Contracts vs Grants

Jenny C. Servo, Ph.D.

AGENDA

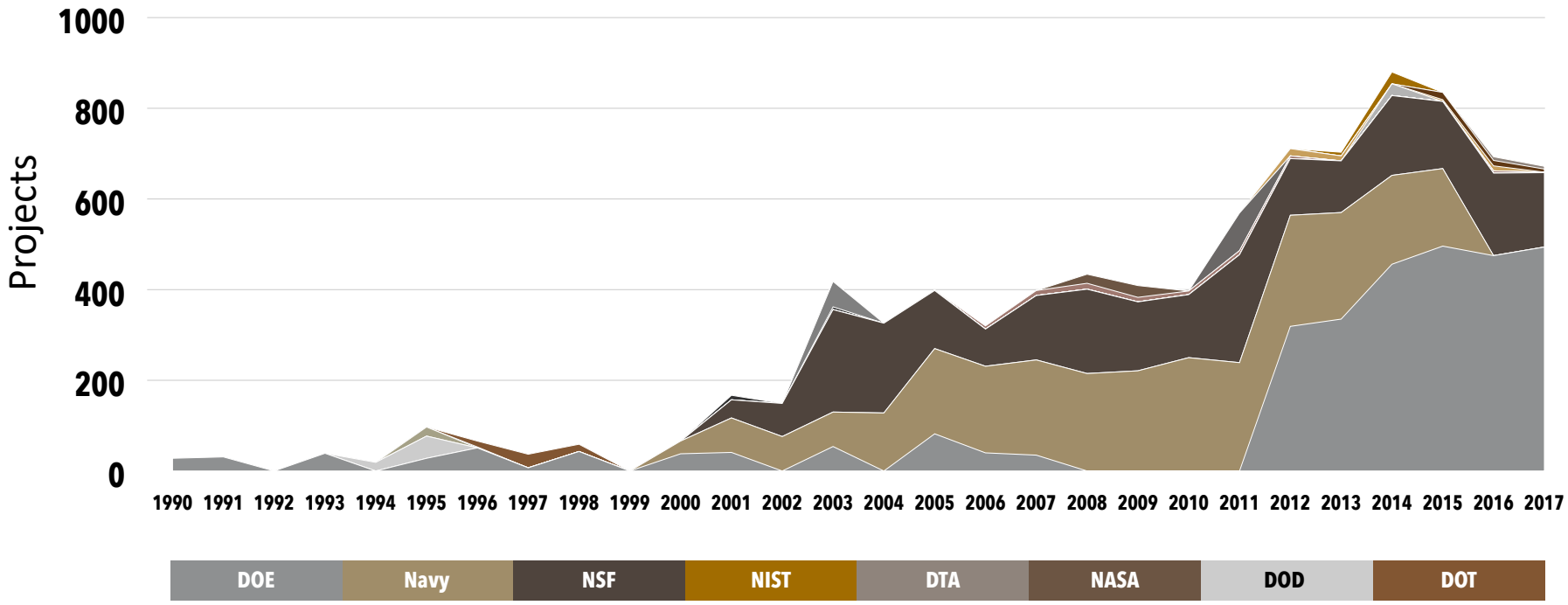
- Introductions
- Quiz SBIR/STTR basics
- A few basics to build on
- Sample solicitation topics
- Contracts vs Grants
- Can you talk to topic authors?
- What's new?

You can download this presentation from
https://www.dawnbreaker.com/event/

You can download agency links discussed from
https://wakelet.com/wake/e58f2f41-6c87-48f8-b856-13dd08442533

DAWNBREAKER
the commercialization company

- Founded in 1990
- Located in North Chili
- Government contractor to 10 agencies
- Provided support to over 8,600 SBIR/STTR projects
- Companies secured over $3B in Phase III funding

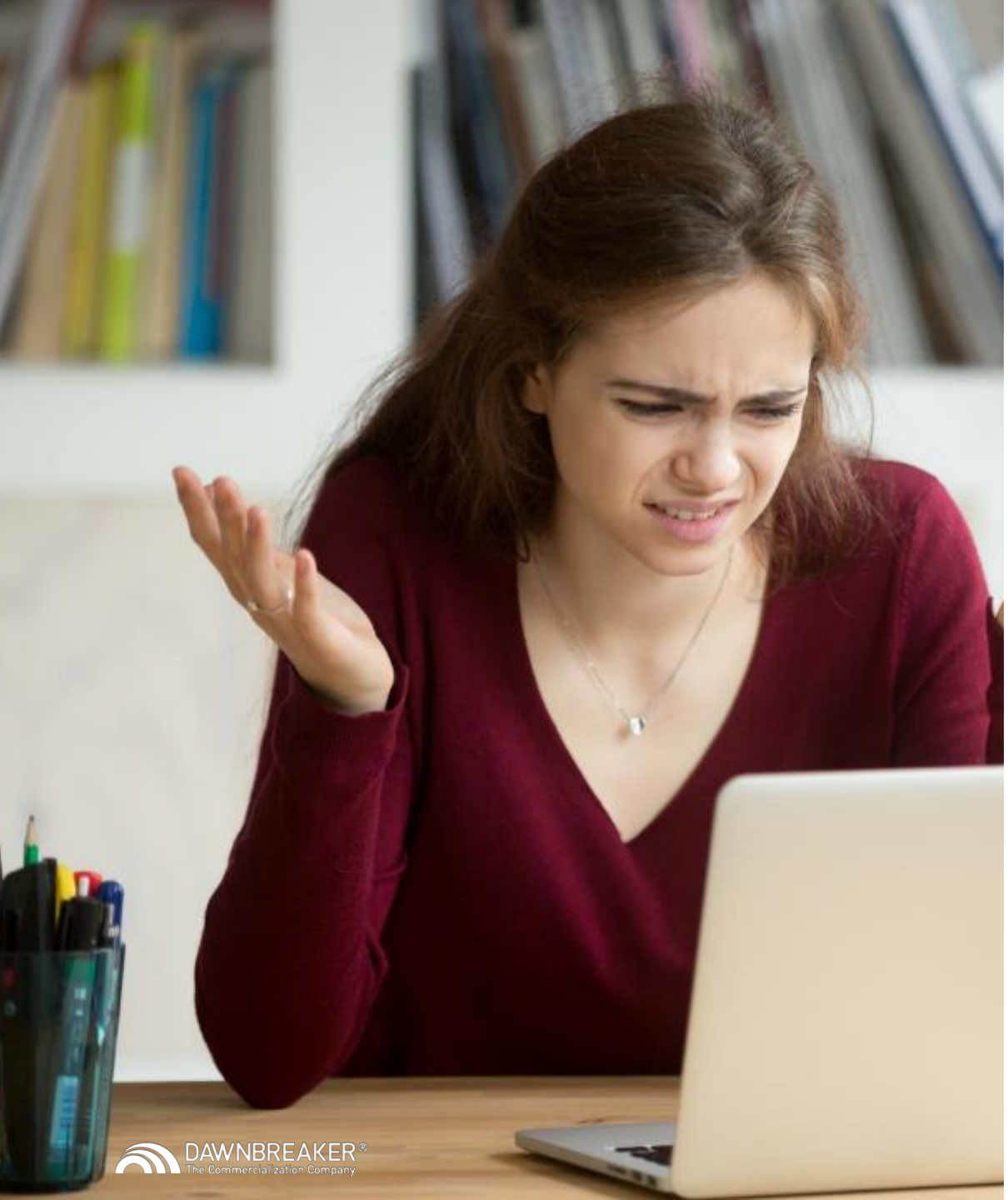


Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs

DOE Phase 0 Program

	Applicants	Accepted	Submitted proposals	% submitted proposals
FY15R2	205	69	47	68.1%
FY16R1	152	57	41	71.9%
FY16R2	172	60	32	53.3%
FY17R1	135	60	38	63.3%
FY17R2	139	78	66	84.6%
FY18R1	173	81	52	64.2%
FY18R2	113	47	39	83%
FY19R2	236	100	70	70%

Since 2015 we have assisted ~ 600 women-owned and socially and economically disadvantaged (SED) firms prepare DOE Phase 0 SBIR/STTR applications



