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Office of the Under Secretary of Defense  
for Research & Engineering

## Message from the Defense SBIR/STTR Program Office

The Department of Defense (DoD) recognizes the contributions of innovative, high-tech small businesses to the Nation’s growth, productivity, and competitiveness. During this time of uncertainty regarding Congressional reauthorization of the SBIR/STTR programs, we continue to engage with the small business community—from roundtables lead by Ms. Heidi Shyu, Under Secretary for Research and Engineering, to Blue Cyber Ask-me-Anything and Boot Camp sessions led by the Air Force Chief Information Systems Office, and participation in outreach events. We remain vigilant in working with leadership to ensure that the SBIR/STTR Programs are reauthorized by Congress before September 30, 2022.

Thank you for your support and interest in the DoD SBIR/STTR Programs.

Sincerely,

Susan Celis and Matt Williams



Matthew Williams  
Technology Portfolio Manager &  
Director, Rapid Innovation Fund,  
Defense SBIR/STTR Program Office

## THE HILL

### Reauthorization of the Small Business Innovation Research and Small Business Technology Transfer Programs Remains Front and Center

In a recent letter to several Congressional committees, Ms. Shyu stated, “The SBIR/STTR programs play a vital role in enabling the U.S. to maintain technological dominance and provide the innovation to allow the U.S. to remain ahead of our adversaries. We are concerned about the uncertainty of reauthorization of the SBIR/STTR programs and the impact of a lapse on both the Department and small businesses. Please preserve the merit-based foundation of the SBIR/STTR programs and reauthorize them as soon as possible.”

Please stay tuned for updates by following us on our social media platforms, signing up for our listserv and checking out our website.

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## DoD SBIR/STTR News

### DoD SBIR/STTR Website Launches - New Look & New Feel

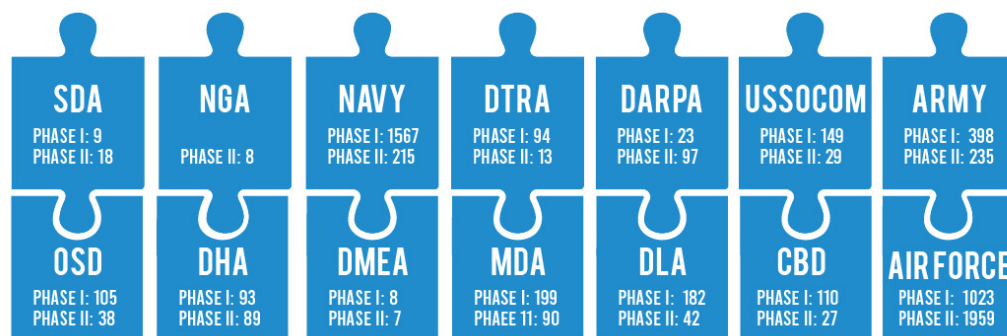
The DoD Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Programs launched a redesigned website with a new look and feel during the third quarter. The website provides more in-depth information about the Defense SBIR/STTR programs, outreach events and resources and is easy to navigate. Check us out at [www.defensesbirsttr.mil](http://www.defensesbirsttr.mil).



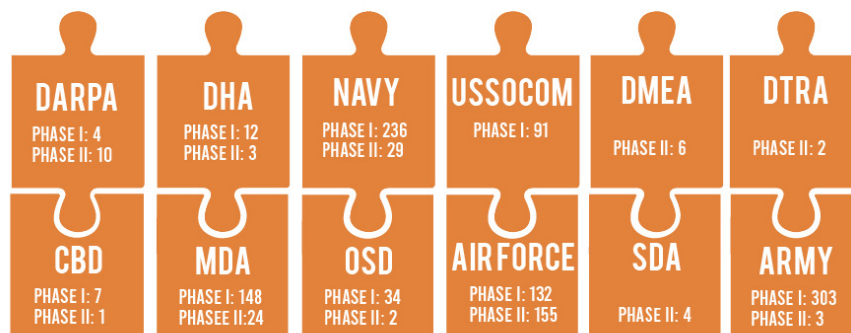
## DoD SBIR/STTR Program Statistics

The following data provides a snapshot of the year to date stats. Please note that data collection is ongoing and numbers are subject to change.

