

DoD SBIR/STTR Programs Quarterly Review



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Message from the Small Business and Technology Partnerships Office

Happy New Year! We are pleased to share our first Defense SBIR/STTR Quarterly newsletter with you. This newsletter will include program changes and updates, upcoming outreach events, statistical data, and more. In this issue, we also share some of our FY21 end-of-year highlights.

The Defense SBIR/STTR programs provide innovative technology solutions to National Security Challenges identified by the participating DoD Services and Components. As a Department, we will continue to strengthen our partnerships with small businesses and other stakeholders to accelerate transition of SBIR/STTR-de-

veloped technology into fielded systems, Programs of Record, and facilitate opportunities for dual-use commercialization to strengthen our economy and the capability of our military. Collectively, we are committed to streamline the SBIR/STTR programs in ways that will make it easier to do business with DoD.

Sincerely,

Susan Celis & Matthew Williams



Matthew Williams
Technology Portfolio Manager &
Director, Rapid Innovation Fund,
Small Business and Technology Partnerships

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FY21 Year in Review

- DoD invested \$2.2 billion in small businesses through the SBIR/STTR programs
- DoD published 23 Broad Agency Announcements/Commercial Solutions Openings
- Small Business and Technology Partnerships participated in 30 outreach events and conducted 75 one-on-one sessions with small businesses

DoD SBIR/STTR Q1 News

New Website is Coming!

The Small Business and Technology Partnerships Office is preparing to launch a new website. The redesigned website provides more in-depth information about the Defense SBIR/STTR programs, outreach and resources and is easy to navigate. Some of the website's new, improved features include:

- Broad Agency Announcements (BAAs) and Commercial Solutions Openings (CSOs) – overview Schedules, Topics and Topic Q&A, Current Announcements and DoD Annual BAAs
 - OTST – an overview of the OTST program
 - Resources – including links to relevant organizations and publications that are downloadable for print
 - Events – a calendar listing of DoD SBIR/STTR events and activities
-

Funding Opportunities

The **Broad Agency Announcement (BAA)** is the primary funding mechanism utilized by the DoD for the procurement of basic and applied research by issuing topics for scientific study and experimentation, which are directed towards advancing the state-of-art, increasing knowledge, or understanding rather than focusing on a specific system or hardware solution. In some instances, a DoD component may elect to release topics under a **Commercial Solutions Opening (CSO)**. CSOs are a competitive procedure used to acquire innovative commercial items, technologies, or services. It allows DoD to obtain solutions or potential new capabilities to aid in fulfilling requirements, closing capability gaps, or providing potential technological advancements.

In the first quarter, OUSD (R&E), SBTP released the first DoD-wide Annual SBIR and STTR Broad Agency Announcements (BAAs). The Annual BAAs allow participating DoD Components the flexibility to advertise SBIR or STTR topics throughout the course of the fiscal year, outside of the three pre-scheduled DoD BAA cycles. Each topic release has its own corresponding pre-release, open and close dates as outlined in each release.

For a full list of current funding opportunities, please visit <https://rt.cto.mil/rtl-small-business-resources/sbir-sttr/> & <https://www.dodsbirsttr.mil/submissions/login>.

To be notified of new funding opportunities and to receive e-mail updates on the DoD SBIR and STTR Programs, subscribe to our Listserv by visiting <https://www.dodsbirsttr.mil/submissions/login> and clicking "DSIP Listserv" located under Quick Links.



OSD (R&E) Transitions SBIR/STTR Technologies (OTST)

The OSD (R&E) Transitions SBIR/STTR Technologies (OTST) program was implemented by Mr. Matthew B. Williams, Technology Portfolio Manager, Small Business and Technology Partnerships (SBTP), in June 2020. The purpose of the OTST Program is to assist in accelerating the transition of SBIR/STTR developed technologies into a Program of Record, Platform, Fielded System/Sub-System, Weapons/Communication Systems, or for use in a Federal Lab or Facility and to help bridge the valley of death.