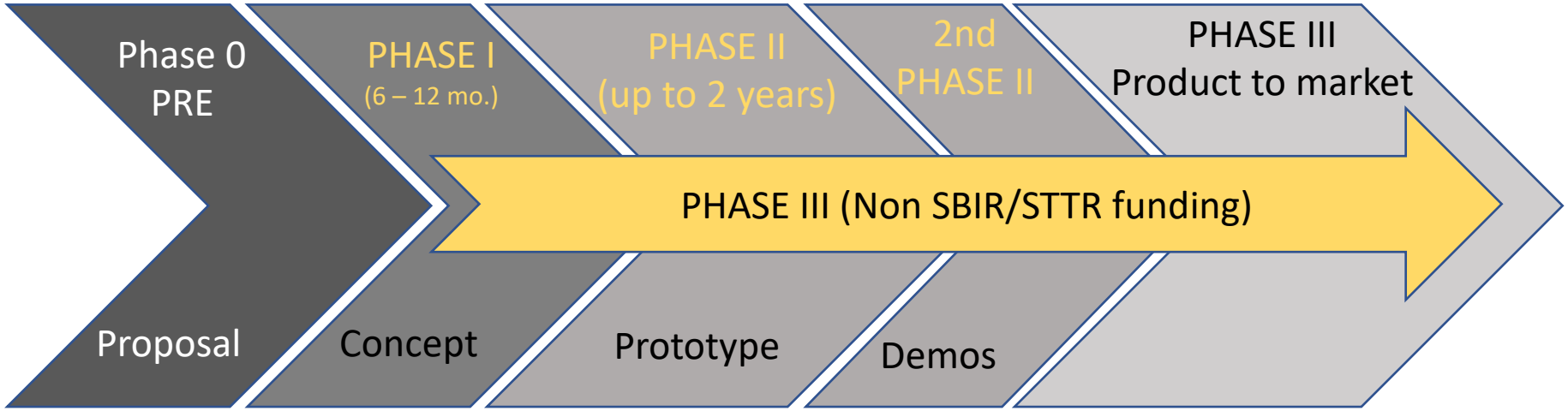
Quiz SBIR/STTR basics

- How can an agency provide a Phase I award for $225,000 when the SBIR legislation indicates that Phase Is are up to $150,000.
- What is Phase 0?
- Which Phase of the SBIR/STTR program mentioned in legislation is NOT funded with SBIR/STTR dollars?
- Does a company applying for an SBIR award have to subcontract 33% of its budget?

Quiz SBIR/STTR basics

- What is OATS – a term used by the DHS SBIR program?
- Which agency is the largest granting institution in the SBIR program?
- Which agency is the largest contracting entity in the SBIR program?
- Of the largest five SBIR/STTR programs which agencies have their topics WITHIN their solicitations?
- Which of the largest five SBIR/STTR programs doesn't allow an applicant to speak with a topic author?
- What does the term "investigator- initiated" mean?

Only Phases I /II use SBIR $$$$



But….

- **More about Phase II**
  - **Sequential Phase II awards**
    - Phase IIA, Phase IIB
  - **Cross-Program and Cross-Agency Awards**
    - OATS – Other Agency Technology Solutions
  - **Award CAPS**

SBIR/STTR Budgets – 2016

Agencies with SBIR and STTR Programs	Budget
Department of Defense (DOD)	$1.288 B
Department of Health and Human Services (HHS) including the National Institutes of Health (NIH)	$891.0M
Department of Energy (DOE), including Advanced Research Projects Agency - Energy (ARPA-E)	$228.6M
National Aeronautics and Space Administration (NASA)	$187.7M
National Science Foundation (NSF)	$183.4M
Agencies with SBIR Programs only	**Budget**
U.S. Department of Agriculture (USDA)	$28.8M
Department of Homeland Security (DHS): Science and Technology Directorate (S&T) and Domestic Nuclear Detection Office (DNDO)	$17.0M
Department of Transportation (DOT)	$11.6M
National Oceanic and Atmospheric Administration (NOAA)	$9.2M
Department of Education (ED)	$7.5M
Environmental Protection Agency (EPA)	$4.9M
Department of Commerce: National Institute of Standards and Technology (NIST)	$3.3M

Solicitations of the five largest SBIR programs

DoD, DOE, HHS, NASA, NSF

Department of Defense (DoD)
(contracts)

Sample Topic

DOD TOPIC – FY18.2 Navy

N182-095. TITLE: Lightweight Track Technology

TECHNOLOGY AREA(S): Ground/Sea Vehicles

ACQUISITION PROGRAM: Marine Corps Assault Amphibious Vehicle (AAV) Survivability Upgrade (SU) AAV-7A2

- **DESCRIPTION:** The Marine Corps seeks a lightweight track product design that provides enhanced water track and land mobility through reduced weight, less ground pressure, better traction and lateral stability; reduced platform vibration, noise, radar/acoustic signatures, weight, and rolling resistance; improved track life and energy efficiency; corrosion and maintenance-free operations; and lower life cycle costs.

  Currently, the Assault Amphibious Vehicle (AAV) uses the Bradley infantry fighting vehicle's suspension system (including T157 track), and provides a stable platform for both water and land mobility. The track strings are made of steel track links integrated with rubber track pads (Track Shoe, Vehicular NSN 2530-01-442-9686) that incur a substantial cost penalty of 9,960 pounds per pair with operations and sustainment. What is needed is the development of a new lightweight track design with the ability to reduce fuel consumption, vibration, and noise dB, while reducing maintenance time, improving speed, acceleration, and maneuverability capabilities in both the water and on land.

Comparing to current T157 track performance, this topic seeks to explore innovative and alternative track system designs for military vehicles. Of particular interest are concepts that satisfy either some or all the following criteria:

- Reduce track weight by 25% (T157: 71.4 lb/ft)
- Equivalent or better water track speed performance
- Produce less vibration
- Decrease noise level
- Decrease lifecycle cost
- Increase time between maintenance
- Decrease fuel consumption

The new lightweight track design needs to either maintain the same interface with the remaining suspension components of the current system or keep a minimum impact on the current running gear layout.

N182-095. TITLE: Lightweight Track Technology
TECHNOLOGY AREA(S): Ground/Sea Vehicles
ACQUISITION PROGRAM: Marine Corps Assault Amphibious Vehicle (AAV) Survivability Upgrade (SU) AAV-7A2

The lightweight track design must operate in basic water, on primary and secondary roads, trails, and cross-country conditions. Basic water conditions are of salt and fresh, open ocean, surf zones, lakes, rivers, streams, marshes, swamps, snow, slush, and ice. Water Tracks Mode is employed during ship to shore, shore to shore, and riverine operations. Water Tracks Mode is defined as having the engine running, as well as providing the vehicle functions associated with amphibious mobility (land and water), however in this mode the water jets are not

operating, only the tracks. Primary roads are high-quality paved, secondary pavement, and rough pavement surfaces. Secondary Roads are loose surface, loose surface with washboard and potholes, and Belgian block surfaces. Trails are one lane, unimproved, seldom maintained, loose surface roads intended for low-density traffic. Typically trails have no defined road width, large obstacles (rubble, boulder, logs, and stumps), cross ditches, washouts, steep slopes, and no bridging/culverts.

Cross-country terrain can consist of tank trails with crushed rock or having large exposed obstacles (rocks, boulders, etc.), but there are no roads, routes, well-worn trails, or man-made improvements. This includes, but is not limited to, flat desert, marshes, vegetated plains, jungle, dense forest, mountains, and urban rubble. The system must be operable and maintain Full Operational Capability (FOC) with the vehicle at Gross Vehicle Weight (GVW) 75,000 pounds:

- Lateral slopes of up to 40%
- Ascending / descending grades of up to 60%
- Trails grades up through 40%
- Maintain 64.37 kph (40 mph) forward speed on level Primary Roads
- Water speed of 3.3 knots (3.7 mph) in calm seas using Water Tracks Mode
- Reverse water speed of one (1) to two (2) knots
- Accelerate in the forward direction from 0 to 20 mph (32.2 kph) in 10.5 seconds or less on a dry, hard, level surface
- Stop within 15.24 meters (50 feet) from the forward speed of 32.2 kph (20 mph) on a dry, hard, level surface with a drift not to exceed 0.91 meters (3 feet) in the actual stopping distance
- Ascend a 91 cm (36 inch) vertical obstacle in the forward direction without preparation of the vehicle
- Ambient air temperatures from -32º C (-25.6º F) to +52º C (125.6º F) in MIL-STD-810
- Temperature shock of 28º C (50º F) temperature change within one (1) minute from both cold to hot and from hot to cold in MIL-STD-810

N182-095. TITLE: Lightweight Track Technology
TECHNOLOGY AREA(S): Ground/Sea Vehicles
ACQUISITION PROGRAM: Marine Corps Assault Amphibious Vehicle (AAV) Survivability Upgrade (SU) AAV-7A2

PHASE I: Explore the applications of advanced material system concepts for a lightweight, durable, lower lifecycle cost, track design that improves service life, maintainability, and manufacturing techniques to meet requirements outlined above. Develop concepts for salt water testing, methodology to evaluate the expected service life of a lightweight track design, and establish a feasible concept that can be developed into a useful product for the Marine Corps. Feasibility will be established by material testing and analytical modeling, as appropriate. Provide a Phase II plan that identifies performance goals, key technical milestones, and address technical risks.

PHASE II: Based on the results of the Phase I effort and the Phase II plan, develop materials and a process for prototypes testing. Evaluate the prototype to determine if the performance goals defined in the Phase II development plan and the requirements outlined in the Description above have been met. Demonstrate system performance through prototype evaluation and modeling to include durability and environmental performance. Using results, refine the design to optimize performance. Prepare a Phase III plan to transition the technology to the Marine Corps.

