications are of approximately equal merit, the existence of a CRADA with a USDA laboratory or a license to a USDA technology will be an important consideration."



## FY 2020 Timeline



#### Phase I

RFA Released early July 2019

Proposal Deadline October 2019

Panels Jan & Feb 2020

Notifications March 2020 Awards\* June –Aug 2020

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

RFA Released Dec. 2019 Proposal Deadline Feb. 2020

Panels May 2020

Notifications June 2020 Awards\* Sep. 2020

#### **USDA SBIR Success Stories**





# Freund's Farm, Inc.



















Agricultural Waste



Fungal Mycelium



Mushroom® Materials



#### **Altaeros Energies**

#### **Technology Developed**

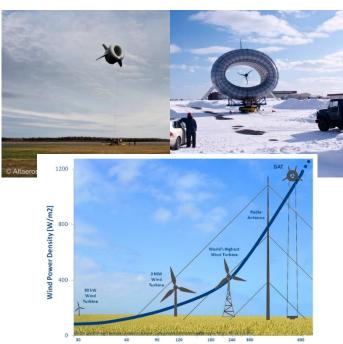
 Altaeros Buoyant Airborne Turbine (BAT) leverages proven aerospace technology to lift a wind turbine into the strong, consistent winds beyond the reach of traditional towers.
 Economic power generation for rural communities and remote locations.

#### **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





# **Stony Creek Colors**



#### INDIGO PLANTS We've tested a variety of indigo plants so that we



Working with farmers, we develop techniques to farm our and nourish ecosystems.



grow the right ones for the southeast climate and

ecology.

**CONSUMERS** Our colors empower people to purchase clothing that fully aligns with their desire to be a force for positive change.



BRANDS

Partnering with pioneering brands, we

to their clothing.

develop bio-based dyes

that bring full integrity

#### STONY CREEK COLORS With our mindful

innovation approach, we develop the processes and chemistry to create bio-based dyes.

MILLS We work with mills to ensure our bio-based dyes specifications and work flawlessly with their





Featured in Forbes, NPR. Huffington **Post** 



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

Elden Hawkes

**Waterfront Centre** 

800 9th Street, SW, Suite 3210

Washington, DC 20024

Phone: (202) 401-6516

E-mail: Elden.Hawkes@usda.gov

Web Site: www.nifa.usda.gov/fo/sbir





Ed Metz - DoED

[11:40am - 12:00pm]





Connecting Research, Policy and Practice

# An Funding Program for R&D of Education Technology Products for Small Businesses

Edward Metz, Ph.D.

U.S. Department of Education
Institute of Education Sciences



#### **Small Business Innovation Research**

Through one annual competition, the ED/IES Small Business
Innovation Research Program (SBIR) provides Phase I and II awards
to for-profit firms for the R&D of commercially viable education
technology products to support students, teachers, or
administrators
in regular or special education settings.







UTE OF ITION SCIENCES

#### **ED/IES SBIR: Key Information**

~\$10M annual budget

Contracts awards are for \$200K for prototype development and an additional \$900K for full-scale R&D and pilot testing

The 2020 ED/IES SBIR program solicitation will likely be released in January, 2020, with proposals due in March 2020

The program has a success rate of ~5% in Phase I and ~50% in Phase II







UTE OF ITION SCIENCES

#### **Five Simple Tips for Your Proposals**

- The concept for the proposed product must be new, doable, and intend to make a significant educational and societal impact
- Include four different forms of educational research
- Include <u>three</u> letters that demonstrate that strong pathways are already in place toward commercial distribution and sustainability
- Include a project team with experts across several areas
- Please write a clear proposal; follow the format; & make sure your website and video demoes are in line with your proposal







UTE OF TION SCIENCES

#### Other Funding Opportunities for EdTech R&D & Evaluation

#### Email <u>Edward.Metz@ed.gov</u> for the latest Funding Opportunity 2-pager

Funding Opportunities for R&D and Evaluation of Education Interventions and Products Across the Federal Government Updated May 2019			
Program	Key Information	<u>Timeline</u>	Point of Contact
ED/IES SBIR – Small Business Innovation Research	\$1.1M to for-profit firms for R&D and evaluation of innovative commercially viable ed-tech products for students, teachers, and administrators, across many areas in education and special education.	Next RFP release: winter 2020	Edward.Met @ed.gov
ED IES Research Grants Program	\$1.4M to \$3.3M (mainly to universities or non- profits) for basic research, R&D of interventions and assessments, and evaluation across many topics in education.	Next RFA release: summer 2019	Edward.Met @ed.gov
ED IES Special Education Grants Program	\$1.4M to \$3.3M (mainly to universities or non- profits) for basic research, R&D of interventions and assessments, and evaluation across many topics in special education.	Next RFA release: summer 2019	Sarah.Brasie @ed.gov
Ready to Learn Television	\$27M for public telecommunications entities to create and distribute educational television and digital media for children ages 2-8, especially those from low-income households.	Next RFA: summer 2020	Brian.Lekano er@ed.gov
OSEP Stepping Up Technology Implementation	\$1.5M (3 grants, \$500,000 each per year/5 years) to effectively implement research-based technology tools that benefit students with disabilities and develop and disseminate products for a broad range of schools.	Next RFA: late Spring 2019	Terry.Jackso n@ed.gov
ED OSEP	\$1.2M per year for 5 years to provide TA to increase the capacity of stakeholders	Next RFA: late Spring	Tara.Courcha ine@ed.gov



