

DEPARTMENT OF THE NAVY

# SBIR/STTR TRANSITIONS

2019 FALL - WINTER



## FROM THE DIRECTOR

### *FASTER, SIMPLER, MORE IMPACTFUL*



Bob Smith, Director DON SBIR/STTR

2019 was a year of big change for the DON SBIR/STTR programs. Leadership gave us the charge to be faster, simpler and more impactful, and our team took that challenge to heart with the implementation of two pilots: Accelerated Delivery & Acquisition of Prototype Technologies

(ADAPT) and Navy Technology Acceleration. Both pilot efforts are leveraging small business innovation to adopt technology faster and make the small business partner experience our priority.

ADAPT is designed to quickly address DON high priority challenges in high impact areas for the naval community that are also determined to apply to dual use applications in the commercial sector. The program utilizes a unique award structure, accelerates decision timelines, and minimizes application processes to rapidly deliver prototype technologies. Six ADAPT topics resulted in 13 Direct to Phase II awards in the X19.1 out-of-cycle BAA.

Navy Technology Acceleration is enabling a wider range of concepts from more innovators through

three broad topics in the 19.3 BAA. Proposal requirements have been cut from 20 pages to five and our evaluation, selection, and payment processes have been accelerated to reduce processing time by 66 percent. The process is faster: We awarded 79 Phase I contracts just 23 days later (from proposal receipt to award), with tremendous support from the Systems Commands and their evaluators. The process is simpler: We used Basic Ordering Agreements (BOAs) that allow us to place orders on those contracts for up to five years without having to start at zero each time. Additionally, in May 2020 our Phase I awardees will have the opportunity to participate in an in-person demonstration of Phase I feasibility for same-day Phase II contract award. This competitive process could conceivably select 25 or more winners, and each could receive \$1.6 million for \$40 million in Phase II contracts that day!

But it doesn't end there. The process used for Navy Technology Acceleration definitely has more impact on small businesses: The next day the Phase II awardees, as well as those who were not selected, will present their technologies to a room full of potential partners, including venture capitalists (VCs), third-party investors, defense prime contractors, all of our Systems Commands, and representatives from the other services. Each of our SBIR awardees will be able to say its technology has earned the DON's attention. In the case of our newly awarded Phase II companies,

there is currency in being able to look a VC in the eye and say, “I’m an SBIR Phase II partner with the Navy.”

Our 20.1 BAA opened on 8 January and will close on 12 February 2020. With every one of those proposal submissions, we’ll ask for 10 pages instead of 20. And we’ve changed our payment schedule to accelerate payment by 66 percent. Our SBCs will get that first payment a lot sooner than in the past.

Our real objectives are to open up the aperture to more ideas and streamline the decision process, which will accelerate our adoption of the technologies to support our warfighters.

### **EMILY to the Rescue**

It’s always gratifying when an SBC with a unique technology achieves success by transitioning and commercializing its product. In this issue of Transitions, we learn about how Sahuarita, Ariz.-based Hydronalix and its EMILY unmanned surface vessel have been a global success.

EMILY was launched from a series of Navy-sponsored SBIRs starting as far back as 2001 and it continues to evolve. Most recently, a version of EMILY equipped with bottom-mapping sonar was able to deploy quickly to the Bahamas after the devastating Hurricane Dorian in September and immediately went to work to determine a safe navigation channel at Marsh Harbor on Abaco Island so the port could reopen and receive relief supplies.

We’re still spinning in Hydronalix technologies that can be used with military applications—a case of “build, test, build.” We keep improving EMILY capabilities with the support of SBIR until we get the exact technologies that the fleet needs.

### **New Direction for FST**

As you know, instead of the traditional Forum for SBIR/STTR Transition (FST), we are conducting more focused technology events to showcase

our SBIR/STTR Transition Program (STP) Phase II companies and their innovative technologies, and to align them with the technology needs of both government and industry. It’s all about connecting requirements with solutions.

With the new format for the FST, STP and the participating SBCs need to look at where their resources are best employed to connect requirements with their solutions. We will have multiple events so SBCs must determine the time and money involved to attend an event and work with their STP Business Consultants to identify the best FST events for them.