PHASE III DUAL USE APPLICATIONS: Upon successful completion of Phase II, conduct full-scale application, testing, demonstration, implementation, and commercialization. The new enabling technologies developed under this SBIR topic would have direct application to other Department of Defense applications including other service's lightweight track systems on Tactical Vehicles, Heavy Equipment, and Industrial Equipment.

The technologies developed under this SBIR topic would be of interest to industrial, agricultural, and recreational vehicles. The technologies would also have applications for mining, construction, and farming industries with large bulldozers, excavators, graders, and farming equipment.

N182-095. TITLE: Lightweight Track Technology
TECHNOLOGY AREA(S): Ground/Sea Vehicles
ACQUISITION PROGRAM: Marine Corps Assault Amphibious Vehicle (AAV) Survivability Upgrade (SU) AAV-7A2

REFERENCES:

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3. "Military Rubber Track Applications Vehicles 35-45 Tonnes." Soucy, 5 Jan 2018. http://www.soucy-defense.com/military-rubber-track-applications/military-rubber-track-application-vehicles-35-45-tonnes

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5. "Technology Integration" GS Engineering, 5 Feb 2018. http://www.gsengineering.com/critical-solutions/technology-integration

6. Hornback, Paul. "Problems Persist, But Continuous Band Track Shows Promise in Light Armor Applications." ARMOR — January-February 1999: Pages 21 and 50. http://ciar.org/ttk/mbt/armor/armor-magazine/armor-mag.1999.jf/1horn99.pdf

- **KEYWORDS:** Continuous Track; Composite Materials; Rubber; Kevlar; Titanium; Amphibious; Fuel Savings; Combat Vehicle; Heavy Weight; Component Durability; Reduced Life Cycle Cost; Segmented

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Contact information is only available during the Pre-Release period

Department of Energy (DOE)
(grants)

Sample Topic

Program Overview: Office of Defense Nuclear Nonproliferation Research and Development

The Defense Nuclear Nonproliferation (DNN) mission is to provide policy and technical leadership to limit or prevent the spread of materials, technology, and expertise relating to weapons of mass destruction; advance the technologies to detect the proliferation of weapons of mass destruction worldwide; and eliminate or secure inventories of surplus materials and infrastructure usable for nuclear weapons. It is the organization within the Department of Energy's National Nuclear Security Administration (NNSA) responsible for preventing the spread of materials, technology, and expertise relating to weapons of mass destruction (WMD).

Within DNN, the Defense Nuclear Nonproliferation Research and Development (DNN R&D) program directly contributes to nuclear security by developing capabilities to detect and characterize global nuclear security threats. The DNN R&D program also supports cross-cutting functions and foundational capabilities across nonproliferation, counterterrorism, and emergency response mission areas. Specifically, the DNN R&D program makes these strategic contributions through the innovation of U.S. technical capabilities to detect, identify, locate, and characterize:

1) foreign nuclear material production and weapons development activities;

2) movement and illicit diversion of special nuclear materials; and 3) global nuclear detonations.

To meet national and Departmental nuclear security requirements, DNN R&D leverages the unique facilities and scientific skills of DOE, academia, and industry to perform research and demonstrate advances in capabilities, develop prototypes, and produce sensors for integration into operational systems. DNN R&D has two sub - Offices: Proliferation Detection and Nuclear Detonation Detection. The Office of Proliferation Detection (PD) develops advanced technical capabilities in support of the following three broad U.S. national nuclear security and nonproliferation objectives: (1) detect, characterize, and monitor foreign production and movement of special nuclear materials; (2) detect, characterize, and monitor foreign development of nuclear weapons and to support the nuclear counterterrorism and incident response mission; and (3) provide enabling capabilities for multi-use applications across the NNSA and interagency community.

The Office of Nuclear Detonation Detection (NDD) performs the following three national nuclear security roles:

(1) produce, deliver and integrate the nation's space-based operational sensors that globally detect and report surface, atmospheric, or space nuclear detonations;

(2) advance seismic and radionuclide detection and monitoring capabilities that enable operation of the nation's ground-based nuclear detonation detection

networks; and

(3) advance analytic nuclear forensics capabilities related to nuclear detonations

Sample Topic

1. Near Field Detection Technologies

Maximum Phase I Award Amount: $150,000	Maximum Phase II Award Amount: $1,000,000
Accepting SBIR Phase I Applications: YES	Accepting STTR Phase I Applications: NO

The Office of Proliferation Detection (PD) is interested in developing new and novel technologies and concepts for near field detection systems and instrumentation. PD is seeking improved equipment for response units to find and locate devices or components which emit radiation in order to prevent adversarial activities.

a. Radiation Detection Material Advancement

Ceramic and composite material research is needed. Improvements for lower cost, larger volume, and better energy resolution than sodium iodide based systems are essential. Emphasis is placed on the eventual creation of large volume scintillators. Possible methods include consolidation of powders, glass-ceramics, or other approaches. Improvements to existing commercial dual-mode gamma and neutron detection materials are needed. In addition to neutron sensitivity, gamma-ray spectroscopic performance comparable to LaBr3:Ce (light-yield

~60,000 photons/MeV and energy resolution ~3% Full Width at Half Maximum, FWHM) is sought with higher gamma-ray stopping power through higher atomic number constituents (densities exceeding 4.5 g/cm3). Low cost crystals of at least 2” are essential. Silicon based material improvements are needed.

Same topic

Fabrication of very thick (~5 mm or more) silicon sensors (Charge-

Coupled Device, CCDs; Complementary Metal Oxide Semiconductor, CMOS imagers; pixel/pad/strip sensors) could be transformative in a number of nuclear nonproliferation mission areas. Reactor monitoring with ultra-low-noise (<1 e-) CCDs or CMOS imagers requires large detector mass which would be enabled by thicker devices. Very thick sensors in various readout configurations would be applicable to measurements of fission products where silicon would provide x-ray (or low energy gamma-ray), conversion electron and beta spectroscopy. Proposals to explore the potential for using direct wafer bonding of high-resistivity silicon to produce very thick, fully-depleted devices are desired. This exploratory work could utilize any of the above sensor configurations to demonstrate successful bonding, top metal application, and operation (charge collection, IV curves, charge cloud dispersion, etc.)

Questions –

Contact:

Donald Hornback,

donald.hornback@nnsa.doe.gov

Health and Human Services (HHS)
(grants)

National Institutes of Health
(Sample topic)

- **National Institute of General Medical Sciences**
- **Division of Cell Biology and Biophysics**

- **A.**
- Development of instrumentation, devices, and methods for detecting in real time, analyzing, and separating biologically important compounds, macromolecules, and their interactions.

- **B.**
- Development of new methods and materials directed toward the solution of biological macromolecule structures, including membrane proteins, assemblies and complexes by, but not limited to, x-ray diffraction, electron diffraction, NMR and mass spectroscopy.

National Aeronautics and Space Administration
(contracts)

Focus Area 1: In-Space Propulsion Technologies
Lead MD: STMD
Participating MD(s): SMD

NASA (Sample Topic)

NASA is interested in technologies for advanced in-space propulsion systems to reduce travel time, increase payload mass, reduce acquisition costs, reduce operational costs, and enable new science capabilities for exploration and science spacecraft. The future will require demanding propulsive performance and flexibility for more ambitious missions requiring high duty cycles, more challenging environmental conditions, and extended operation. This focus area seeks innovations for NASA propulsion systems in chemical, electric, nuclear thermal and advanced propulsion systems related to human exploration and science missions. Propulsion technologies will focus on a number of mission applications including ascent, descent, orbit transfer, rendezvous, station keeping, and proximity operations.

Z10.01 Cryogenic Fluid Management (SBIR)

Lead Center: GRC

Participating Center(s): JSC, MSFC

This subtopic solicits technologies related to cryogenic propellants (such as hydrogen, oxygen, and methane) storage, and transfer to support NASA's exploration goals. This includes a wide range of applications, scales, and environments consistent with future NASA missions. Such missions include but are not limited to a Methane Upper Stage, Nuclear Thermal Propulsion, Lander Propulsion, and In-Situ Resource Utilization in support of the Evolvable Mars Campaign.

Z10.01 Cryogenic Fluid Management (SBIR)
Lead Center: GRC
Participating Center(s): JSC, MSFC

Same topic continued

Specifically, listed in order of importance:

- Develop reliable cryogenic screen channel acquisition devices (NASA is mainly interested in screens with pore sizes < 100 µm) using innovative manufacturing techniques to minimize stresses of cryogenic screen channels to improve screen-to-window manufacturing reliability. Reliability should be based on changes in bubble point pressure before and after thermal cycling the elements (> 10 times) at or below 77 K.
- New and improved technologies that provide for the densification (or sub-cooling) of cryogenic propellants. Propellant conditioning systems that allow for the production and maintenance of densified propellants that support operations including transfer and low-loss storage are of prime interest for future space vehicle and ground launch processing facilities.
- Advanced numerical design tools are sought for cryogenic propellant management systems accounting for large EUS-scale operations in relevant low-gravity (low-acceleration) environments. Ideally, such a tool should consider thermal gradients, acceleration gradients, perturbations due to docking, and orbital maneuvers in order to help system designers evaluate the impacts of these various environments to the propellant management system. Advanced numerical design tools are sought for fuels/cryogenic management systems accounting for large EUS-scale operations in relevant low-gravity (low-acceleration) environments considering the impacts of thermal gradients, gravity gradients, perturbations due to docking, orbital

  maneuvers, self-gravitation, and others.