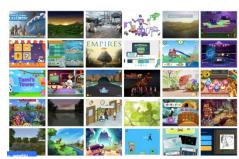
#### 7<sup>th</sup> Annual ED GAMES EXPO

Join us in Washington, DC to try out more than 100 learning games and technologies across all areas of education for children and students of all ages while meeting the developers

And meet the reps from ~30 different Federal programs that supported the R&D of the games and technologies

Date/Location: TBD in early January, 2020







UTE OF ATION SCIENCES

#### Reach Out For More Info & Feedback

Edward Metz, Ph.D.

Email: edward.metz@ed.gov

SBIR Website: <a href="mailto:ies.ed.gov/sbir/">ies.ed.gov/sbir/</a>

Videos: ies.ed.gov/sbir/videos.asp

IES Website: <a href="http://ies.ed.gov">http://ies.ed.gov</a>





SBIR/STTR
Rapid Sessions

[Monday]

1:20 April Richards – EPA

1:40 Tammy Taylor – DOT

2:00 John Pucci – DHS

2:20 Monroe Harden – DoD-Army

2:40 Bob Smith – DoD-Navy

3:00 David Shahady – Air Force

3:20 DoD Components – DARPA, DHA, CBD

3:40 DoD Components – SOCOM, DTRA





#### **April Richards – EPA**

[1:20 - 1:40pm]





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

April Richards, Program Manager SBIR National Conference June 17-18, 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 = ~\$4.2 M

#### PHASE I:

Proof Of Concept

\$100,000

6 Months

Awards = Contracts

#### PHASE II:

Develop & Commercialize
Technology

\$400,000

2 Years



# **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



# Solicitation Now Open! Closes July 31, 2019



Information at: <a href="https://www.epa.gov/sbir">www.epa.gov/sbir</a>

Apply at: FedConnect

Subscribe to SBIR listserv:

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



#### **Solicitation - Broad Topic Areas**







Air Quality



Land Revitalization



Homeland Security



Sustainable Materials Management



Safer Chemicals





#### **Clean & Safe Water**



- Rehabilitation of water infrastructure
- Technologies for the destruction of PFAS in water and wastewater
- POU treatment for opportunistic pathogens
- Rapid detection and treatment of antibiotic resistant bacteria in wastewater
- Treatment for cyanobacteria and cyanotoxins in drinking water
- Resource Recovery for Decentralized Wastewater Systems





#### **Air Quality**



Innovative Air Monitoring Technologies:

- ethylene oxide (EtO)
- sulfur dioxide (SO2)





#### **Land Revitalization**



Mining site characterization and remediation







#### **Homeland Security**





- 3-D Gamma Camera to Map Radiological Contamination
- Novel water distribution and stormwater system sensors





#### **Sustainable Materials Management**



- New Applications for Industrial Non-Hazardous Secondary Materials
- Preventing Food Waste





#### **Safer Chemicals**



Safer paint and coating removal products







#### **Anticipated Schedule**

#### PHASE I

Contracts Began: Ar

April 2020

Contracts End:



September 2020

#### PHASE II

# Solicitation Open:

• September 2020

# Proposals Due:

November 2020

#### Contracts Awarded:

• May 2021

#### Option Documentation Due:

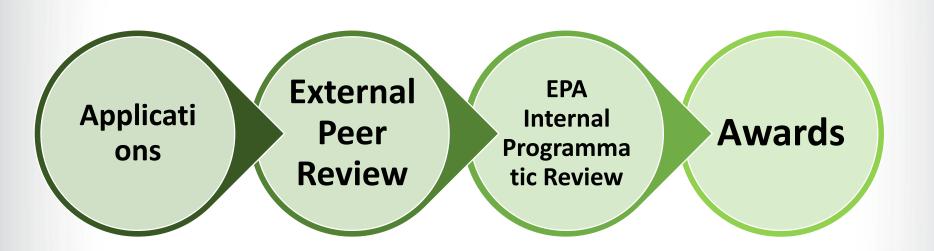
 90 days before end of Phase II contract

# Phase II Ends:

• May 2023



#### **Proposal Evaluation & Selection**





#### **External Peer Review: Phase I**

#### RATINGS

Highly Recommend

Recommend

Do Not Recommend

#### REVIEW CRITERIA

#### **Commercialization Criteria**

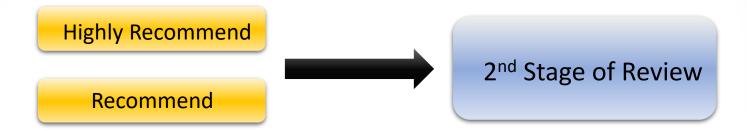
- Market Opportunity
- Company/Team
- Commercialization Approach

#### **Technical Criteria**

- Innovation
- Technical Approach
- Technical Challenges



#### **Internal Programmatic Review**



#### **EVALUATION CRITERIA**

- Relevance to Topics & Agency priorities
- Advance Sustainability





Wide use, broad application/impact



#### **SBIR Sensors Research Microsite**

The Federal government is a significant driver of sensor innovation: investing in low cost, portable, easy-to-use technologies to facilitate the collection of real time, reliable measurement information.