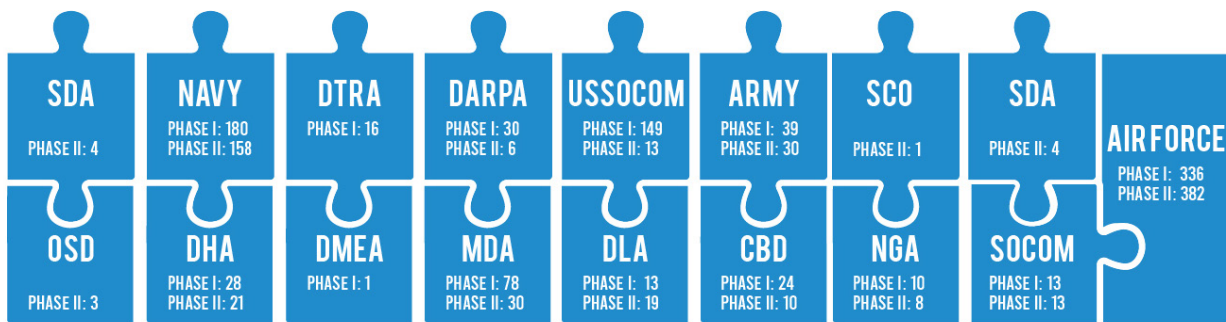
### SBIR NUMBER OF PROPOSAL SUBMISSIONS BY COMPONENT



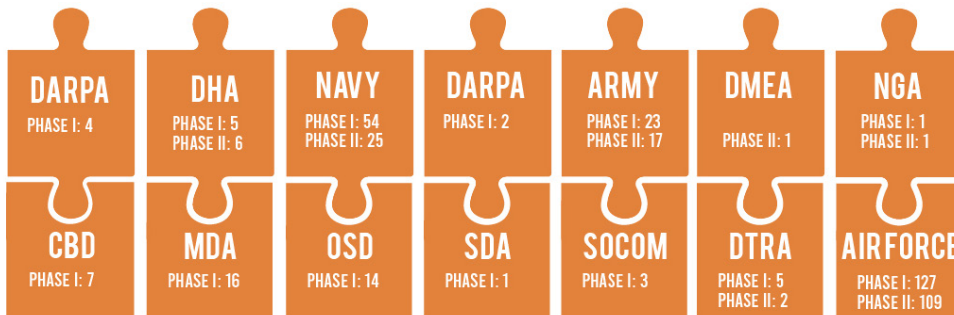
### STTR NUMBER OF PROPOSAL SUBMISSIONS BY COMPONENT