Z10.01 Cryogenic Fluid Management (SBIR)
Lead Center: GRC
Participating Center(s): JSC, MSFC

Same topic continued

- Develop an insulation to reduce the heat leak in the annulus space of approximately ¾", which is located over a liquid hydrogen tank but under a broad area cooled (BAC) shield at 90 K for space applications. The insulation concept has the dual function of structurally supporting the 5 mil thick broad area cooled shield and roughly 35-40 outer layers of traditional multi-layer insulation (MLI) (or less with high performing MLI) and reducing the heat leak from the 90K surface to the LH2 tank. Analysis shall focus on the thermal design's reduction of conductive and radiative heat transfer in the vacuum of space to minimize heat load (> 70% reduction in insulation heat load compared to equivalent MLI system without BAC shield) to the tank while being lightweight for flight.
- System/stage cryogenic valves sized for 3 in. (7.62 cm) tube size for low pressure (<50 psia; 3.4 bar), scalable to 10 in. (25.4 cm) size, with Cv > 200, low internal (~ 1 sccm, goal of < 0.1 sccm) and external (~ 3 sccm, goal of < 0.1 sccm) leakage, > 500 cycles with a goal of 5,000 cycles, low heat leak (<3 W/valve), low actuation power. The valve should have a clear path to combine with an actuator and its requirements.
- Electric Pump technologies with low power (<40-50 kW) at flowrates suitable for feeding iRCS accumulator(s) supplying a bank of four (4) 1000-lb RCS engines operating at total oxygen or methane mass flowrates of ~8-10 lb/s (3.6-4.5 kg/s), or Low power (<4-6 kW) supplying a bank of four (4) 100-lb RCS engines, operating at a total flowrate of ~1 lb/s (0.45 kg/s). The pumps will operate between low pressure (<50 psia; <3.4 bar) propellant tanks, up to supercritical pressures >667 psia (>46 bar) under varying duty cycle demand regimes. Note actual duty cycle requirements will be mission specific – proposers should describe scalability to handle changes in demand, and changes in the scale of thrusters per thruster bank (e.g.,m3x100-lb & 1x1000-lb, etc.).

National Science Foundation (NSF)
(grants)

Distributed Ledger

National Science Foundation
(Sample topic)

- The Distributed Ledger topic area covers a wide range of technology areas of current and emerging commercial significance and impact spanning all areas of distributed ledger including blockchains, Directed Acyclic Graphs (DAGs), and related capabilities (cryptography, smart contracts, etc.). Applications of these technologies and approaches across any range of industries and commercial uses are appropriate for this topic area. It is important that the proposed project involve novel, distinctive approaches and/or disruptive innovations that enable high potential impact and competitive advantage in its field of use. These subtopic areas are meant to serve as examples of what entrepreneurs may propose in this space; all distributed ledger proposals with technical innovation and significant commercial potential are welcome, regardless of the specific area of focus of the project.

- DL1: Autonomous Systems and Economies
- DL2: Blockchain, DAGs, and Next Gen Protocols
- DL3: Convergence with Big Data, and AI
- DL4: Convergence with IoT, Crowdsourcing and Crowdsensing
- DL5: Cryptography and Security
- DL6: Decentralized Applications (dApps); Smart Contracts
- DL7: Distributed Consensus; Fault Tolerance Mechanisms
- DL8: Distributed Ledger in Edge and Cloud Computing
- DL9: Distributed Ledger Interoperability
- DL10: Distributed Ledger in Network Architecture and Management
- DL11: Financial Technologies
- DL12: Human-to-Technology Interface
- DL13: Scalability Solutions
- DL14: Trusted Identity; Identity Management
- DL15: Other Distributed Ledger Technologies

Contracts vs Grants

The relationship between the Federal government and contractors is defined by a legal instrument

Contract

Used when the principal purpose is the acquisition, by purchase, lease, or barter of property or service with direct benefit or use of the Federal Government

Grant

1. The principal purpose of the relationship is the transfer of money, property, services, or anything of value to … in order to accomplish a **public purpose** of support or stimulation authorized by Federal statute, rather than acquisition

2. No substantial involvement is anticipated between the executive agency, acting for the Federal Government, and the State or local government or other recipient during performance of the contemplated activity.

Public purpose = purports to benefit the populace as a whole

Differences

Grants

- A flexible instrument designed to provide funds to support a public purpose.
- Principal Investigator (PI) has more freedom in defining the scope of the work.
- Requires best efforts in research.

Contracts

- A binding agreement between a buyer and a seller for goods and/or services.
- Scope of work is fairly inflexible.
- Requires delivery of promised goods or services determined by contract.

Differences

Grants

Questions and answers about solicitations are NOT made public.

Potential applicant can contact the topic author throughout the period that the solicitation is open.

Cannot be used for classified work.

Contracts

Questions and answers about solicitations MUST be made public.

There are restrictions regarding contacting the topic author.

Must be used for classified work.

SBIR Program

Contracts

DoD Department of Defense
NASA National Aeronautics and Space Administration
DHS Department of Homeland Security
DOT Department of Transportation
EPA Environmental Protection Agency

Both

HHS Health and Human Services *(mostly grants)*
DoED Department of Education

OTHER

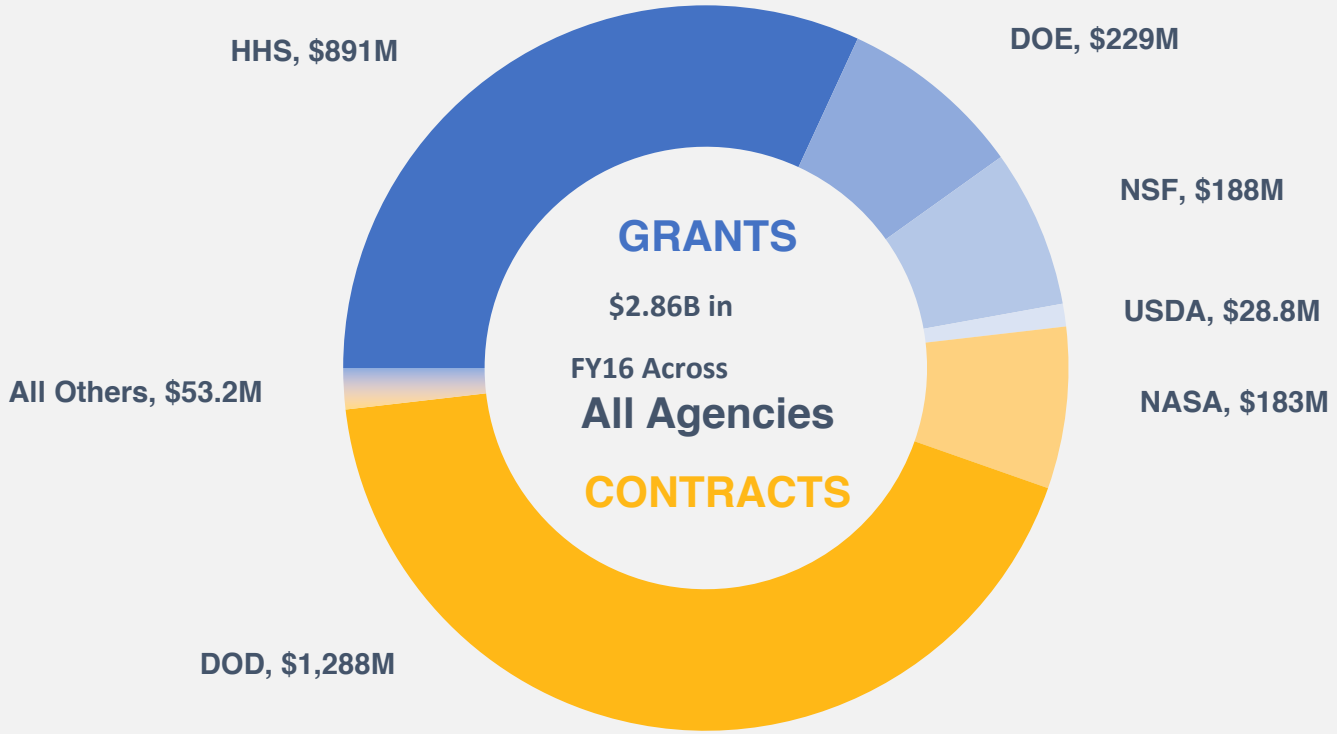
NIST National Institute of Standards and Technology

Grants

NSF National Science Foundation
DOE Department of Energy
USDA United States Department of Agriculture
NOAA National Oceanic and Atmospheric Administration

Contracts vs Grants

FY16 Combined SBIR/STTR Budget



Escalation of Set-Aside

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
SBIR	2.5%	2.6%	2.7%	2.8%	2.9%	3.0%	3.2%
STTR	0.30%	0.35%	0.35%	0.40%	0.40%	0.45%	0.45%
Combined	2.80%	2.95%	3.05%	3.20%	3.30%	3.45%	3.65%

The STTR program is considerably smaller than the SBIR program

Differences During Proposal Preparation Process

Differences

Grants

Questions and answers about solicitations are **NOT** made public

Potential applicant **CAN** contact the topic author throughout the period that the solicitation is open.