The OTST program team assists sponsoring programs in identifying SBIR/STTR Phase II (PII) technologies that have high potential of transition and provides these programs with the right tools to select the best PII transition strategy. It is important to note however, that the OTST Program is not an application process for the SBIR/STTR firms, the OTST program is structured to be a technology pull from the sponsoring program.

OTST Phase III

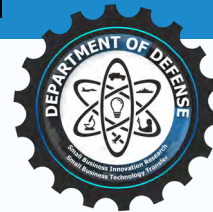
The OTST program offers PIII Contracting services through the Contracting Center of Excellence (CCoE). This service works well for Agencies & Components that have an OTST PII effort that was contracted at the CCoE as a PII Basic Ordering Agreement (BOA). The PII BOA is a great contract type to do a follow-on PIII effort.

Additionally, this PIII contracting service is also designed to work with any OTST-funded effort. The OTST Team collaborates with the Funding Sponsor to determine the appropriate PIII contracting vehicle.

Benefits of OTST

- Process is structured to be a technology pull to meet requirements that address potential and emerging requirements.
- Accelerates transition of SBIR/STTR-funded technologies to PIII, especially into systems being developed, acquired, and/or maintained for the war-fighter.
- Accelerates technology transition by enhancing the connectivity among SBIR/STTR firms, prime contractors, DoD Science & Technology and acquisition communities.
- Improves the SBIR/STTR firm's capability to provide the identified technology to the DoD.
- Reflects the OTST program's commitment to provide additional funding for the further development of the SBIR/STTR technology to a point where the transition /integration process can start.
- All SBIR/STTR PII efforts approved under the OTST program, are contracted at the Contracting Center of Excellence (CCoE) and the PII contract type is a Cost-Plus-Fixed-Fee (CPFF) Basic Ordering Agreement (BOA).





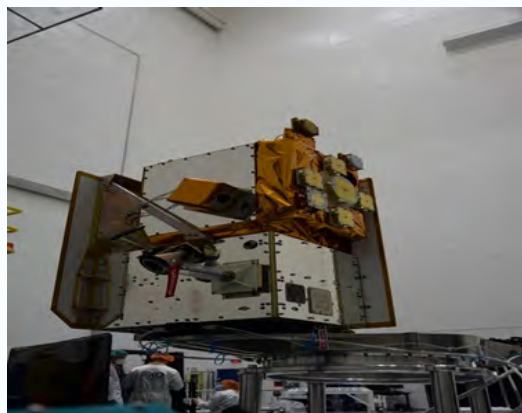
Components Connection

DoD SBIR/STTR Components - the following agencies participate in the DoD SBIR/STTR Programs:



Space Development Agency: Doing Big Things with Small Companies

The Space Development Agency (SDA) is committed to harnessing the power of small business for the National Defense Space Architecture (NDSA), the DoD's proliferated low Earth orbit warfighter-focused capability. Not only is a major portion of SDA's initial on-orbit capability demonstration being built by a small business, but in October 2020 SDA joined the SBIR/STTR program, issuing a Broad Agency Announcement (BAA) seeking emerging technologies from small business partners. To date, SDA has released 12 SBIR/STTR topics, received 152 proposals, and selected seven (7) small businesses for awards worth more than \$8.5 million.



The Prototype On-Orbit Experimental Testbed (POET) payload integrated on Loft Orbital's YAM-3 satellite, was launched in support of the Space Development Agency (SDA) SBIR program on June 30 from Cape Canaveral Space Force Station, Fla., on a SpaceX Transporter 2 rideshare Falcon 9 mission. Photo credit: Scientific Systems Company, Inc.

SDA believes that small businesses embody SDA's pillars – speed and efficiency, affordability, and innovation. In addition to the BAA, SDA worked with Scientific Systems Company, Inc. (SSCI) to launch a Prototype On-orbit Experimental Testbed (POET) via Phase II program funding. POET, transferred to SDA from DARPA, is intended to space qualify advanced computing hardware and enable on-orbit investigations into data fusion, data analysis, and algorithm development. This experiment is foundational to an eventual NDSA battle management/command, control and communications capability.