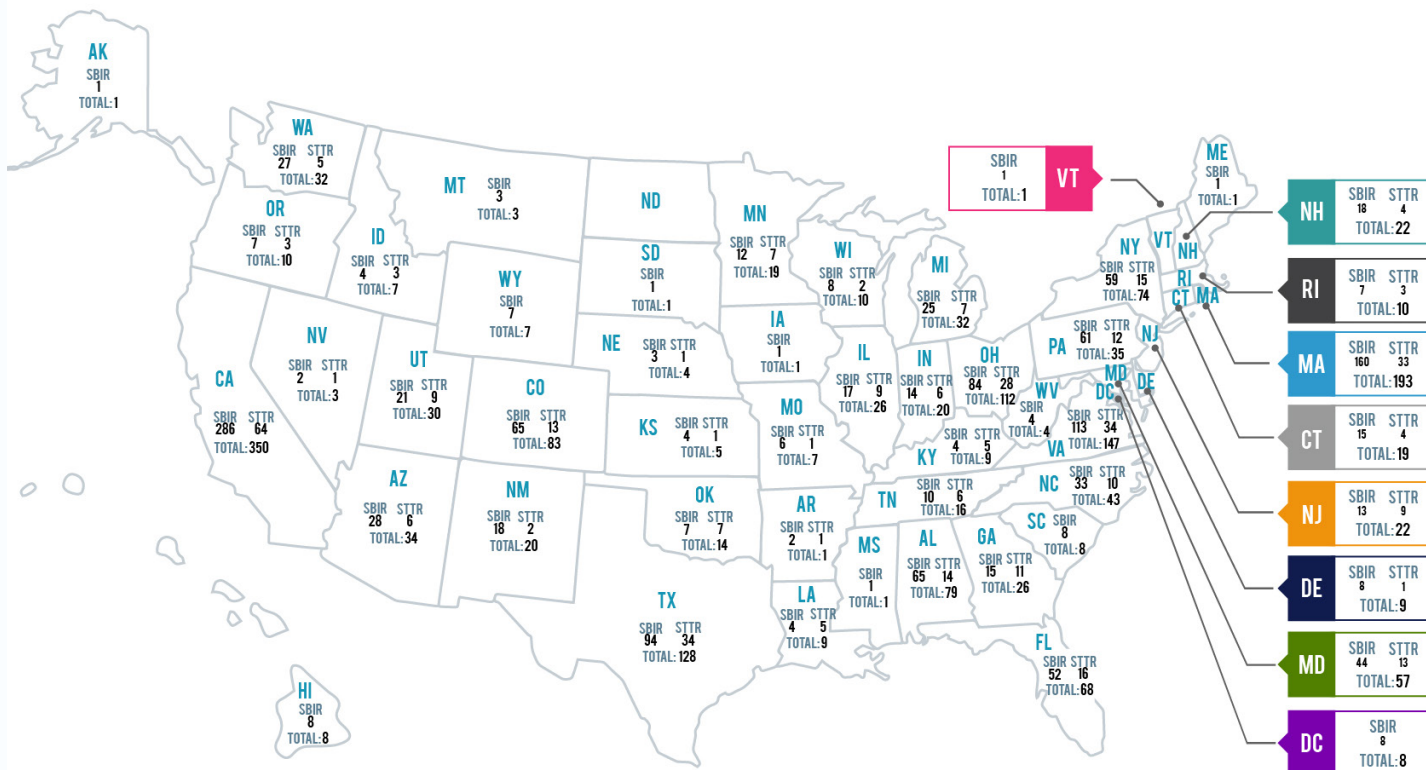
## SBIR AWARDS BY COMPONENT



## STTR AWARDS BY COMPONENT

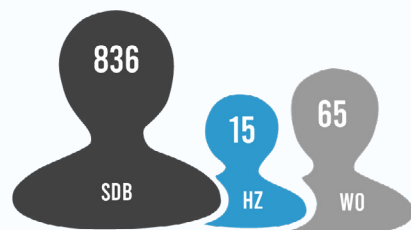


## SBIR/STTR CONTRACT AWARDS - FY 2022

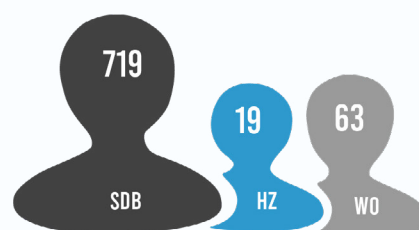




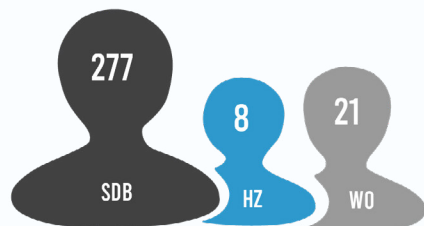
## SBIR PHASE I PROPOSAL SUBMISSIONS BY SOCIOECONOMIC CATEGORY



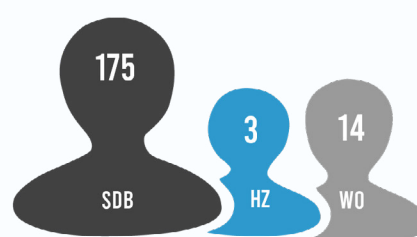
## SBIR PHASE II PROPOSAL SUBMISSIONS BY SOCIOECONOMIC CATEGORY



## STTR PHASE I PROPOSAL SUBMISSIONS BY SOCIOECONOMIC CATEGORY



## STTR PHASE II PROPOSAL SUBMISSIONS BY SOCIOECONOMIC CATEGORY



### TERMINOLOGY KEY:

SDB = Small Disadvantaged Business

HZ = HUBZONE Historically Underutilized Business Zone

WO = Woman-owned Small Business

## FUNDING OPPORTUNITIES

In the third quarter, DoD Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) released over 130 SBIR topics and over 50 STTR topics across four Broad Agency Announcements (BAAs) and one Commercial Solutions Opening (CSO). During this timeframe, approximately 2,700 proposals were submitted across all topics and solicitations.