Contracts

Questions and answers about solicitations **MUST** be made public

There are restrictions regarding contacting the topic author

DAWNBREAKER®
The Commercialization Company

WHO, HOW and WHEN to CONTACT

GRANTING ORGANIZATIONS

- **Each agency has its own methods**
  - **Department of Energy (DOE)**
    - Can contact at any time while solicitation is open
    - Use phone and email (listed in topics document)
    - Purpose is to seek clarification on topic
    - Also uses Letter of Intent (LOI) – means of selecting reviewers
  - **National Institutes of Health (HHS) Omnibus solicitation**
    - Can contact at any time while solicitation is open
    - Use phone and email (listed in solicitations)
    - Contact is highly encouraged

Contacts

National Institute of General Medical Sciences
Division of Cell Biology and Biophysics

A.
Development of instrumentation, devices, and methods for detecting in real time, analyzing, and separating biologically important compounds, macromolecules, and their interactions.

B.
Development of new methods and materials directed toward the solution of biological macromolecule structures, including membrane proteins, assemblies and complexes by, but not limited to, x-ray diffraction, electron diffraction, NMR and mass spectroscopy.

Other Research Topic(s) Within the Mission of the Institute

NIGMS SBIR/STTR COORDINATOR

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CELL BIOLOGY AND BIOPHYSICS

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GENETICS AND DEVELOPMENTAL BIOLOGY

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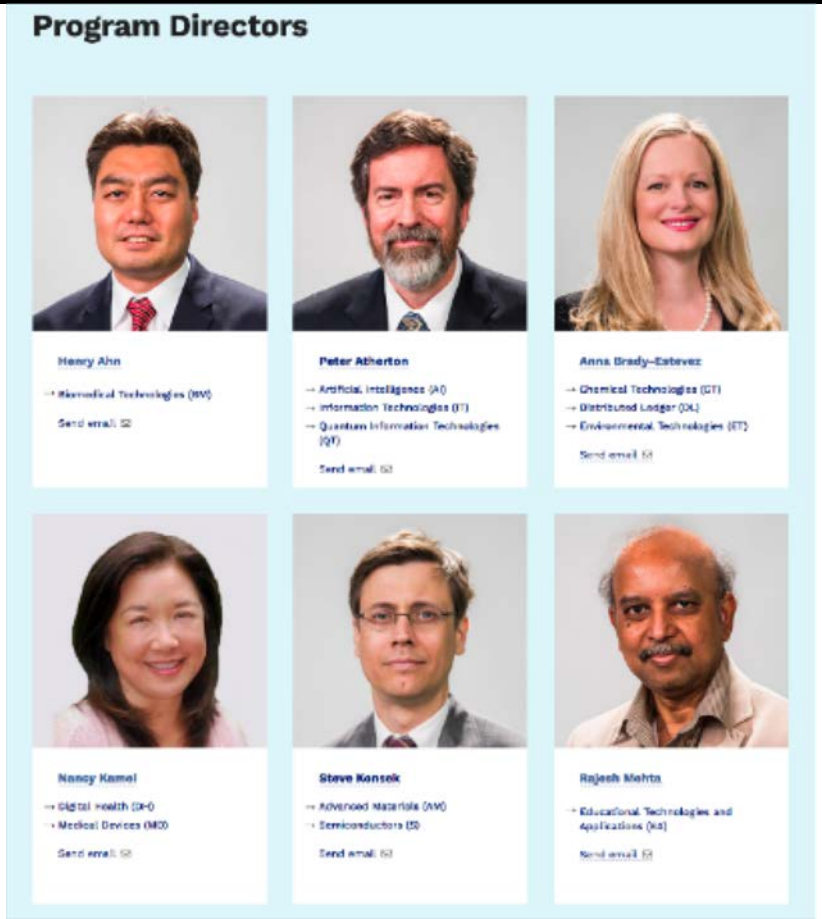
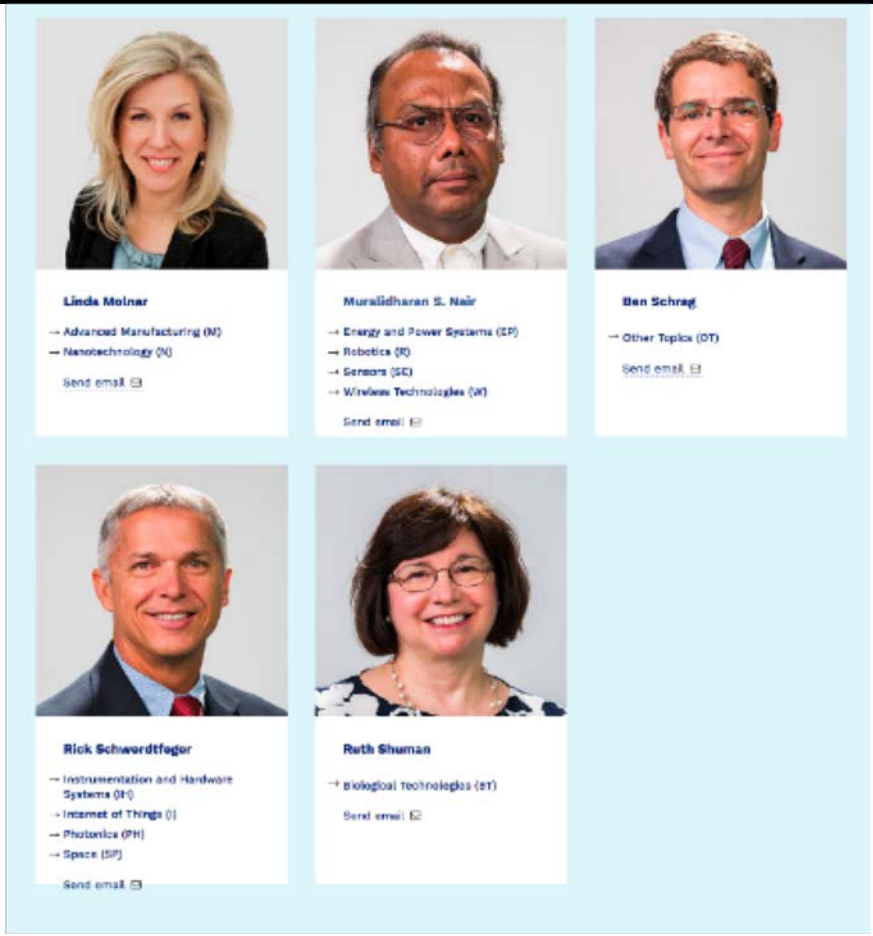
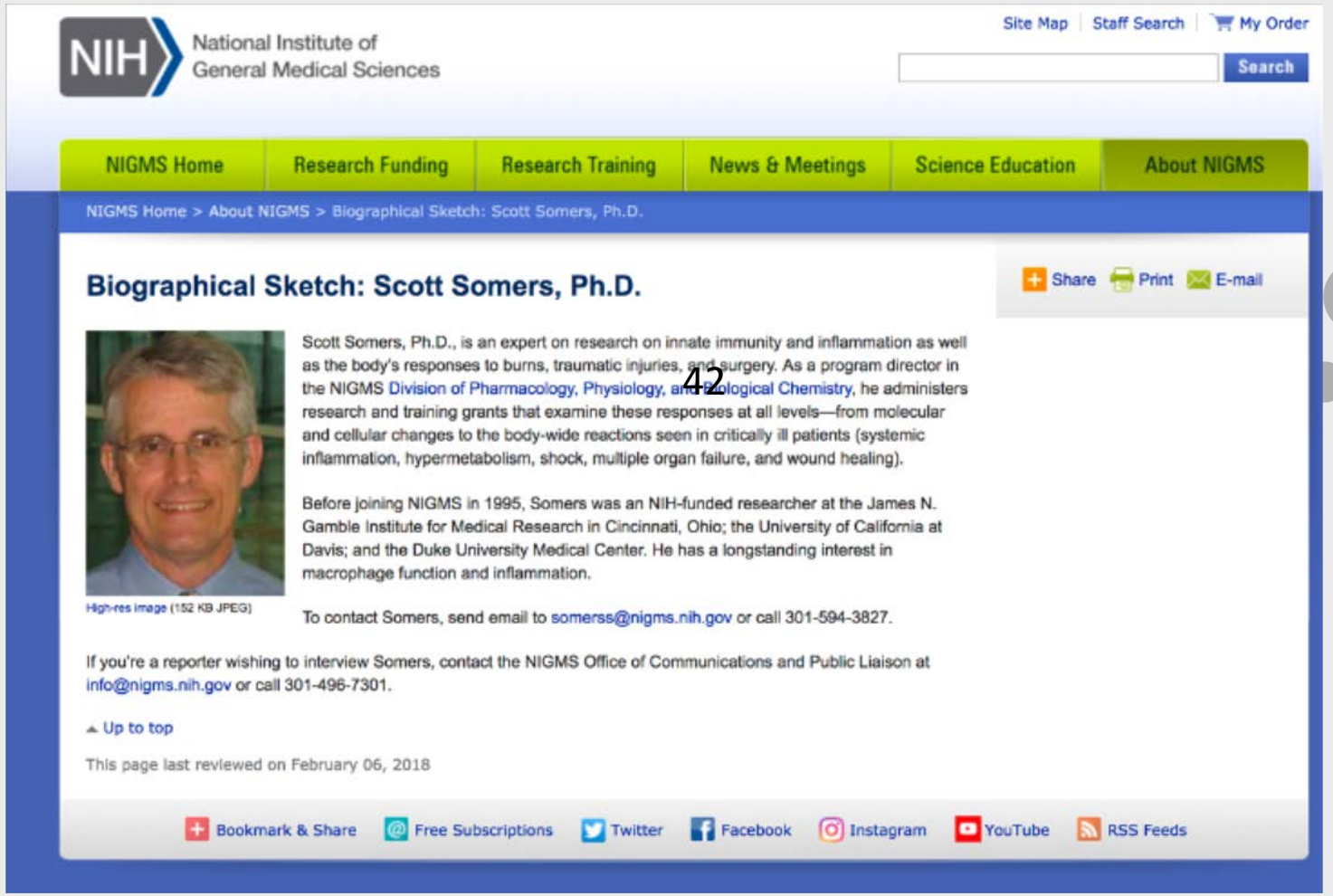
PHARMACOLOGY, PHYSIOLOGY, AND BIOLOGICAL CHEMISTRY