It may seem like a simple decision, but you can’t just say that an aviation-related technology company doesn’t need to attend a submarine-related conference, because you never know when there will be a serendipitous connection for what its technology can do. Every once in a while, SBCs may need to step outside of their comfort zones and look in other places.

If money is tight and time is short, perhaps you shouldn’t go to the submarine-or the cyber-related conference, but if you are looking for other customers or trying to see where your technologies fit in other places, or you need to recharge your batteries with other ideas, maybe you should show up because you will be welcome.

Change is inevitable and often necessary to reinvigorate longstanding programs. We are hopeful that the changes made to our programs will lead to more successes for our small business partners and the warfighters.

Sincerely,



Robert L. Smith  
Director DON SBIR/STTR



# WITH SBIR, ONE GOOD THING LEADS TO ANOTHER EMILY LEADS THE WAY FOR GETTING RELIEF SUPPLIES TO STORM-DAMAGED BAHAMAS

By Edward Lundquist, Navy STP Staff Writer

This SBIR/STTR story begins in 2001, when Tony Mulligan's company Advanced Ceramics Research (ACR) received a Navy Small Business Technology Transfer (STTR) investment to develop a system to detect marine mammals so Navy ships could avoid them. In 2003, this evolved into another SBIR effort, the Silver Fox unmanned air vehicle (UAV), which the Marine Corps and Navy subsequently used for surveillance in Iraq and Afghanistan. Mulligan sold ACR in 2009, but later used his original unmanned aerial systems knowledge to start his new company, Hydronalix.

In 2010, Mulligan and his business partner Robert Lautrup had a eureka moment and invented the EMILY (Emergency Integrated Lifesaving Lanyard) concept. Additional SBIR investments to Hydronalix led to the development and refinement of the EMILY system, which is actively used as a lifesaving device around the world. Thanks to SBIR, the EMILY technology continues to evolve. Most recently, a version of EMILY mapped a safe route for ships to dock in the Bahamas with hurricane relief supplies after the devastation of Hurricane Dorian.

"Sonar EMILY can be used to create sonar maps of the sea floor or look for missing bodies or objects," said Mulligan. "This technology was used in the Bahamas to ensure a safe channel to enable ships to navigate into ports to deliver desperately needed relief supplies."

Hurricane Dorian severely damaged Great Abaco Island, and closed Marsh Harbor. "Our job was to make sure the shipping channel was open so the rescue and supply ships could come in and reopen the airport. This allowed the doctors, medical staff and administrators to arrive, bringing medicines, equipment and supplies, reopening the hospital



Courtesy of Hydronalix

Sonar EMILY Mapping Marsh Harbo

and begin to treat patients," Mulligan said. "All the ships that followed used the clear-passage map generated by the Sonar EMILY USV."

A bottom survey normally requires a sonar-equipped mapping ship with sophisticated equipment, which could take several days to arrive, even in a large port with significant resources. The Sonar EMILY, however, can be quickly packed up and delivered and put right to work.

"We cut several days off that timeline," Mulligan said. "In just a few hours we essentially opened the island up for disaster response and relief, which would have been delayed for multiple days if they had to wait for larger ships. After the success in Marsh Harbor, the team moved to Baker's Bay on Great Guana Cay."

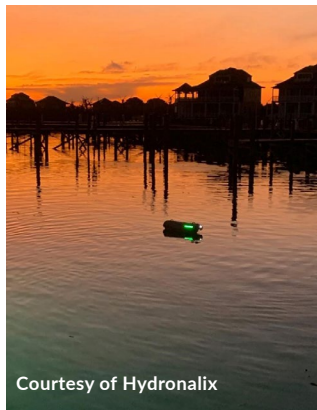
The Sonar EMILY USV can operate for three hours on its battery pack. It has a single beam,





Courtesy of Hydronalix

Operator running EMILY Sonar Control Station



Courtesy of Hydronalix

EMILY Continues mapping into night

multi-beam, side scan, and downward imaging sonar imagery, and can provide a live-feed to the operator to display what the sensors are seeing on the bottom of the waterway.