It is important to note that Congressional authorization of the SBIR and STTR programs is set to expire on September 30, 2022. If the programs are not reauthorized by this date, the DoD cannot continue to publish SBIR/STTR BAAs or CSOs. We cannot fund new projects after that date.. To that end, while we still have released new topics under the annual SBIR/STTR BAAs, funding for proposals selected for award are subject to the SBIR/STTR programs being reauthorized.

We will be sure to keep you informed of pertinent updates on the DoD SBIR/STTR Programs via email, so please subscribe to our Listserv by visiting <https://www.dodsbirsttr.mil/submissions/login> and clicking "DSIP Listserv" located under Quick Links. In addition, follow us on social media, Twitter, @dodsbir, Facebook, dodsbir and our website, [www.defensesbirsttr.mil](http://www.defensesbirsttr.mil).



## COMPONENTS CONNECTION

Air Force/Space Force Chief Information Security Officer's Blue Cyber Ask-Me-Anything Cybersecurity Webinars Continue Reaching Small Businesses Every Week

Since launching the Blue Cyber initiative to help small businesses successfully navigate cybersecurity and provide resources to support their efforts, the Ask-Me-Anything webinars have been successful and well-attended by Small Business Innovation (SBIR)/Small Business Technology Transfer (STTR) companies, DoD contractors and prospective companies. These live events, which provide current cybersecurity content and speakers from various organizations, are held every Tuesday from 1-3 p.m. ET via Zoom.

Kelley Kiernan, Chief Information Security Officer, and her team speak to hundreds of companies each week and look forward to even more joining the weekly webinars. For more information on the Blue Cyber Education Series, visit [www.safcn.af.mil/CISO/Small-Business-Cybersecurity-Information/](http://www.safcn.af.mil/CISO/Small-Business-Cybersecurity-Information/), on LinkedIn by following USAF SBIR/STTR or Kelley Kiernan at [kelly.kiernan@us.af.mil](mailto:kelly.kiernan@us.af.mil).

To register for upcoming events, visit [https://www.zoomgov.com/webinar/register/WN\\_6Gz84TQGRvm6YHMSVyE0Qg](https://www.zoomgov.com/webinar/register/WN_6Gz84TQGRvm6YHMSVyE0Qg)



## Accelerating Innovation and Transition with Defense Advanced Research Projects Agency (DARPA) Regional Workshops

At universities throughout the United States, leaders from DARPA's Embedded Entrepreneurship Initiative and the Small Business Programs Office will offer workshops focusing on the strategic transition and commercialization of DARPA-funded research and technology.

Join them for an engaging program featuring DARPA's Chief of Commercial Strategy and the Director of the Small Business Programs Office. They will be accompanied by accomplished innovators, creative entrepreneurs, and senior commercial advisors who have helped navigate markets and steer successful transitions of DARPA-funded technologies. Learn how you, or your organization, can become a part of the DARPA ecosystem that advances innovation and ensures U.S. national and economic security.

Visit [acceleratinginnovation.darpa.mil](http://acceleratinginnovation.darpa.mil) to register and learn more.

### EVENT SCHEDULE

**October 3**  
Ohio State University

**November 14**  
Texas A&M University

**December 12**  
University of California, San Diego



## SUCCESS STORIES

### Mikros Systems Corp Develops Adaptive Diagnostic Electronic Portable Test - Benefits US Navy Cruisers and Destroyers

Mikros Systems Corp, through the Multi-Function Distributed Analysis Tool (MFDAT) program, developed Adaptive Diagnostic Electronic Portable Testset, ADEPT®, which is an intelligent, semi-automated, programmable electronic test tool designed to aid technical personnel in the maintenance, alignment, calibration, and error diagnosis of complex electronic systems. ADEPT eliminates the need for traditional manuals, paper documentation and discrete test equipment and eases the burden on electronic technicians by integrating the required test equipment functionality and automating the testing processes.