In October 2021, SDA began participating in the DoD-wide SBIR/STTR BAA to continue engaging small businesses to enable leap-ahead improvements in future NDSA tranches. SDA launched a new webpage in 2021 focused on its small business efforts at <https://www.sda.mil/home/work-with-us/small-business/>.

SpaceWERX Orbital Prime Solicitation Tackles OSAM

SpaceWERX has launched the Orbital Prime program with an out of cycle STTR. Orbital Prime will invigorate the On-orbit Servicing, Assembly, and Manufacturing (OSAM) market using Active Debris Remediation (ADR) as a use case for the foundational technologies. As congestion and debris threaten the long-term sustainability of the space domain, Orbital Prime will transition agile, affordable, and accelerated OSAM space capabilities to build the foundation for space logistics while preserving the global commons. On-orbit capability will be demonstrated on an accelerated timeline in two to four years.

- To learn more about the Orbital Prime opportunity, click the link below.
<https://spacewerx.us/space-prime/>
- Download and review the STTR Solicitation details here.
https://rt.cto.mil/wp-content/uploads/AF_x21.S_CSO.pdf

Success Story

Response Technologies Modernizes the Flexible Fuel Cell

Response Technologies LLC, a Bell Textron company, in response to SBIR topic number: DLA 182-001, developed an additive manufacturing 3D reinforced composite process currently used in their redesign of a decades-old military technology—the flexible fuel cell. Traditional fuel cell manufacturers use WWII-era subtractive manufacturing and production processes which do not capitalize on advanced manufacturing techniques, capabilities or efficiencies. Compared to the Response fuel cell technology, traditionally manufactured fuel cells are costlier, provide less protection and have considerably longer procurement lead times.

Response's innovative, forward-thinking manufacturing methods resulted in a seamless, crashworthy, ballistically-tolerant and self-sealing fuel cell that is universally fuel compatible and environmentally sustainable. The design improvements are potentially lifesaving, cost effective and reduce procurement lead time –all benefits that have a direct impact on warfighter and weapons system readiness. The redesign and modernization comes with several benefits, most notably:

- 20% targeted weight reduction
- 0% reduction in total ownership costs
- 20% reduction in future procurement costs
- Reduces manufacturing lead time from months to days
- Timeline for new product designs using the technologies derived is reduced by 8x
- Potential to eliminate the need for aromatics in fuel for self-sealing



Flexible Fuel Bladder. Image provided by Responsible Technologies 2018

Response addressed and overcame the usual risks and concerns associated with advanced manufacturing techniques by meeting priorities for the DoD rotorcraft market and by certifying the fuel cell under the rigorous standards of MIL-DTL-27422F.

The Hill

The Small Business Technology Partnerships (SBTP) Office has had a busy legislative quarter and strives to improve the processes of the DoD SBIR and STTR programs to ensure that small business innovative technologies support the priorities of the Department of Defense (DoD). Specifically, the office is working to promote the reauthorization of the SBIR and STTR programs, whose authorities are set to expire in September 2022. SBTP is in favor of both expansion and permanency of SBIR and STTR authorities, which would afford the DoD increased flexibility in awarding funding to small business concerns, further leading to more SBIR/STTR projects transitioning to the Warfighter.

Outreach Events

DoD Small Business and Technology Partnerships at TechConnect World Innovation Conference and Expo 2021

Small Business and Technology Partnerships (SBTP) Acting Director, Susan Celis, and Matthew Williams, SBTP's Technology Portfolio Manager & Director, Rapid Innovation Fund participated in the TechConnect World Innovation Conference and Expo 2021, from 18 - 20 October at the Gaylord Convention Center, National Harbor, MD. TechConnect World Innovation Conference and Expo, one of the largest meetings in the SBIR/STTR community, has connected top applied research and early-stage innovations from universities, labs, and startups with industry end-users and prospectors.