The initial Navy STTR marine mammal detection and mitigation solution featured low-cost sensors and automatic detection and decision aids. The SBIR Silver Fox technology transitioned into an unmanned aircraft with video communications, navigation, propulsion, battery management, sensor classification and threat warning systems, eventually for use in combat. This technology also evolved into EMILY, providing rapid-response water rescue. Mulligan stated that EMILY has been used in Mongolia and Kazakhstan during floods, in Indonesia for tsunami response, and in Greece to rescue migrants.

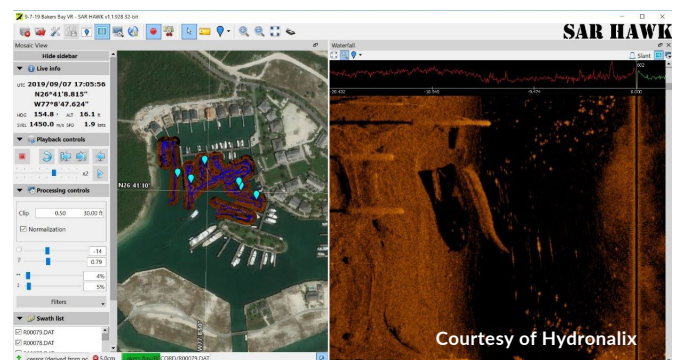
While EMILY is just one of the products derived for this partnership with the Navy, it has captured the attention of the world with hundreds of the lifesaving devices in service around the globe. The robotic system can reach people in distress faster than a rescue swimmer or someone on a surfboard. The brightly colored buoys weigh just 25 pounds and can travel at speeds up to 22 miles per hour. The buoys can be optioned with a two-way radio, camera, and lights for night missions. It can be thrown in the water, tossed off a boat or bridge, or dropped out of a helicopter. The device can also be tethered so a swimmer in distress can grab it and be pulled to safety.

“EMILY is made of Kevlar and aircraft-grade composites and is virtually indestructible,” said Mulligan.

The unmanned surface vessel (USV) is now being outfitted with different sensors that can conduct a variety of missions. SBIR encourages small businesses to “complete; derive; and extend,” and the EMILY technology has done just that. Hydronalix keeps finding new uses for the EMILY platforms. In addition to the rescue EMILY, there is the Sonar Search and Rescue EMILY, Police EMILY, a Man Over Board EMILY (MOBE), and SPEEDoo Water Sampling EMILY. With support from the DoN SBIR program, EMILY is being upsized to a 65” and 75” Autonomous Mobile Buoy Intelligence, Surveillance, and Reconnaissance (ISR) platform with tracking cameras, radar, weather station, and sonar imaging.

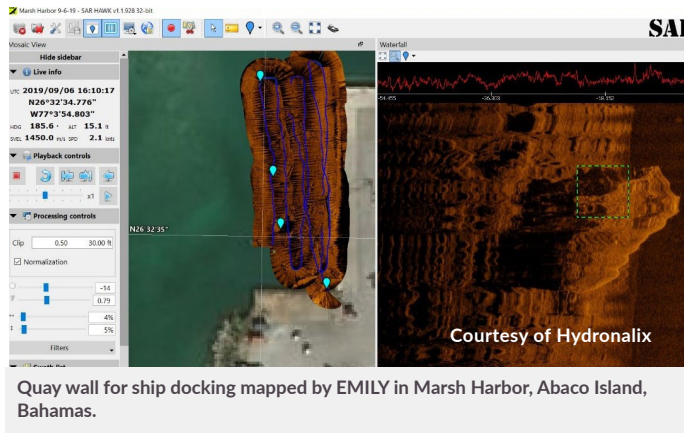
Mulligan said the lifesaving technology is being used in many other ways as well. “We have a water sampling system that is designed to test sewage or industrial waste for hazardous substances or to monitor natural events such as a red tide bloom.”

The Michigan Department of Transportation (MDOT) has a fleet of Sonar EMILYs and has successfully trained about 100 people to use this technology. MDOT said that the system’s sonar and cameras are being used to obtain images of substructure units below water, view the underside of bridges and performance characteristics, and to monitor the bridge for scouring. The EMILY systems can operate in turbulent waters with high



Bakers Bay, Great Guana Cay, Bahamas, EMILY SONAR Data processed with SARHAWK Software.





currents and near substructure units or debris.