Central web location promotes collaboration across SBIR agencies

Easier for sensor developers to locate relevant SBIR/STTR funding opportunities



















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# **EPA SBIR**Success Stories

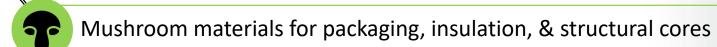




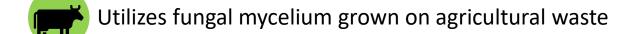
#### **Ecovative: Green Island, NY**













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 <a href="mailto:richards.april@epa.gov">richards.april@epa.gov</a>

Website: www.epa.gov/sbir

**Listserv:** <a href="https://www.epa.gov/sbir/sbir-listserv">https://www.epa.gov/sbir/sbir-listserv</a>

SBA SBIR website: www.SBIR.gov



Tammy Taylor – DOT

[1:40 - 2:00pm]



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

SBIR/STTR Spring Innovation Conference
June 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*	Х					
Federal Highway Administration / Intelligent Transportation Systems-Joint Program Office (ITS JPO)	Х	Х	Х	Х	Х	X
Federal Railroad Administration	Х	Х		Х	Х	X
Federal Transit Administration	Х	Х	Х	Х	Х	X
Federal Motor Carrier Safety Administration						X
National Highway Traffic Safety Administration	Х	Х		Х	Х	X
Office of the Secretary	Х			Х		
Pipeline and Hazardous Material Safety Administration	Х				Х	



<sup>\*</sup>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 2 \$200K to \$1M
  - ➤ Phase 2B \$250K to \$1M
- Number of awards per year
  - ➤ Phase 1 based on solicitation topics
  - $\triangleright$  Phase 2 50-60% of Phase 1 awards
  - ➤ Phase 2B ~25% of Phase 2 awards



## **DOT's 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**

- Commercialization Assistance Program (CAP) 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
- > Improved cost appendices
- > Funding for CORs to travel to project sites



### This Year's FY 2019 Solicitation Schedule

# Visit <a href="www.volpe.dot.gov/sbir">www.volpe.dot.gov/sbir</a> to sign-up to receive alerts on new solicitations

Action	Start Date	End Date	
Solicitation Open and Close Dates	Feb. 19, 2019	Apr. 22, 2019	
Evaluation Period Initiation and Completion	Late April	June	
Announce Award Recommendations	NLT 90 days (Jul. 22, 2019) from Solicitation Close		
Award Contracts	NLT 180 days (Oct. 21, 2019) from Solicitation Close		





TransportationGov @USDOT - 14 Dec 2015 Kudos to @VolpeUSDOT @USDOTFHWA

and @SolarRoadways. This. Is. Way. Cool. 1.usa.gov/1RkywBk





TransportationGov @USDOT - 14 Dec 2015

Someone ask for solar pavement that illuminates lines, melts snow? Oh, we did! 1.usa.gov/1RkywBk



Top Tweet earned 2,460 impressions

Distracted driving and walking: How @USDOTs #SBIR helps make it safer to cross the street. go.usa.gov/cY9bY pic.twitter.com/C6phwOH4Dz







### **DOT Solicitation Process**

- Solicitations are posted at <u>volpe.dot.gov/sbir</u> and <u>fbo.gov</u>
- □ Requests for clarifications/questions on research topics can be submitted to the Program Office staff
- Submission of offers via secured website is a requirement



# Opportunities Outside of DOT SBIR Program

- DOT/Office of Small and Disadvantaged Business Utilization –
   osdbu.dot.gov
- □ Fed Biz Ops <u>fbo.gov</u>
- □ University Transportation Center Program –<u>utc.dot.gov</u>
- □ Transportation Research Board <u>trb.org</u>
- □ 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

Melissa Wong
SBIR Program Manager
melissa.wong@dot.gov
617-494-3414

Tammy Taylor
SBIR Contracting Officer
tammy.taylor@dot.gov
617-494-3462







John Pucci – DHS

[2:00 - 2:20pm]