NSF – Need Help? – contact us





Reach out at any time



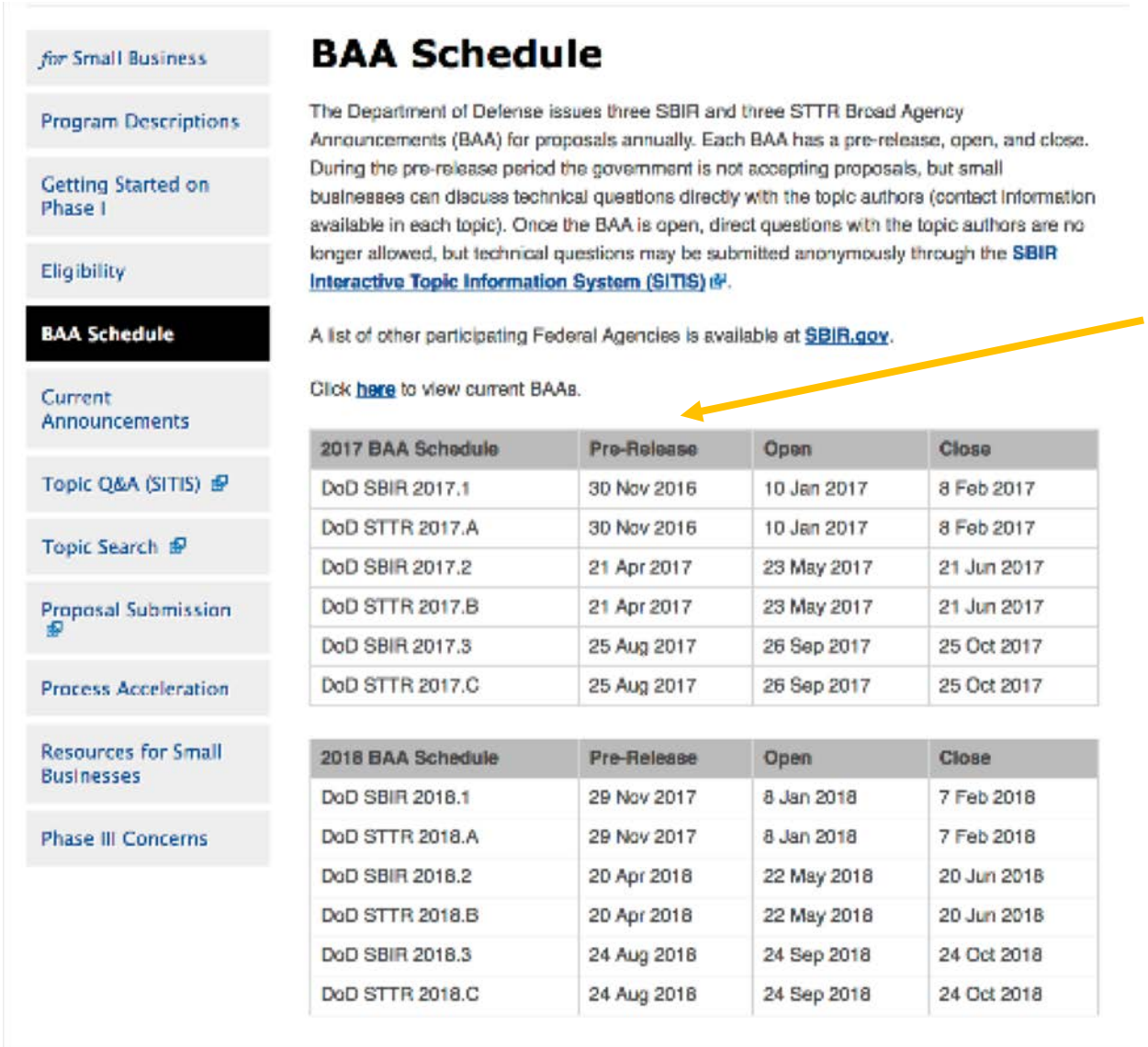
NSF New Method

- Announced with March 4th solicitation
- Required to submit a Project Pitch
- This can be done at any time
- Pitch is submitted using an on-line form
- Will receive feedback in three weeks
- Via e-mail NSF will request a full proposal if it aligns with topics
- Proposals can be submitted only during the open periods (two times per year)

Requirements of Responsive Pitches

- **“Involves a high degree of technical risk** – for example: Has never been attempted and/or successfully done before; is still facing technical hurdles (that the NSF-funded R&D work is intended to overcome)
- **Has the potential for significant commercial impact and/or societal benefit, as evidenced by**: Having the potential to disrupt the targeted market segment; Having good product-market fit (as validated by customers); Presenting barriers to entry for competition; Offering potential for societal benefit (through commercialization under s sustainable business model.”

What about contracting organizations?



for Small Business
Program Descriptions
Getting Started on Phase I
Eligibility
BAA Schedule
Current Announcements
Topic Q&A (SITIS)
Topic Search
Proposal Submission
Process Acceleration
Resources for Small Businesses
Phase III Concerns

BAA Schedule

The Department of Defense issues three SBIR and three STTR Broad Agency Announcements (BAA) for proposals annually. Each BAA has a pre-release, open, and close. During the pre-release period the government is not accepting proposals, but small businesses can discuss technical questions directly with the topic authors (contact information available in each topic). Once the BAA is open, direct questions with the topic authors are no longer allowed, but technical questions may be submitted anonymously through the **SBIR Interactive Topic Information System (SITIS)**.

A list of other participating Federal Agencies is available at **SBIR.gov**.

Click **here** to view current BAAs.

2017 BAA Schedule	Pre-Release	Open	Close
DoD SBIR 2017.1	30 Nov 2016	10 Jan 2017	8 Feb 2017
DoD STTR 2017.A	30 Nov 2016	10 Jan 2017	8 Feb 2017
DoD SBIR 2017.2	21 Apr 2017	23 May 2017	21 Jun 2017
DoD STTR 2017.B	21 Apr 2017	23 May 2017	21 Jun 2017
DoD SBIR 2017.3	25 Aug 2017	26 Sep 2017	25 Oct 2017
DoD STTR 2017.C	25 Aug 2017	26 Sep 2017	25 Oct 2017

2018 BAA Schedule	Pre-Release	Open	Close
DoD SBIR 2018.1	29 Nov 2017	8 Jan 2018	7 Feb 2018
DoD STTR 2018.A	29 Nov 2017	8 Jan 2018	7 Feb 2018
DoD SBIR 2018.2	20 Apr 2018	22 May 2018	20 Jun 2018
DoD STTR 2018.B	20 Apr 2018	22 May 2018	20 Jun 2018
DoD SBIR 2018.3	24 Aug 2018	24 Sep 2018	24 Oct 2018
DoD STTR 2018.C	24 Aug 2018	24 Sep 2018	24 Oct 2018