It has interesting commercial markets beyond the military or government-sponsored rescue or environmental and infrastructure monitoring roles. A police version being used in Thailand with sirens, lights, and a small but extremely efficient speaker.

"It's being used for public events on the water such as triathlons. They can drive the boat 600 meters away, and still talk to people several hundred meters beyond that," Mulligan said.

Whether monitoring bridges under water, leading ships safely into port, reaching swimmers in distress, rescuing flood victims, sampling water for hazardous substances, or keeping triathletes in communication with event officials, EMILY has the potential to save untold numbers of lives. In fact, it already has. SBIR grants are meant to support research on projects that will be commercially viable. EMILY, in use by military and government organizations in multiple countries around the world, is paying dividends on the Navy's original investment.



## SAN DIEGO COMPOSITES PARTNERED WITH PRIMES TO TRANSITION TECHNOLOGY, GROW THE COMPANY

By Edward Lundquist , Navy STP Staff Writer

San Diego Composites (SDC) was founded in 2002 to specialize in composite design and manufacturing with three Phase I SBIRs. Because of the technology it developed with the SBIR investment, the company grew, and eventually was acquired in 2018 to become part of Applied Composites. While no longer a small business, SBIR is in the company's DNA.

According to company president Robert Kolozs, SDC looked at platforms that required lighter, stronger, or specialized properties that could be made from composites. "In designing a product with a new material system, we found that we had to also design a new manufacturing process."

Megan Caprio, an SDC engineer, said the company's Phase I SBIRs would begin with an analysis of design. In the Phase II, the company would make a

prototype. Each time the company was able to grow its capabilities. Since just about everyone was an engineer, engineers did everything, from design, prototyping, manufacturing and testing. "As we built up our capabilities, our product development grew into manufacturing parts. Both sides grew in parallel. Now we can develop and make a product for a customer, or we can build to specifications."

The company was focused on technology solutions that met an existing need or improved an existing component. SDC found that a product had a much better chance of integration if there was an existing platform with a specific need and a technology champion at a prime contractor that was helping to drive the integration of the technologies

The start-small-and-grow business strategy has

paid off. SDC has expanded its customer base to include aeronautics, automotive, and space. The company now has larger production runs and makes bigger and more complex parts. “We have the largest commercial autoclave in southern California,” she said.

### Prime partnerships

“As we grew, we built upon our projects, leveraging the SBIR program to grow our business and increase our capabilities, facilities, and workforce,” Caprio said. “As we did that, we created and nurtured working relationships with other companies and primes.”

Instead of a small company hoping to get a small task order or sub-contract from a prime, Caprio said her company would reach out to primes to give them a subcontract to have them help SDC establish requirements, conduct design reviews, and collect and analyze test results.

Caprio said the primes have deep knowledge and experience working with the government customer and, therefore, can provide invaluable insight. “The large companies have their SBIR teams. Find out who they are and talk to them. They can pair you up with a manager who can be your champion for teaming.”

She also said that it is important to listen to the customer. “We’re in constant communications with the sponsor,” Caprio said. “They put topics out for a reason. We have the end user involved from the beginning.”

SDC has developed and manufactured composite rocket motor cases and launch canisters, and they’ve worked very closely with their partner to meet the specific requirements. “Because we’ve established a reputation for high quality solutions and products, we felt that we could be a supplier to primes for these types of products,” Caprio said.

One of their recent successes involved working with Northrop Grumman to develop hardware in support of the Trident II D5 weapon system.

The hardware at hand had to survive the operating environment for underwater, be made from readily available materials, and be affordable.

“We worked with Northrop Grumman from the beginning,” said Caprio. “They helped us with the requirement and the design review. And we’re able to take advantage of their specialized test facilities to test our 8-foot composite dome.”

Caprio acknowledged that a Phase I contract may not result in a lot of money, but SDC thinks big. They work with an integration partner from the beginning. Starting in a Phase I, they engage with a large company as their sub. That teaming arrangement helps drive technologies in the right direction for a higher probability of winning the Phase II, so they’re better positioned to transition their technology.



Replacement closure for Trident II D5 submarine

Also, networking with other stakeholders can help to shape what she called Phase 0 topics, where a need is recognized and a topic is suggested to the government. Even then, the process is competitive, so there’s no favoritism in making an award.