# DHS Small Business Innovation Research (SBIR) Programs Overview



## **2019 SBIR Spring Conference**

Seeding America's Future Innovations TM

June 18, 2019



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













### Today DHS will...



ISSUE 50

CYBERSECURITY

WARNINGS

9.400 LBS

OF ILLICIT DRUGS

SPECIAL

282,000

PRIVATELY OWNED

**VEHICLES** 

SEIZE

EVENTS



U.S. Citizenship and

Immigration Services



INVESTIGATIONS





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** 



## 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



### **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

#### **SBIR Portal Help Desk**

Email: dhssbir@reisystems.com

Phone: 703-480-7676

#### **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

#### 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



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







## Monroe Harden – DoD-Army

[2:20 - 2:40pm]







**Bob Smith – DoD-Navy** 

[2:40 - 3:00pm]





## **Department of Navy (DON)**

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

Mr. Robert Smith
Director, DON SBIR/STTR & Special Programs
robert.l.smith6@navy.mil

www.navysbir.com



## **DON SBIR/STTR**

## 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

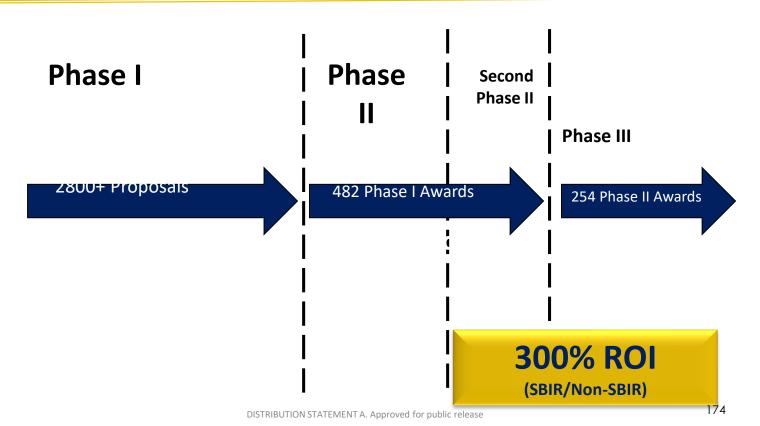
## About the Program:

- 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



## "Life" of a Topic





## What is Part of DON SBIR/STTR?





## **Participating DON SYSCOMs**

DON Program Staff Bob Smith
Director, DON SBIR/STTR

Lee Ann Boyer
DON CRP
Program Manager

Steve Sullivan
DON STTR
Program Manager

Joy McGlasson DON SBIR/STTR Operations Manager

Systems Commands (SYSCOM) Program Managers

#### NAVSEA

Dean Putnam Program Manager SBIR/STTR/CRP

#### **MARCOR**

Jeff Kent Program Manager SBIR/STTR/CRP

#### **ONR**

Lore-Anne Ponirakis Program Manager SBIR

#### **SPAWAR**

Shadi Azoum Program Manager SBIR/STTR/CRP

#### **NAVAIR**

Donna Attick Program Manager SBIR

#### **NAVSUP**

Esteban Diaz Program Manager SBIR/CRP

**SSP** 

Mark Hrbacek Program Manager SBIR/STTR/CRP

#### NAVFAC

Tim Petro
Program Manager
SBIR/CRP

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## **Evolution of EMILY**

### **Emergency Integrated Lifesaving Lanyard**



2001 2007 2017 2018

# The Start Marine Mammal Detection and Mitigation

- Automatic Detection
- Low Cost Sensors
- Mitigation Decision Aids

#### The Leveraging Silver Fox UAV Combat Tested 2007

- Video Communications
- Threat Warning System
- Sensor Classification

#### Today Emergency Integrated Lifesaving Lanyard

- · Worldwide use by lifeguards
- Rescue in USA
- · Swift water rescue
- Used in Hurricane Harvey

#### Tomorrow

#### Mobile Gateway Buoy (MGB) Operationally Tested 2017

- Communications
- Video Sensors
- Sonar Sensors
- UUV data relay
- Rathometric manning

\$5M STTR \$7M SBIR

\$4.2M in Government Phase III Funds/\$6M+ +Commercial Sales



## 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!



## Questions



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## David Shahady – DoD-Air Force

[3:00 - 3:20pm]







DoD Components DARPA, DHA, CBD

[3:20 - 3:40pm]





## Small Business Programs Office (SBPO)



Susan Celis Program Director susan.celis@darpa.mil



#### 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 <u>www.grants.gov</u> or <u>www.fedbizopps.gov</u> to view DARPA Broad Agency Announcements (BAAs), Research Announcement (RAs), and Requests for Proposals (RFPs).
- Visit <a href="https://sbir.defensebusiness.org/">https://sbir.defensebusiness.org/</a> to view DoD SBIR and STTR Program Announcements.

## Think **boldly**. Embrace risk.



## **Technology Offices**

BTO	Biological	l Technol	ogy
-----	------------	-----------	-----

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

#### **DSO** Defense Sciences

Autonomy | Complexity | Fundamentals | Materials | Math | Sensors

#### **I20** 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

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### **DARPA** 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

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

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

David Busigo, Jr.