DoD Pre-Release Period

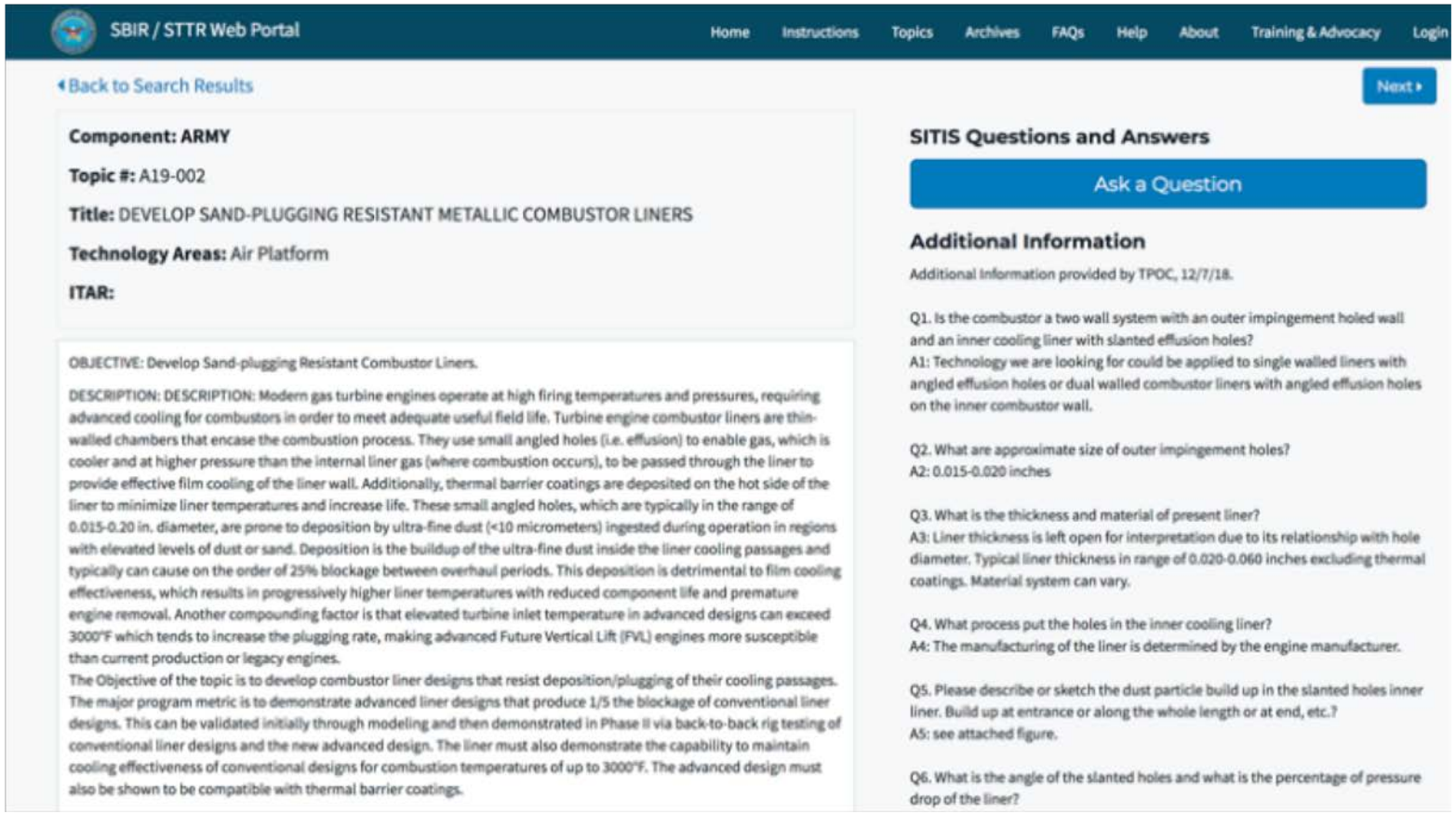
In most cases you can contact TPOCs during this period

There are exceptions: SOCOM

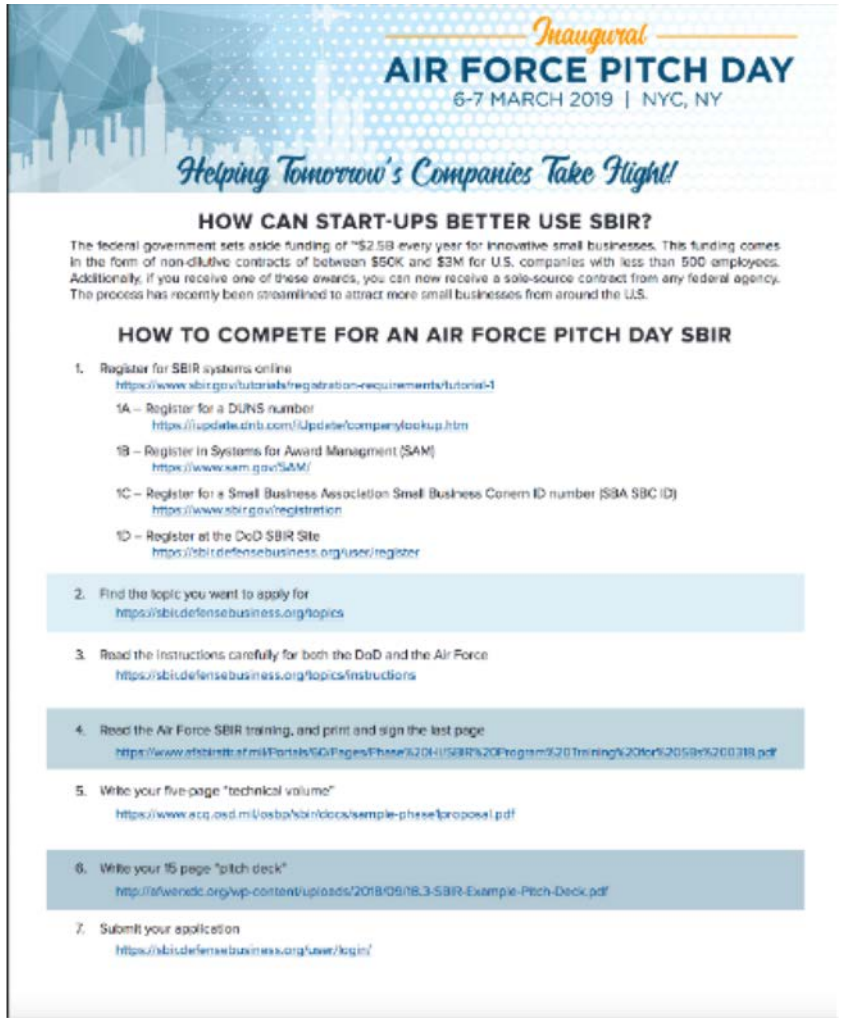
During the Pre-release Period of the DoD 19.1 SBIR Broad Agency Announcement (BAA), any questions should be limited to specific information that improves the understanding of a particular topic's requirements. All questions must be submitted in writing either by email to sbir@socom.mil (if the question(s) includes company sensitive information not to be released to the general public) or to the online SBIR/STTR Interactive Topic Information System (questions and answers will be released to the general public). USSOCOM does not allow inquirers to talk directly or communicate in any other manner to the topic authors (differs from Section 4.15.c. of the DoD 19.1 SBIR Program Announcement instructions). **All inquiries must include the topic number in the subject line of the e-mail.**

SBIR Interactive Topic Information System (SITIS)
(used after Pre-Release)