### Plan for success

SDC is a participant in the STP program, but only recently. “We just got involved in STP three years ago. I attended the FST (Forum for SBIR/ STTR Transition) twice and have presented Tech Talks. It’s one of the best conferences I’ve ever





attended. That's where we made the connection for the Trident II D5 enclosure," she said. "We also had the opportunity to brief the Navy ManTech [manufacturing technology] group. They came to our booth, and I invited them to my presentation. Now we are submitting a proposal to ManTech for Phase III funding. We're excited, and so is the Navy."

"Manufacturing technology is always improving, and we're staying ahead of that wave. We're delivering higher quality, less scrap and fewer mistakes," Caprio said. "Working with ManTech

will make us even better."

Working closely with primes from the start can smooth the path to transition. Getting to know the SBIR teams at the primes is an important step to getting to the managers who can use small business technology to improve their platforms and products. Taking advantage of the deep knowledge and experience working with the Navy that larger primes have, as well as their resources to determine requirements, design reviews, testing, and more, can save time getting products and technology to the warfighter.

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## KEY TAKEAWAYS REGARDING IP/DATA RIGHTS ON THE SMALL BUSINESS ADMINISTRATION'S REVISED SBIR/STTR POLICY DIRECTIVE RELEASED 2 MAY 2019

By Jeff Pan, Navy STP IP / Data Right SME

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Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Effective: May 2, 2019. (SBA Policy) requires that each participating agency review its own rules to ensure consistency with Small Business Administration (SBA) policy and make necessary changes. So in time, DFARS252.227-7018 will likely be amended to meet SBA policy. DoD would likely publish a proposed amendment to DFARS252.227-7018 in the Federal Register for public comment and revision before publishing a final revised DFARS252.227-7018 in the Federal Register. Likely amendments to the DFAR include the following:

### **Revision of the Protection Period for SBIR technical data and computer software from DFARS five years to 20 years from award.**

The SBIR protection period is the period of time during which the government is obligated to protect SBIR data against unauthorized use and disclosure in accordance with SBIR data rights. The current DFARS protection period is five years after completion of the SBIR. That five-year protection period can be extended for work that derives from,

extends, or completes prior SBIR/STTR efforts—and perhaps daisy chained in perpetuity. Under the May 2, 2019 SBA Policy, however, the data protection period extends 20 years from the date of the award and cannot be extended by right. The new policy provides SBIR awardees the certainty of a guaranteed 20-year term.

### **After the expiration of the protection period, the 2019 SBA policy provides the government with government purposes rights in SBIR technical data and computer software, instead of unlimited rights under DFARS.**

Data rights under the DFARS depend on the type of data and timeframe within the SBIR lifecycle. For SBIR data (data generated under an SBIR award) the government has limited rights in technical data and restricted rights in computer software that extend five years after the end of the SBIR project under which the technical data or computer software was generated. Limited rights allow use and disclosure within the government only, with a right to disclose or use the data outside the government only under limited circumstances defined in the DFARS. The government also has

limited rights to technical data, and restricted rights in computer software, that the contractor developed exclusively at private expense and proposed as part of the SBIR. There is no expiration date for limited/restricted rights in technical data/computer software developed exclusively at private expense. The contractor must mark SBIR data, and technical data data and software funded by private expense, or generated under an SBIR award, with appropriate restrictive legends or else the government acquires the data with unlimited rights. The government acquires unlimited rights in form, fit, and function data; data that is publicly available without restriction; technical data or software the government previously acquired with unlimited rights; technical data or computer software delivered under the contract without restrictive markings; and SBIR data upon expiration of the five-year protection period. Unlimited rights allow the government to use and disclose the data in any manner and authorize others to do so.

The SBA policy on data rights for different types of data also depends on the type of data and timeframe. As is the case under the current DFARS, during the SBIR data protection period, the government has limited rights in technical data, and restricted rights in computer software generated under an SBIR award. Upon expiration of the protection period, the government gets government purpose rights, as opposed to unlimited rights under the current DFARS, in previously protected SBIR data. This change favors the contractor by limiting use of SBIR data to government purposes after the end of the protection period. The government acquires unlimited rights in form, fit, and function data, operations, maintenance, installation, or training purposes data, and technical data or computer software delivered under the contract without restrictive markings, including unmarked SBIR data available to the public without restriction, data or software the government previously acquired with unlimited rights.

