Urgently and often, Naval leadership has been talking about doing things differently ... and faster. What began as just a drumbeat, is now a full-throated roar, across the Fleet and Force. Assistant Secretary of the Navy, James Geurts, drew a line in the sand with his June 11th memo to his System Commands:

"It is critical to our accelerated acquisition campaign to re-think the policies, procedures, processes and tools across the acquisition community to support programs exploring new authorities .... I’m keenly interested in your ideas on different organizational constructs .... I am open to any other ideas on how the DON can provide additional support to facilitate agility and speed in acquisition."

I’d say that the Naval SBIR/STTR Program has been successfully practicing what Naval leadership is preaching about strategic change, about delivering innovation faster and cheaper. Here’s what we’re doing differently, today, with your help, and, where we’re headed tomorrow. Here’s our contributions to the Naval mission:

**Initiatives and Training**
- Most of you SBIR/STTR awardees have benefited from our exploration with the Lakehurst, NJ, Contracting Center, of reducing your “time without money”. Our monthly performance dashboards show that over the past two years, we have realized a 20% reduction in elapsed time to get you under contract. The average “time without money” is just 5.9 months – and we will continue to improve!
- Furthermore, during the “Catapult Challenge” in Hampton Roads, VA, we watched Debbie Raffi, Head of Contracts at the Office of Naval Research, spearhead an innovative approach for creating a contracting fast lane for innovative technologies, and a venue to discuss using Other Transaction Authorities (OTAs).
- Have you found improvement in our 17- and 18-series topics? OSD definitely has! Across all DoD components, DON topics were declared “best written” by the OSD Office of Small Business Programs (OSBP) – the result of our well-orchestrated improvements in topic management.
- DON OSBP Director, Ms. Emily Harman, has invited me to join her on visits to Commands – a great opportunity to speak directly with System Commands and PEO leadership about using our agile Phase III process to deliver innovation faster. Our Phase III Guidebook remains “best in class”, and I proudly advocate its use by all DON acquisition staff.

**Outreach and Collaboration**
- Our “Primes Summit” outreach to the defense industrial base has expanded to include university-based innovation hubs – emphasizing multi-campus systems with great engineering schools (Connecticut, Indiana,
Michigan, Massachusetts, California, and Arizona). What do they all have in common? All of them want to stand up a no-kidding SBIR/STTR capability and focus on delivering innovative R&D to the defense department and to other customers. We're there to help, and plan to expand this effort.

- American advanced manufacturing centers (such as the Flexible Hybrid Electronics Manufacturing Institute) are opening entirely new paths for innovation. We’ve committed to a great pilot at UMASS Lowell with Raytheon Integrated Defense Systems to help SPAWAR PEO C4I revolutionize undersea communications.

- With 18 years of high-profile annual Navy SBIR/STTR forum marketplaces under our belts, we’re taking a leaf from the NAVSEA and NAVAIR SBIR playbooks, and plan to let innovation stakeholders across the nation propose new locations for our celebrated Forum for SBIR/STTR Transition (FST). We loved the Sea-Air-Space Expo connection; but, the rest of the nation beckons ……

- 2018 marked our increased, focused, formal collaboration with front-line DoD components; such as Special Operations Command (SOCOM) and the new Defense Health Agency. They like our agility and skill in acquisition collaboration, and we like their proximity to warfighters.

**Mission and Message**

- Accelerating and improving Naval sustainment (think maintenance, repair, and modernization) is Job One for our public/private shipyards and air depots, according to OPNAV leadership.

  - Three years ago, DON SBIR/STTR worked closely with the Naval Air Warfare Center (NAWC), Cherry Point, NC, and Penn State's ARL, to prove a Pentagon hypothesis about rapid fielding. Coldspray technology in our SBIR/STTR inventory was just what the doctor ordered - both for rapid fielding, and for cost reduction. We’ve expanded that air sustainment footprint to include industry (Lockheed Aero) as we look at F-35 sustainment, and sharing best practices with the Air Force Sustainment Command.

  - Today, we’re taking that same agility and deep innovation bench to Naval shipyards, such as Puget Sound Naval Shipyard and Intermediate Maintenance Facility in Bremerton, WA, as they embrace innovation to help ensure a 355-ship fleet; and, private shipyards, such as Huntington Ingalls in Newport News, VA, as they contemplate using SBIR/STTR to strengthen small businesses in their sustainment supply chains.

- For Congressionally-authorized programs such as SBIR/STTR, legislators need facts on the taxpayers’ investment – on how SBIR/STTR awards translate into jobs, wages, regional economic stimulus, contributions to local, state, national tax bases, and overall economic impact – in addition to what you do for, and with, American warfighters. Our beautiful eight-page summary, “Defense Innovation for the Warfighter, Commercial Innovation for the Nation,” has become a keystone SBIR/STTR summary – for Congress, and for the country.

So, yes, I’d say that the Naval SBIR/STTR Program has been successfully practicing what Naval leadership is preaching about strategic change, about delivering innovation faster and cheaper. But, I’ll hasten to add: you ain’t seen nothing yet – improvement is our game! Together, we will continue to make a great program even better.

Sincerely,

Robert L. Smith
Director DON SBIR/STTR
Sailors conducting maintenance and repairs take pride in making sure things work. But the job isn't done until the paperwork is complete. That's why a Pennsylvania company is helping sailors to better plan, execute and document maintenance.