Ms. Celis presented an overview of the agency's program during a panel, "SBIR/STTR 101 & Agency Briefings," on Tuesday, October 19. The next day, Mr. Williams served as a panelist to discuss, "SBIR/STTR: Working with the Primes," along with panelists from Boeing, Northrop Grumman, Raytheon and Lockheed Martin. SBTP also hosted a booth in the Pavilion, an open space, that enabled colleagues to disseminate program information and engage with small business, academia, and industry partners in a safe manner.

The conference included the annual SBIR/STTR Innovation Conference, AI TechConnect, and the TechConnect Technical Program - more than 35 world-class technical symposia, and the Nanotech Conference Series – the world's largest and longest running nano-technology event.



Susan Celis (second from left), Acting Director, Small Business and Technology Partnerships, with staff at TechConnect World Innovation Expo 2021.

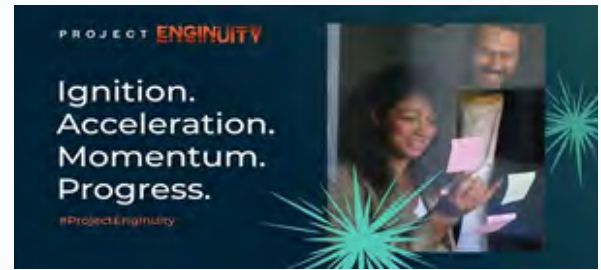


Matthew Williams, Technology Portfolio Manager & Director, Rapid Innovation Fund moderating panel with (from left) Dr. Sharon Myers, Boeing; Craig Owens, Lockheed Martin; Jim Baker, Northrop Grumman and Alf Carroll, Raytheon.

Project Eenuity Virtual Collider

SBTP participated in the Project Eenuity Virtual Collider on 26 – 27 October. Project Eenuity is a national SBIR accelerator designed to accelerate and empower Black, Latinx and women entrepreneurs on their journey to secure non-dilutive capital and fuel innovation. A major component of SBTP's outreach efforts is reaching underrepresented communities and providing knowledge and tools to help small businesses bring innovative technologies to the Department of Defense. To that end, Mr. Matthew Williams, participated in an "Ask Me Anything" session with Project Eenuity

program participants and answered questions about the DoD SBIR/STTR programs and technology transition. SBTP team members also conducted one-on-one sessions where participants spoke about their technologies and asked questions about the SBIR/STTR proposal process. In the lead-up to the event, 61 minority-led companies completed the Project Engenuity program, and this Virtual Collider event was the culmination of their hard work. Program participants received expert training, which supports their application for funding via SBIR/STTR awards.



Small Business and Technology Partnerships (SBTP) Attended the Defense Manufacturing Conference (DMC)

SBTP support contractors, Jason M. Talley, Outreach/Education/Transition Manager and Maria Conneran, Program Analyst, attended the DMC 2020 conference at the Gaylord Rockies Resort and Convention Center in Aurora, Colorado from 13 – 16 December. The DMC is the nation's annual forum for enhancing and leveraging the efforts of engineers, managers, technology leaders, scientists, and policy makers across the defense manufacturing industrial base. Attendees convened with leaders, manufacturing subject matter experts from government, industry, and academia and exchanged information and perspectives on defense manufacturing, including policies, strategic direction, and funding opportunities. Also, the latest manufacturing innovations that benefit our warfighters were displayed for attendees to experience first-hand. Mr. Talley and Ms. Conneran had the opportunity to meet with small business and industry leaders to discuss the DoD SBIR/STTR Programs and the OSD Transitions SBIR/STTR Technologies (OTST) in the Aurora Exhibit Hall and previewed technologies that could help meet the modernization technological goals of the Department.

To learn more about DMC visit: <http://www.dmcmeeting.com>

Upcoming Events

Navy West & FST | San Diego, CA | 16-18 February 2022 | <https://navyfst.com/events/west-2022/>

SXSW Conference & Festivals | Austin, TX | 11 – 20 March 2022 | <https://www.sxsw.com/>

SAS STEM Expo & Sea, Air & Space | National Harbor, MD | 3-6 April 2022 | <https://seairspace.org/stem-expo/>

CONNECT WITH US

Questions about the DoD SBIR/STTR Programs

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