## ADVANCED DESIGN AND PRODUCTION PLANNING LEADS TO TRANSITION IN LESS TIME, AT LOWER COST

By JENNIFER REISCH, NAVY STP STAFF WRITER

Early in his career, Mark Smithers worked at a company that won a lot of SBIR awards but did not have a matching success rate for commercializing the technology it developed. He and one of his colleagues saw an opportunity to help bridge that gap. They left that company to work in a manufacturing environment to get more experience in production and product development. There they learned about cost reduction, maintenance, service, and the principles of Six Sigma. Then Smithers and his partner, Robert Treiber, were ready to start their own company—Boston Engineering.

For over 23 years, Boston Engineering has been using tools and consulting engineering services to successfully deliver products and solutions. “We saw a gap, saw all these technologies that were





not transitioning, not turning into product,” Smithers said. The backgrounds he and Treiber have increase the likelihood of getting technology into production, whether it’s Boston Engineering’s own technology or that of one of its clients.

One of the company’s key areas of advanced technology expertise is Design for Excellence or DFx, where x is a factor for several principles, including:

- Design for manufacturability (DFM)
- Design for assembly (DFA)
- Design for reliability (DFR)
- Design for serviceability (DFS)
- Design for testability (DFT)
- Design for usability (DFU)
- Design for installation (DFI)
- Design for compliance (DFC)

The DFx process considers the impact of multiple key factors on product delivery as a whole to develop a complete product strategy. By considering these factors early in the design process, small businesses can save time and money, ease the scale-up process, and accelerate time to transition.

“Our core business is helping other companies design their products as a service provider. Therefore, the DFx is a core capability that helps us transition our own SBIR-funded technologies,” Smithers said. “Most SBIR-centered companies are PhDs who are creating the possible out of the impossible. They don’t really think about the product and the user—they’re trying to make it work.”

Small businesses are engines of innovation, but innovation isn’t enough. It is one thing to build a functioning prototype; a whole other set of expertise is required to bring a safe, durable, attractive, and cost-effective product to market.

Many SBIR small businesses struggle with getting their products into a form the DoD will buy and users will expect. Often there are things they could have done early on to put hooks in place. Adding the thinking of DFx upfront can minimize the amount

of money needed to iterate or get across the chasm to transition. Using DFx processes enables companies to develop high quality products in less time and at lower cost overall. DFx helps eliminate multiple revisions and design changes that can cause program delays and increased cost.

Successful implementation of DFx has many potential benefits. Incorporating the steps into the research and development process can:

- Increase manufacturing reliability and extend product life
- Enable compatibility with high-speed automated assemblies
- Accelerate design and minimize iterations
- Reduce manufacturing costs and complexity, and
- Design manufacturing tests and assembly steps to improve production

“The principles in some ways can work for everybody,” Smithers said. “You can think of usability as one of the more critical aspects. It embodies user-centric design practices or designing the product in terms of the user. For DFM, or design for manufacturability, there are critical things to consider. The volume of units is critical. However, companies need to consider techniques that help bridge from the early lower volumes to the higher volumes. The methods for producing units through that transition is important. A company does not want a design that does not easily transition to higher volume manufacturing methods [AKA scaling]. In some cases, you will design something at a higher cost initially because it sets the stage for the optimal lower costs later. This is a tricky area for some companies. It’s a balance between the short- and long-term objectives.”

Too often small businesses need to redesign products to address manufacturing issues. Ideally, most of a technology’s lifecycle should be determined during the concept and design phases. If a prototype design can’t be produced cost-efficiently at scale, a redesign is needed, which takes time and money.

Small businesses “Need to acknowledge the power and benefits of the concept [of DfX,]” said Smithers. “Embrace the ideas. Include the proper thinking early in the development process. It’s never too early to think of DfX and especially the user.” Employing DfX from conception, Phase I and continued into Phase II, makes it more likely companies can meet the customer’s schedule and production requirements and thus achieve transition.