According to Henry Silcock, Chief Technology Officer for Mikros Systems Corporation in Fort Washington, PA, Mikros has created systems to both streamline the process of planned maintenance and support Condition-Based Maintenance (CBM+) for shipboard combat system elements.

"We're a pretty good SBIR success story," said Silcock. "We have received close to 30 SBIR awards, including multiple Phase II and Phase III awards."

The Navy's decades-old Preventive Maintenance System (PMS) relies on paper schedules, and maintenance record cards (MRCs) with detailed instructions on how to perform and document regular maintenance. Now Mikros has developed an IT-based systematic approach to PMS for the AEGIS Weapon System (AWS) and SPY-1 radars on Navy combatants.

"The AN/PSM-132 Adaptive Diagnostic Electronic Portable Testset (ADEPT) Maintenance Automation Workstation has everything a Sailor needs for preventative maintenance in one portable enclosure," said Silcock. "It will select and configure the appropriate instrument for an applicable test, and provide the pass-or-fail result. ADEPT provides an automated testing process that improves the accuracy, precision, and speed of AEGIS preventative maintenance. It maintains a database of all testing to provide trend or comparative analysis, and an audit trail if required."

ADEPT systems are currently deployed on all AEGIS CG and DDG platforms to support the SPY-1 radar. A planned enhancement to provide remote support to the AEGIS MK 99 Fire Control System is being developed in collaboration with IBM, working as a subcontractor to Mikros.

This effort is a great example of how the Navy's SBIR/STTR program, working with small businesses, can bring new solutions to address longstanding and critical challenges that impact the sustainment of key systems on warfighting platforms. Mikros has already received over $100 million in contracts as a result of its SBIR effort, and is expected to have a similar positive impact on other systems throughout the fleet.

As the system proved its value, Mikros worked with the Naval Surface Warfare Centers at Dahlgren, Crane, and Port Hueneme to extend ADEPT to support other radar variants and developed a logistics support suite for surface combatants. Through a separate SBIR, Mikros developed a Littoral Combat Ship (LCS) maintenance application by adding the AN/SYM-3 ADEPT Distance Support Sensor Suite (ADSSS).

ADSSS is a condition-based maintenance system that uses smart sensors, model-based prognostics and secure networks to implement condition-based maintenance for mission-critical complex distributed systems. The system is being installed aboard the Navy's LCS. The first product installation was completed last year, with six more scheduled over the next two years.

"There are three things required for SBIR success for Phase 1 proposals," said Silcock, "a good idea; a good story; and good prospects for follow-on work. The 'good idea' applies new or new-ish technologies to the problem. The good story explains your past experience with similar technologies. And third, your good prospects take into consideration what happens after you succeed in Phase I and your strategy for a production program in the future."
Silcock said it’s vital to understand the customer context for the requirement. "Check out the Program Office and the designated contacts - you will need to get to know them."

"Try to provide something tangible at the end of Phase 1, not just a paper report; but, a working prototype or a virtual demo." he said. "This greatly increases your chances of Phase 2 funding."

For later phases, Silcock advises companies to think ahead and to keep transition in mind. "What is your end-game? Evaluate how the requirement aligns with your corporate goals - would you invest in it yourself? Get feedback from prospective users as you develop your technology. Keep production in mind, and identify sources of matching funds. Consider non-functional requirements, such as environmental, ruggedness, and tailoring. Anticipate the plan for product support and the logistics tail, as well as, the certification and accreditation needs. Know what you will need for information assurance and meeting any classification society requirements."

While the Navy business is thriving, Silcock said Mikros is leveraging the SBIR investment to bring its technology to a broader market. "We're accelerating our transition efforts. We're developing new variants for different classes of ships and systems. And we're looking at the commercial world to see how we can apply the same concept to complex industrial systems, such as HVAC for building management, air traffic control and power utility applications."

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**MARINES TO SHOWCASE SBIR TECHNOLOGY AT QUANTICO**

By Edward Lundquist

Jeff Kent, the SBIR program manager at the Marine Corps Systems Command (MARCORSYSCOM), said a major benefit of the FST is that the participating small businesses’ principal investigators, engineers, scientists and researchers are present in one place with government engineers, acquisition professionals, and decision makers to casually converse with. But, he said, there are still many others who would benefit from seeing what the small companies offered.

Kent’s team liked the FST so much that they are planning an operational demonstration at Quantico to bring the companies with Marine-related technology to a location that’s closer to senior leadership at MARCORSYSCOM, the Marine Corps Warfighting Laboratory, the Marine Corps Combat Development Command, and the Marines, themselves. Quantico is about 35 miles south of the Pentagon.

"We think it would be valuable to demonstrate technology related to things like ground vehicles, combat medical systems and those kinds of technologies in an operational context," Kent said.

According to Kent, the demonstration won’t be a "CONOPS experiment", but it would help Marine Corps SBIR participants see how their technology functions in a field environment, and get feedback from Marines. "It will be a great way to get some workable feedback about how this technology can help benefit the Marines and their vehicles and equipment, and it would benefit from being displayed in a realistic setting."

"It won’t be a static table-top display," Kent said. "People can see it and touch it, and understand what it is and does, while the companies can visualize their technology being used by Marines in a somewhat operational environment out in the field."

We’re just looking for ways to get exposure for transition," said Kent. "Ultimately, it requires a financial commitment from the program managers."

The event, which will probably take place in the spring of 2019, will be by invitation only. Participating companies might not have exhibited at the most recent FST; but, they’ll all be MARCORSYSCOM SBIR participants.