ADEPT's test automation is a benefit to the Navy and has been shown to reduce the time it takes to perform periodic maintenance by 50% or more, while also greatly reducing operator errors. ADEPT is currently in use aboard US Navy Cruisers and Destroyers, where ADEPT's time savings, ease of use, and distance support capabilities are important in reducing the high workloads of AN/SPY-1 radar technicians. ADEPT also includes specialized test equipment that allows technicians to better align the AN/SPY-1 radar more efficiently and without additional training. The ability to standardize on a common instrumentation interface across all systems also shows great potential in improving the efficacy of maintenance training and reducing the overall maintenance training time requirements for many electronic systems.

Mikros expects to deliver an additional 35 ADEPT Units to the Navy during the first quarter of 2013, bringing the total number of units delivered to 139 over the past five years. Mikros has secured a contract to supply ADEPT variants to the Littoral Combat Ship - a 55-ship program that includes the USS Freedom. The LCS program represents a substantial new market for ADEPT Units. Mikros is also proposing to apply ADEPT to conditioned-based maintenance applications on other naval platforms, such as amphibious ships, carriers and submarines. Combined, these platforms have the potential to generate wide placement of ADEPT Units and multiple additional orders throughout the Navy. For more information, contact Marc Dalby [marc.dalby@mikrossystems.com](mailto:marc.dalby@mikrossystems.com).

#### Multiple Function Distributed Test and Analysis Tool (MFDAT)



MFDAT/ADEPT represents a major step forward for electronic test equipment. By combining modular instrumentation solutions with automated testing processes and distance support technologies, the readiness of electronic systems is improved





## ORBIS Uses Defense Logistics Agency Small Business Innovation Research Award to Solve Obsolescence Requirement for Military Services

ORBIS was awarded a Defense Logistics Agency (DLA) Phase I Small Business Innovation Research (SBIR) award in November 2017 to demonstrate the feasibility of improving product availability and increasing competition to alleviate limited sources of supply for DoD systems and subsystems. During their period of performance, ORBIS completed the initial engineering, associated lifecycle logistics, and manufacturing to provide a complete solution to the customer. By building on technical synergies, focused processes, economies of scale and familiarity with stakeholders, ORBIS reverse engineered the National Stock Numbers (NSNs) and developed Technical Data Packages (TDPs) to become a qualified source of supply. The Source Approval Request (SAR) process qualified ORBIS to manufacture and market those NSNs for sale to DLA to improve availability, decrease cost, and broaden the industrial base for similar products.