Director

david.Busigo@darpa.mil

Susan Celis
Program Director
susan.celis@darpa.mil

Small Business Support Team (703) 526-4170 sbir@darpa.mil



## The Defense Health Agency's Healthcare and Biomedical SBIR/STTR Program: Leveraging Innovation to Deliver Solutions

CAPT Joseph Cohn, PhD
DHA J-9
Chief, Research Program Division
DHA SBIR, STTR,
and Rapid Innovation Fund Programs











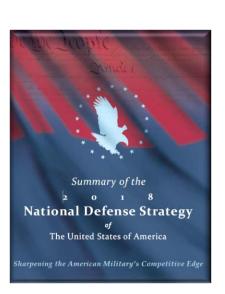






## **The Future Operational Environment**

Build a lethal Joint Force that possesses decisive advantages for any conflict



Enhance Nation's security by ensuring Warfighters are ready to conduct full range of operations



Operate in environments that are highly distributed with minimal organic health service infrastructure



## Meeting the Future Through Biomedical Research and Development



**Future Battlespace ...** 

**Increased / Time Distance** 

**Distributed Operations** 

**Degraded / Denied Comms** 

**Logistics Challenges** 

**Challenged Air Superiority** 



...Demands Advanced Solutions

**Advanced Trauma Care Training** 

**Injury Detection and** 

**Diagnostics** 

**Injury Treatment / Prolonged** 

**Field Care** 

**Patient Transport / En Route** 

Care

Rehabilitation

## Meeting the Future Through Biomedical Research and Development



## We can address these health services challenges through <u>agile</u>, <u>integrated</u>, and <u>innovative</u> research and development solutions

**Agile:** Future medical forces and the technologies that enable them must be

immediately responsive to a range of contingencies anytime and

anywhere

**<u>Integrated</u>**: Interoperable capabilities guided by common standards and procedures

<u>Innovative</u> Solutions that embrace risk to achieve the breakthroughs needed to

sustain the highest levels of medical capability

## **Summary of Major Investments Defense Health Program**

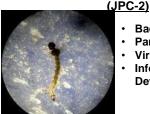


#### **Medical Simulation & Information** Sciences (JPC-1)



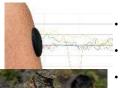
- Theater/Operational Medicine
- Medical Resourcing
- Information Technology Infrastructure and **Data Management**

#### **Military Infectious Diseases**



- Bacterial
- Parasitic
- Viral
- Information & Devices

#### Military Operational Medicine (JPC-5)



- · Injury Prevention and Reduction
- **Psychological Health** and Resilience
- **Physiological Health**
- **Environmental Health** and Protection
- **Wearable Sensors**

#### **Combat Casualty Care (JPC-6)**



#### Radiation Health Effects (JPC-7)



- Post-exposure mitigation of radiation injury
- Protection and prevention
- Mechanism of radiation injury
- Development of biodosimetry tools

#### Clinical & Rehabilitative Medicine (JPC-8)



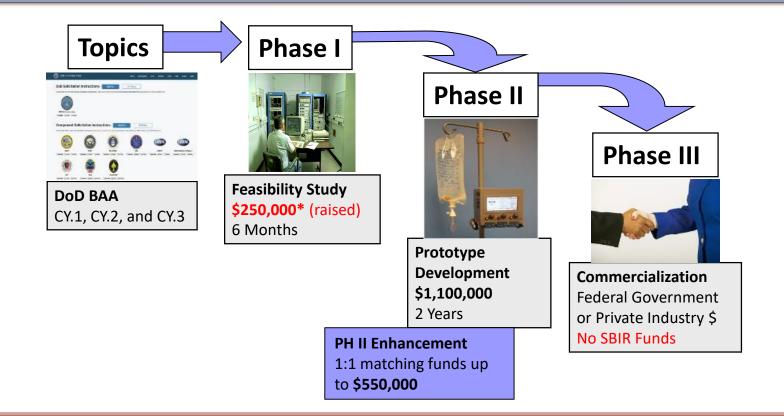
- **Regenerative Medicine**
- Neuromusculoskeletal Injury Rehabilitation
- **Pain Management**
- **Sensory System Injury**

- **Neurotrauma & Traumatic Brain Injury**
- Hemorrhage Control & Resuscitation
- Forward Surgical- EN Route Care
- Photonics & Light-Based Innovation for Severe Injury