Currently Boston Engineering is completing a Phase II SBIR for the Navy entitled “OHIO Class External Hull Antifouling.” The company has applied DfX throughout the entire process. The product, a semi-

autonomous system to kill biofouling life, is being designed in a modular and flexible fashion so that it can be applied to other antifouling opportunities as well. “The modules need to be easy to use, have safety features, be easy to integrate, be scalable in the modular form, be reliable, and be at a cost that promotes adoption,” Smithers said.

Getting a technology to production is never simple, but implementing the principles of DfX can provide a competitive edge, improving quality and reducing risk while saving time and money in the process, leading to a transition and increased customer satisfaction.

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## CREATIVE GSA CONTRACTING PATH DELIVERS STEAM SUITS TO SAILORS

By EDWARD LUNDQUIST, NAVY STP STAFF WRITER

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An urgent need put forward by the submarine community for a better damage control suit has led to a contract for Pawtucket, R.I.-based textiles company, Propel, LLC.

The current protective garment, worn by personnel aboard nuclear submarines who enter the engine room to locate and isolate steam leaks, has been in use since the early 2000s, but is actually a combination of garments that were not specifically designed for this application. “Users identified issues with access to their emergency air supply, maneuverability, dexterity, visibility, communications, and durability,” said Dean Putnam, SBIR program manager at Naval Sea Systems Command (NAVSEA). “The Navy considers warfighter safety of primary importance, so the need for safer suits was paramount.”

Instead of relying on something that was cobbled

together, the Navy wanted something purpose-built. That led to a NAVSUP SBIR Phase I for applicable technology innovations for Propel, a woman-owned small business.

Propel’s steam suit offered damage control personnel a smaller, lighter suit that provides protection for sailors in casualty situations with better maneuverability, dexterity, visibility, communications, and access to emergency air supply than existing protective clothing.

“The Propel steam suit corrects all of the concerns of the current suit and greatly improves the user’s safety and casualty response time,” said Putnam. “Advancing technologies in textiles and clothing made the steam suit possible. New textiles and construction techniques provide a smaller, lighter suit that provides protection for sailors in casualty situations and greatly improves

***“GSA was able to get the steam suit under contract in less time and for a lower fee,” said King. “They were terrific to work with.”***

***Propel CEO Clare King***





Propel Steam Suit

maneuverability, dexterity, visibility, communications, and access to emergency air supply.”

The garment is fabricated from multiple materials. Some require transformation, such as lamination, coating, or finishing. The bill of materials for each garment has 26 different items, and each of those has minimum order quantities. The initial order is small, just 44 suits. Even when a small company such as Propel gets a contract, it must cover the costs of the material and labor, and that can tie up cash for a long time. Propel CEO Clare King said her company has teamed with Patagonia, which has experience in designing specialized clothing for the

military, and Peckham, an “Ability One” company where 75 percent of its employees have disabilities.

While the submarine fleet identified an urgent need for these suits, the process of contracting for them can be complicated. The Naval Supply Systems Command funded the SBIR to develop the new steam suit, but had no procurement funding. The Defense Logistics Agency (DLA) usually procures military clothing, but DLA did not have a Navy national stock number assigned. NAVSEA recognized that engaging with the General Services Administration (GSA) Office of Assisted Acquisition Services would speed this life-saving technology to the force and identified FY19 funding to get a contract vehicle in place for 40 steam suits. Now NAVSUP, DLA, or the Submarine Force can order the upgraded steam suit, but any organization that wishes to purchase a steam suit can send funding to GSA who will put it on contract.

“GSA was able to get the steam suit under contract in less time and for a lower fee,” said King. “They were terrific to work with.”

King said she hopes her company receives the follow-on order before the current run is complete so she can keep the production line open. “Clothing isn’t like a widget. We can’t make just five. To make it efficiently we have to make it at scale.”

“NAVSEA is committed to rapid deployment of technology to our warfighters,” said Putnam. “The inter-agency agreement with GSA was a common-sense solution.”

Propel’s improved suits might still be languishing in prototype form if not for the cooperative approach King has taken. By working with other manufacturers as well as employing the services of the GSA, Propel was able to speed up the contracting and production for the upgraded steam suit.