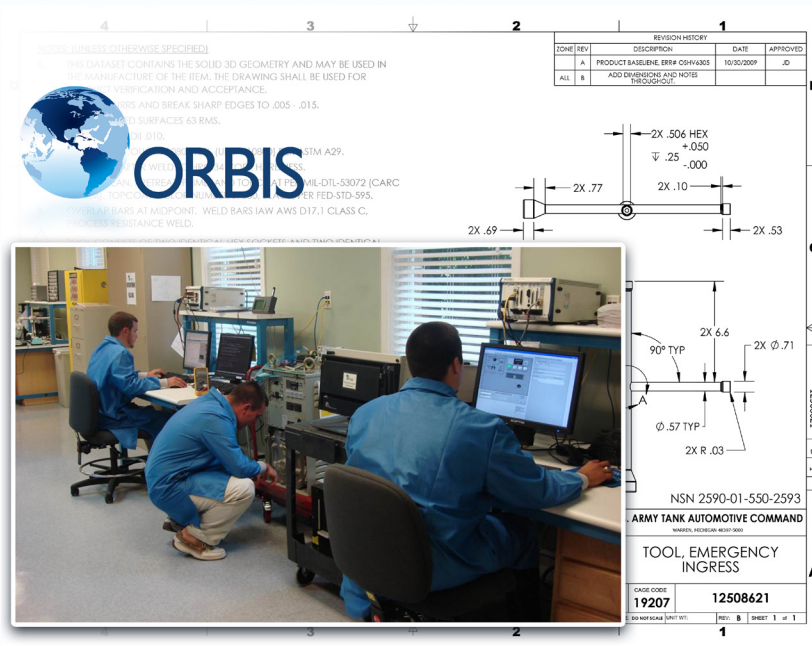


Image provided by Orbis 2021

ORBIS reverse engineered and developed a TDP for an emergency rescue bar for a High Mobility Multipurpose Wheeled Vehicle (HMMWV) and investigated the economic viability of doing the same for a disc brake caliper assembly for the same vehicle. In executing the work, ORBIS worked with potential manufacturers and resellers of HMMWV parts. DLA's need for alternate sources and the strong aftermarket demand for these parts created an ideal market opportunity for ORBIS to further develop additional TDPs for other HMMWV parts. During the Phase I work, ORBIS worked with a local South Carolina company to identify other potential HMMWV reverse engineering candidates, including a body mount, NSN - 5340 -01-568-4874, with a strong market demand. ORBIS demonstrated in Phase I that its approach to reverse engineering related components using one company showed a 25% cost savings for the entire engineering, logistics, and manufacturing process for items as compared to individual companies that were completing the work. After demonstrating this successful method, ORBIS marketed their Reverse Engineering Obsolescence Management (REOM) Process to both DoD and commercial customers.

REOM caught the attention of Navy organizations, the Army, and companies in the Light Rail industry for reverse engineering obsolete material. ORBIS was awarded a Phase III SBIR contract with Naval Sea Systems Command in September 2020. This SBIR Phase III contract, managed by General Services Administration (GSA), was derived from the DLA SBIR Phase I objectives to successfully improve availability, decrease cost, and broaden the industrial base for the intended products. This is an Indefinite-Delivery, Indefinite Quantity (ID/IQ) contract, not to exceed \$29.4M over a five-year ordering period.



ORBIS is developing design modernizations with built-in features to rapidly implement follow-on technology and array upgrades. This effort will improve handling systems with frequent modular upgrades without expensive Original Equipment Manufacturer (OEM) support. This sophisticated approach is poised for rapid insertion into hydraulically controlled Towed Array Handling Systems, addressing obsolescence issues on critical Printed Wiring Boards and Assemblies (PWBs/PWAs) to provide significant reliability improvement benefits to the Navy fleet. For more information, please contact [DLASBIR2@dla.mil](mailto:DLASBIR2@dla.mil).

### Innovital Systems Successfully Transition Vibration Isolation Technology to MH-60S Gunner Seat

Innovital Systems Inc. (formerly Techno-Sciences, LLC) was awarded a Navy Phase II Small Business Innovative Research (SBIR) award in 2008 to fabricate, test, and refine a tactical prototype of a Semi-Active Magnetorheological Vehicle Seat (SAMVS) system, which was designed to mitigate harmful vibrations during vehicle operation. It was initially designed for use in an Expeditionary Fighting Vehicle (EFV), an amphibious vehicle designed to operate through harsh conditions and at much higher speeds than its predecessors.

Injurious shock loads transmitted to the occupants when traversing over water in high sea states as well as harmful shock and vibration transmitted to the occupants when the vehicle is traveling over land posed a threat to occupant health and significantly limited mission length.

To address this, a retrofit-capable SAMVS system was developed in Phase I which adapted to these broadly varying operational conditions as well as occupant weight to provide optimal protection of the occupant during EFV missions. The SAMVS system demonstrated a reduction in shock dosages applied to the occupant by 33% in water mode and a reduction to the vibration transmitted to the occupant by 65% as compared to the previous, passive suspension system.