Photos courtesy of DoD

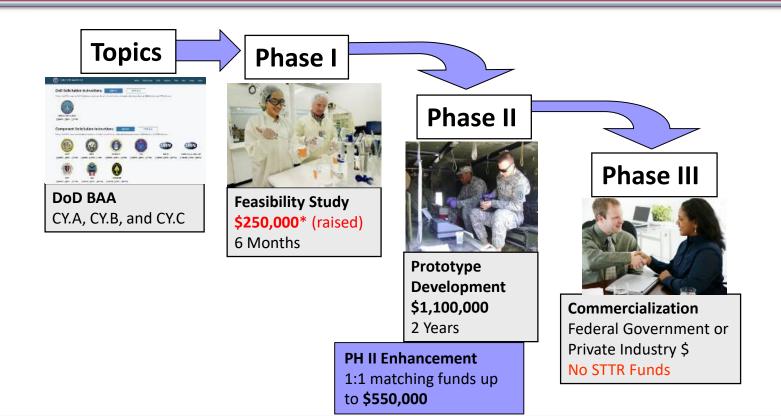
### **DHA SBIR Overview**





### **DHA STTR Overview**





## **DHA SBIR/STTR Program Features**



- Faster Phase I to Phase II pathway
  - ☐ Phase II proposal opportunity prior to end of Phase I
- Some topics utilize Direct to Phase II authority
  - ☐ Found as separate file under DoD SBIR/STTR BAA
- Maximum allowable Phase I \$250K
- Tri-service topic authors
- Contracts awarded by an medical contracting activity's SBIR/STTR service branch
- Transition planning assistance provided by a resident Technical Assistance Advocate support contractor

## **DHA SBIR/STTR Points of Contact**



#### <u>Defense Health Agency – Falls Church, VA</u>

https://health.mil/About-MHS/Defense-Health-Agency



CAPT Joseph Cohn, Chief Research Program Administration Division / DHA SBIR/STTR Programs (Joseph.v.cohn.mil@mail.mil, 703-681-8370)

#### **US Army Medical Research and Materiel Command – Fort Detrick, MD**



http://mrmc.amedd.army.mil/

Mr. J.R. Myers, SBIR/STTR Project Manager (james.r.myers.38.civ@mail.mil, 301-619-7377)

Ms. Colleen Gibney, SBIR/STTR Deputy Project Manager (colleen.n.gibney.civ@mail.mil, 301-619-3719)

Ms. Amanda Cecil, SBIR/STTR Operations Manager (amanda.l.cecil3.ctr@mail.mil, 301-619-7296)

Ms. Lauren Lynch, DHA SBIR/STTR Program Analyst (lauren.a.lynch6.ctr@mail.mil, 301-619-5146)

Unclassified 199

## 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





## **Chemical/Biological Detection**



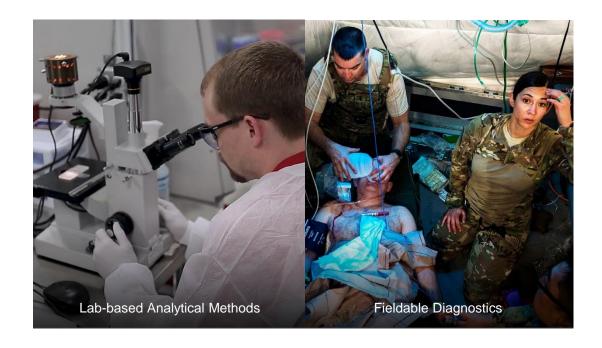


## **Detection/Diagnostics**





## **Medical Diagnostics**





## **Vaccines/Therapeutics**





## Medical Countermeasures: Chemical & Biological





## **Individual CB Protection Continuum**

**Lightweight** 



- ✓ Open-air battlefield
- ✓ DoD specific

**Medium Weight** 



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

Full Encapsulation



- space
- ✓ NFPA 1991/1994 class

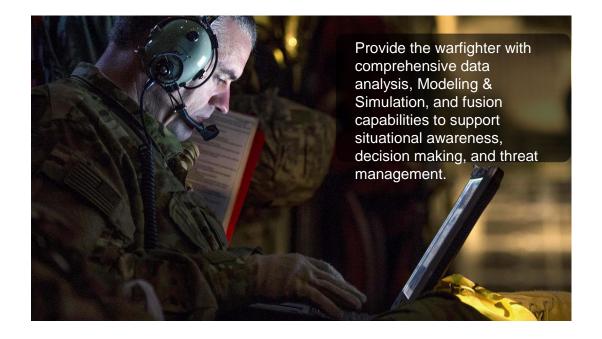


## **Decontamination**





## **Information Systems/Surveillance**





## **Advanced and Emerging Threats**





## **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 *
CBD SBIR	FY19.1 / FY19.A	28 Nov 2018	8 Jan 2019	6 Feb 2019
	FY19.2 FY19.B	2 May 2019	30 May 2019	1 Jul 2019
	FY19.3 / FY19.C	23 Aug 2019	24 Sep 2019	23 Oct 2019

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



## DoD FY19.2 SBIR Announcement CBD SBIR Has New Topics!

#### **'ON-THE-STREET' RIGHT NOW!**

**UNCLASSIFIED** 

Phase I Proposals due July 1 No Later Than 8:00pm EDT

SEE:

https://sbir.defensebusiness.org



CBD192-001

## **CBD SBIR – FY19.2 Announcement Topics**

Military Working Dog Decontamination Kit

CBD192-002	On-site Treatment of Contaminated Equipment	
CBD192-004	Phage therapy for bio-threat bacteria	
CBD192-005	Development (or Application) of a Non-Invasive Device	
	to Measure Changes in Intra-Cranial Pressure resulting	
	from Viral or Bacterial Infections of the Central Nervous	