DoD



Air Force Experiment – Pitch Days



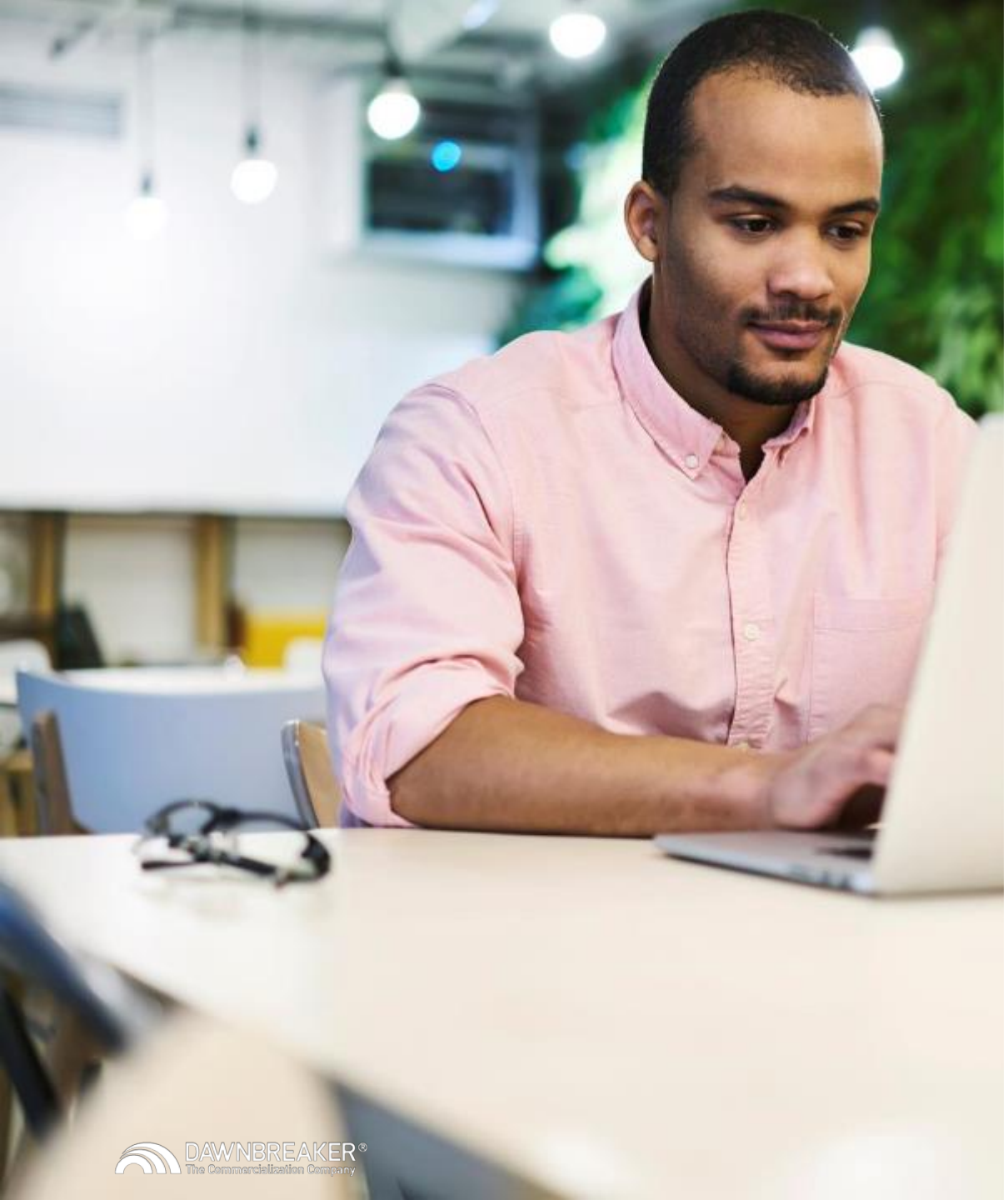
NASA

1.11.2 Questions about this Solicitation

To ensure fairness, questions relating to the intent and/or content of research topics in this Solicitation cannot be addressed during the open solicitation period. Only questions requesting clarification of proposal instructions and administrative matters will be addressed.

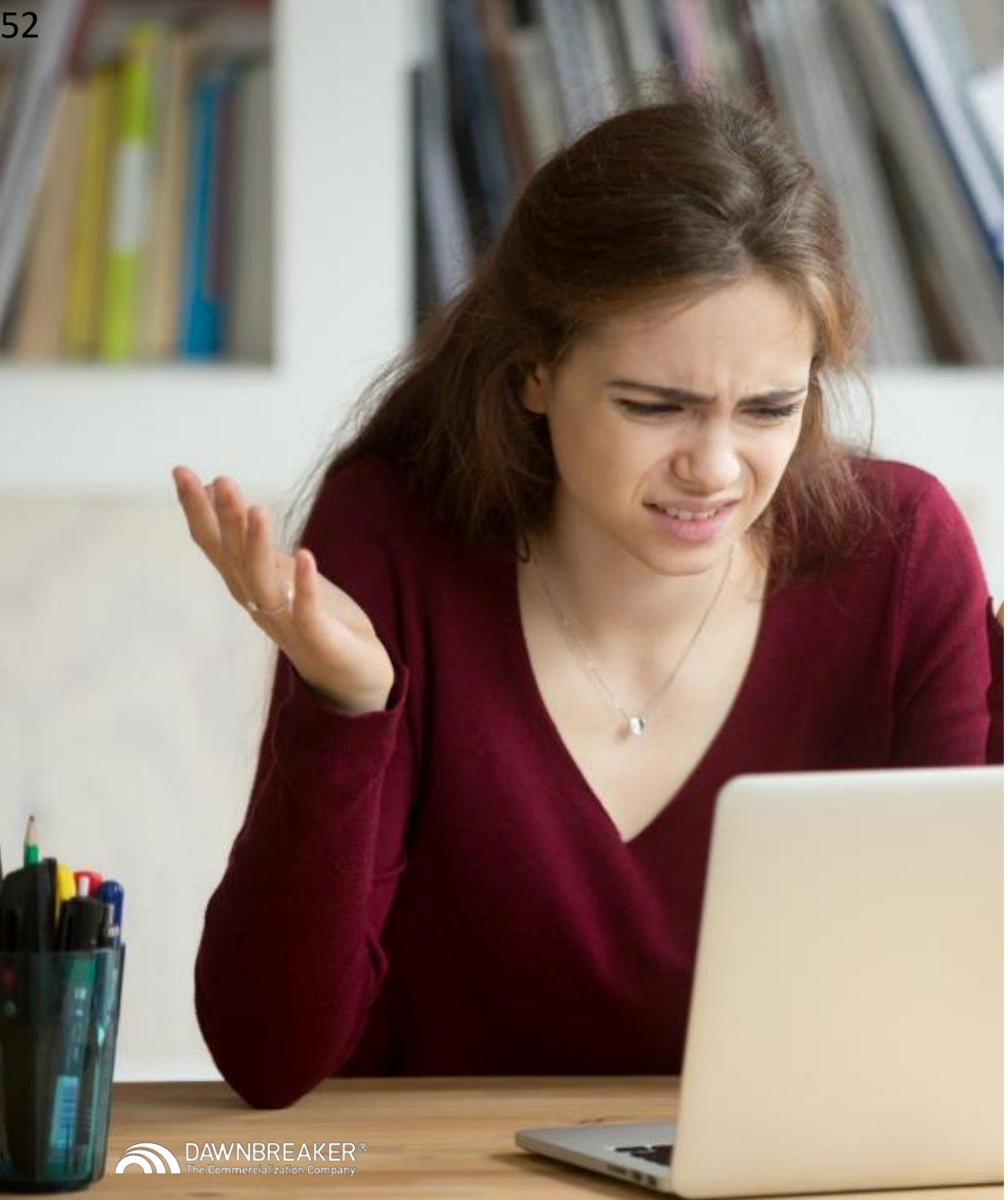
The cut-off date and time for receipt of Phase I solicitation procurement related questions and answers is 5:00 p.m. Eastern, March 2, 2018.

The cut-off date and time for receipt of Phase II solicitation procurement related questions and answers is seven calendar days prior to the end of the Phase I contract.



Talk to Topic Authors!

AGENCY	Can you contact personally?	What do they call Topic Author
Department of Defense	Pre-R	Technical Point of Contact (TPOC)
Department of Education	No	-----
Department of Energy	Yes	Topic Author (TA), Topic Manager
Department of Homeland Security	Pre-R	Technical Point of Contact (TPOC)
Department of Transportation	No	------
National Aeronautics and Space Administration	No	------
Environmental Protection Agency	No	------
National Institutes of Health	Yes	Program Officer, Program Director
National Institute of Standards and Technology	No	------
National Oceanic and Atmospheric Administration	No	------
National Science Foundation	Yes	Program Officer, Program Director
United States Department of Agriculture	Yes	National Program Leader (NPL)



Why Communicate?

- Glean additional insight into the topic
- Agencies are restricted in how much detail they can put into a Funding Opportunity Announcements (FOA) or solicitation
- Client may therefore have lingering questions
- Topic may also be broad to encourage a diversity of responses
- A client may need more clarity before deciding to respond
- Discussion may help you choose between multiple topics – as TA may know true intent of the different topics

Sample E-mail

Dear [Insert Topic Manager Name]

By way of introduction my name is [insert name] and I am [describe affiliation]. I have reviewed the current Funding Opportunity Announcement [FOA] and am interested in Topic #. After reviewing the topic carefully, as well as the links and references, I have a few lingering questions that I would like to discuss with you. Would you have time in the next couple of days for a brief, 10-15 minutes phone call? A brief conversation with you will help me determine if I can submit a responsive proposal. Please recommend a time when I may call you.

My questions relate to: [insert 1 or 2 of your key questions]

Thanks for your consideration of my request.

Do's and don't's

- The purpose of the email and subsequent discussion is to verify the client's understanding of the topic.
  - DON'T talk about your company and experience
  - DON'T ask questions that are addressed in the solicitation
  - DON'T talk to much. You learn when you LISTEN
  - DO ask questions of clarification regarding the topic
  - DO ask if certain approaches are of interest
  - If contracting organization, DO ask questions about transition

Helping client prepare e-mail

- How can you help prep your client for preparing the email? Do you do this now?
- How can you help your client with frustration that might result from not getting a prompt response or no response?

SBIR/STTR Proposals are challenging

Challenges

- Technologies must be innovative
- With grants one has to define the state of the art
- It will take about 150 hours over a 10 week period
- There’s a LOT of red tape
- Applicants often need to build a team
- The solicitations have similarities, but there are many differences
- Budgets can be very challenging

PTAC Assistance

- Adds great value
- System for Awards Management (SAM) and other registrations
- Structure, motivation and assistance
- Referrals to other service providers in area for complementary support
- Have established relationships with businesses that you can leverage

Dawnbreaker

Thank-you for coming

jcservo@dawnbreaker.com