NAVAIR identified the value this technology would have if it were ported to H-60 pilot seats, which had almost no isolation from aircraft vibration. At high levels, vibration exposure has been determined to be harmful and fatiguing to Navy pilots and aircrew. In 2018, Innovital Systems received a Rapid Innovation Fund award to mature and qualify a bespoke isolator system specifically for the Next Generation Gunner's Seat (NGGS). The technology, which demonstrated over a 50% reduction in vibration exposure, was acquired by PMA 202, the Navy's Aircrew Systems Program Office, in 2021, and fleet installation of the isolator system is imminent. For more information, contact William Glass, [william.c.glass.civ@us.navy.mil](mailto:william.c.glass.civ@us.navy.mil)





### OUTREACH EVENTS

#### **DoD Small Business Innovation Research/Small Business Technology Transfer Program Staff Participated in SBIR/STTR Panel at the Special Operations Forces Industry Conference**

On 16-19 May 2022, OSD Transitions SBIR/STTR Technologies Program (OTST) employees attended SOFIC 2022 in Tampa, FL, networked with Small Business Industry and staffed a booth in the IGNITE Pavilion exhibit hall with SBIR program representatives from Missile Defense Agency (MDA), NAVY, Defense Advanced Research Agency (DARPA), and United States Special Operations Command (USSOCOM), as well as approximately 75 small businesses. OTST representatives networked with many new funding candidates and discussed the SBIR/STTR program and funding strategies available. In addition, OTST Transition Manager, Jason Talley (Support Contractor), served on a panel with SBIR/STTR program representatives and discussed technology transition and opportunities for “bridging the valley of death.”

OTST representatives attended Under Secretary Heidi Shyu’s keynote address and other sessions focused on funding opportunities for small businesses. SOFIC provided an excellent opportunity to promote SBIR/STTR programs and “SBIR 101 Presentations and Agency Pitches” provided attendees an explanation of the unique structure and process for participating Components’ SBIR program. Over the four-day conference, more than 16,000 attended and approximately 350 exhibitors.

#### **DoD Small Business Innovation Research/Small Business Technology Transfer Program Staff Lead Panels, Networked & Hosted Exhibit Booth at TechConnect World Innovation Expo 2022**

DoD SBIR/STTR Programs’ staff attended TechConnect at the Gaylord Convention Center, National Harbor, Maryland on June 13-14, 2022. DoD SBIR/STTR Program Manager, Susan Celis, participated in an Agency Reverse Pitch and lead a SBIR/STTR Agency Deep Dive panel with Components, including: Navy, AFWERX (Air Force), Defense Advanced Research Projects Agency (DARPA), Defense Health Agency (DHA), and Missile Defense Agency (MDA).



OSD Transitions SBIR/STTR Technologies Program (OTST) Technology Portfolio Manager, Matthew Williams, led a panel titled “SBIR: Working with Defense Primes” with panelists from Raytheon, Boeing, Lockheed Martin and Northrop Grumman.

In addition, Program staff hosted a booth in the main exhibit hall, alongside SBIR program representatives from agencies including DoD: Army, Navy, AFWERX, DARPA, DHA, and OSD. Federal agencies present were: Environmental Protection Agency, Department of Agriculture, Department of Energy, National Aeronautics and Space Administration, as well as approximately 100 small businesses. The conference provided an opportunity to network with small businesses, discuss the SBIR/STTR program and funding opportunities and strategies available.



### DoD SBIR/STTR Program Manager Served on University of Colorado Panel for Colorado SBIR/STTR Week to Discuss Program

As the third quarter came to a close, for Colorado SBIR/STTR Week, June 27 – July 1, Susan Celis, DoD SBIR/STTR Program Manager, along with SBIR/STTR representatives from the National Institutes of Health, Department of Energy, and National Science Foundation participated in a panel hosted by the University of Colorado to discuss their programs. At this virtual roundtable, representatives discussed how they work with other federal agencies and the best ways for small businesses to engage and do business with the agencies. In addition, they shared ways for small businesses to find the best solicitations and topic areas and how these businesses develop a research program in a new agency.



Innovital's Vibration Isolation Technology Improves Mission Endurance and Protects Pilots from Back Injuries. Image credit: [www.innovitalsystems.com/](http://www.innovitalsystems.com/)

## UPCOMING EVENTS

### Defense TechConnect Innovation Summit & Expo

September 26 - 29, 2022

Gaylord Conference Center, National Harbor, MD

Event Website: <https://www.events.techconnect.org>

### DoD SBIR/STTR

<https://www.defensesbirsttr.mil>

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