System

CBD192-006 Development of Small Molecule Therapeutics for

**Emerging Viral Agents** 

CBD192-007 Optimized Platforms for Proper Glycosylation and

Sialylation of Recombinant Human Butyrylcholinesterase

(rBChE)

CBD192-008 Long Duration, Novel Opioid Medical Countermeasure

for Intramuscular Injection

http://sbir.defensebusiness.org

Proposals due NLT 8pm ET, 1 July 201916



## **Some Helpful Resources**

DoD SBIR/STTR Program Information for Small Businesses and DoD SBIR Proposal Submission (Phase I & Phase II): https://sbir.defensebusiness.org

DoD Office of Small Business Programs – Doing Business with the DoD: <a href="http://www.acq.osd.mil/osbp/sb/dod.shtml">http://www.acq.osd.mil/osbp/sb/dod.shtml</a>

Doing Business with DoD:
Guide to DoD Contracting Opportunities:
<a href="http://www.acq.osd.mil/dpap/cpic/cp/doing\_business\_with\_the\_department\_of\_defense\_dod\_us.html">http://www.acq.osd.mil/dpap/cpic/cp/doing\_business\_with\_the\_department\_of\_defense\_dod\_us.html</a>

Chem-Bio Defense (CBD) SBIR/STTR web-site: <a href="http://www.cbdsbir.net">http://www.cbdsbir.net</a>



## **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

(571) 616-6037



## DoD Components SOCAM, DTRA

[3:40 - 4:00pm]



# U.S. Special Operations Command (SOCOM)

SEEDING AMERICA'S FUTURE INNOVATIONS™

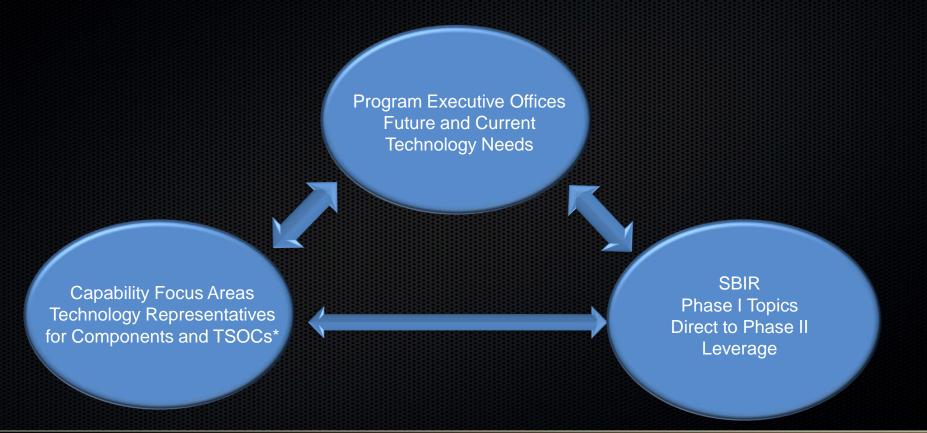


"Somewhere something incredible is waiting to be known."

-Carl Sagan

SCIENCE AND TECHNOLOGY

# **USSOCOM SBIR Technology Insertion**



<sup>\*</sup> Theater Special Operations Command (TSOC)

SCIENCE AND TECHNOLOGY

# AIR



# LAND



# SEA



# UNDERSEA



# SPACE





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# >50% of SOCOM Phase IIs Began as Non-SOCOM Efforts



## **SBIR LINKS**

- USSOCOM SBIR Program: <a href="https://www.socom.mil/SOF-ATL/Pages/sbir.aspx">https://www.socom.mil/SOF-ATL/Pages/sbir.aspx</a>
- DoD SBIR program (managed by OSBP): www.acq.osd.mil/osbp/sbir
- Federal SBIR Program (managed by SBA): www.sbir.gov

# Defense Threat Reduction Agency

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

Mark Flohr Program Manager DTRA R&D

Distribution A
Approved for Public Release





# **Agency Mission**

The Defense Threat Reduction Agency enables DoD, the U.S. Government and International Partners to counter and deter Weapons of Mass Destruction and Improvised Threat Networks.

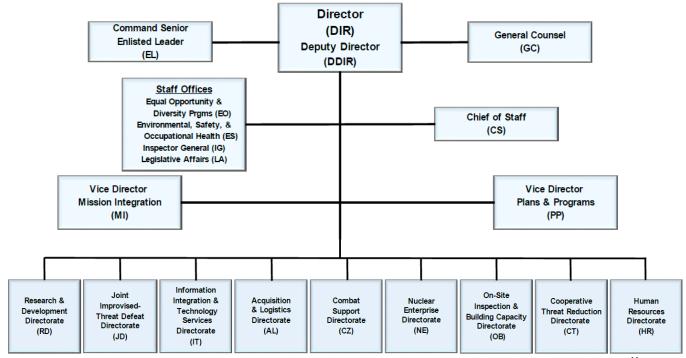




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# **DTRA Organization Chart**