# UPCOMING EVENTS

Jan. 26-31	44th International Conference and Expo on Advanced Ceramics Composites (ICACC 2020) <a href="https://ceramics.org/event/44th-international-conference-and-expo-on-advanced-ceramics-and-composites">https://ceramics.org/event/44th-international-conference-and-expo-on-advanced-ceramics-and-composites</a>	Daytona Beach, Fla.
Feb. 05-06	Military Additive Manufacturing and Technology Showcase <a href="http://militaryam.dsigroup.org/">http://militaryam.dsigroup.org/</a>	Tampa, Fla.
Feb. 02-07	Marine West <a href="https://www.marinemilitaryexpos.com/marine-west/home/">https://www.marinemilitaryexpos.com/marine-west/home/</a>	Camp Pendleton, Calif.
Mar. 02-04	2020 Tactical Wheeled Vehicles Conference <a href="https://www.ndia.org/events/2020/3/2/2020-tactical-wheeled-vehicles-conference">https://www.ndia.org/events/2020/3/2/2020-tactical-wheeled-vehicles-conference</a>	Austin, Texas
Mar. 03-04	NDIA 2020 Human Systems Conference <a href="https://www.ndia.org/events/2020/3/3/2020-human-systems-conference">https://www.ndia.org/events/2020/3/3/2020-human-systems-conference</a>	Arlington, Va.
Mar. 09-13	2020 Pacific Operational Science and Technology (POST) Conference <a href="https://www.ndia.org/events/2020/3/9/post-2020">https://www.ndia.org/events/2020/3/9/post-2020</a>	Honolulu, Hawaii
Mar. 26-27	ShipTech 2020 Transitioning Advanced Manufacturing Technology and Accelerating Capabilities for an Affordable Fleet <a href="https://www.onlineregistrationcenter.com/ShipTech2020">https://www.onlineregistrationcenter.com/ShipTech2020</a>	Charleston, S.C.

DOD SBIR/STTR CURRENT AND UPCOMING ANNOUNCEMENTS			
Current Announcement	SBIR Pre-Release	Announcement Opens	Announcement Closes
20.1	Dec. 10, 2019	Jan. 14, 2020	Feb. 12, 2020 at 8:00 p.m. ET
20.A	Dec. 10, 2019	Jan. 14, 2020	Feb. 12, 2020 at 8:00 p.m. ET
X20.1	Dec. 10, 2019	Jan. 14, 2020	Feb. 12, 2020 at 8:00 p.m. ET
X20.A	Dec. 10, 2019	Jan. 14, 2020	Feb. 12, 2020 at 8:00 p.m. ET
Up Coming Announcements	SBIR Pre-Release	Announcement Opens	Announcement Closes
20.2	Apr. 22, 2020	May 20, 2020	Jun. 17, 2020 at 8:00 p.m. ET
20.3	Aug. 25, 2020	Sep. 23, 2020	Oct. 22, 2020 at 8:00 p.m. ET
20.B	Apr. 22, 2020	May 20, 2020	Jun. 17, 2020 at 8:00 p.m. ET
20.C	Aug. 25, 2020	Sep. 23, 2020	Oct. 22, 2020 at 8:00 p.m. ET

DEPARTMENT OF THE NAVY FORUM FOR SBIR/STTR TRANSITION (FST)	
<b>NAVSEA FST Day - 29 January 2020</b> 	<b>HQ Naval Sea Systems Command</b> <b>Washington Navy Yard, Washington, D.C. - HQ Atrium</b> - Focus on SBCs advancing maritime systems and warfighting capabilities - Visit: NavyFST.com to learn more - invite-only, requires security pre-screen
<b>WEST 2020 - 2-3 March 2020</b> 	<b>San Diego Convention Center, San Diego, Calif. - Booth 1113</b> - Displaying leading edge technologies supporting C4ISR, aircraft, combat systems, and logistics support - Visit: <a href="http://www.westconference.org">www.westconference.org</a> to learn about WEST 2020, AFCEA, & USNI
<b>AIAA Aviation Forum - 15-19 June 2020</b> 	<b>Reno-Sparks Convention Center, Reno, Nev. - Booth 405</b> - All things aviation - innovative materials, components, systems, and software - Learn more at: <a href="http://www.aiaa.org/aviation">www.aiaa.org/aviation</a>