9



#### **Mission and Vision**

#### **Our R&D Mission**

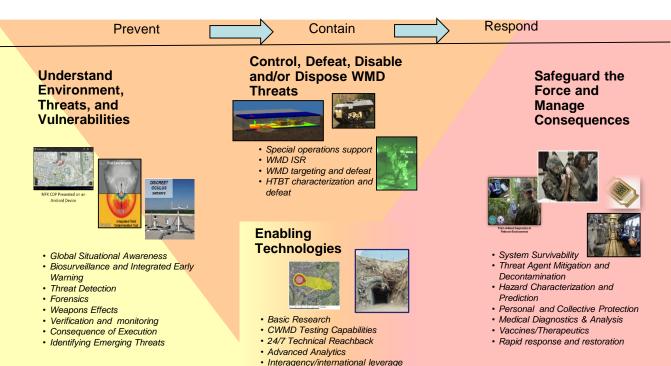
Provide research, development, test and evaluation (RDT&E) investments that focus on maintaining the U.S. military's CWMD technological superiority, supporting current readiness, and mitigating the risks of technical surprise for the CWMD mission.

#### **Our R&D Vision**

Be the recognized leader for CWMD technical innovation – responding to urgent warfighter needs while investing in R&D to shape the Nation's CWMD capabilities.



#### DTRA R&D Aligns with DoD Strategy for CWMD





# **DTRA RDT&E Summary**

- DoD's R&D organization focused on CWMD
  - Executes the two primary DoD CWMD S&T programs
  - Integration of JIDO's efforts adds significant value to overall RDT&E portfolio
- Responds to national/DoD CWMD priorities and SecDef's Lines of Effort (LOE)
  - Supports the strategic deterrent
  - Provides USSOCOM primary support for CWMD capabilities
  - Develops, coordinates, and transitions CBDP S&T medical and physical sciences technologies for validated joint military capability needs
- WMD-related research into over 100 universities
- Preserves core scientific and technology capabilities within the Military Service laboratories
- Comprehensive integrated R&D investment increases agility to respond to new/changing requirements



#### What's Unique about DTRA RDT&E

- Focused Solely on CBRNE
  - Collaboratively executes the two primary DoD S&T budgets for CWMD
  - Integration of JIDO's efforts adds significant value to overall RDT&E portfolio
- Within a Combat Support Agency (CSA)
  - Military / Deployable Workforce
  - 24/7 Ops / Reachback Center
  - Liaison offices at all US Commands
- Nimble and responsive to urgent needs
  - Basic Research through Advanced Technology Development (6.1 6.3) "under one roof"
- Top-notch and unique in-house field test capability
- Competitive "Best of Breed" across National/DoD labs, industry, academia



#### **DTRA SBIR**

#### DTRA SBIR

- Funds: FY16 = \$9.1 FY17 = \$9.2M FY18=\$9.9M FY19=\$9.9M
- Participate in one DoD Broad Agency Announcement per year
- Solicitation 16.2 (7 topics / 14 Phase I awards and planned up to 7 Phase II awards)
- SBIR 17.2 BAA (8 topics / 19 Phase I awards and planned up to 8 Phase II awards)
- SBIR 18.2 BAA (7 topics / plan for 14 Phase I awards and up to 7 Phase II awards
- SBIR 19.2 BAA (7 topics / plan for 14 Phase I awards and up to 7 Phase II awards
- Potential for additional SBIR Phase II awards using OSD SBIR STTR funds



## **DTRA SBIR**

#### Participating in one DoD solicitation per year

ВАА	No of Topics	Phase I awards	Phase II awards	OSD funded	Total Phase II Awards
15.2	8	16	9	0	9
16.2	7	16	10	0	10
17.2	8	18	8*	TBD	TBD
18.2	7	19	7*	TBD	TBD
19.2	7	14	7*	TBD	TBD

Blue – Awarded Green – To be Awarded

<sup>\*</sup> Potential for additional funding



#### DTRA STTR

#### DTRA STTR

- Funds: FY16 \$1.4M FY17 \$1.3M FY18 \$1.4M FY19 \$1.4M
- Participate in DoD Broad Agency Announcement in even years
- Solicitation FY16.A (4 topics / 8 Phase I awards, 1 Phase II award) Two additional STTR Phase II awards using OSD SBIR STTR funds
- No STTR Topics in FY17
- FY18.B BAA (4 topic / 8 Phase I awards and 1 Phase II award) May request OSD SBIR-STTR funds for additional Phase II awards.
- FY19.B BAA (3 topics / 6 Phase I awards and 1 Phase II award) May request OSD SBIR-STTR funds for additional Phase II awards.



## **DTRA STTR**

#### Participating in DoD solicitation mainly in even years

ВАА	No of Topics	Phase I awards	Phase II awards	OSD funded	Total Phase II Awards
16.A	4	10	1	2	3
17.A	NA				
18.B	4	8	TBD	TBD	TBD
19.B	3	6	TBD	TBD	TBD

Blue – Awarded Green – To be Awarded



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