

Accelerating Acquisition through Rapid Prototyping and Rapid Fielding
SENEDIA Tech Talk Highlights
November 8, 2018

Denise Crimmins, Director, USW Rapid Prototyping, presented information on DON's efforts to more rapidly test and field needed warfighter technology.

Two years ago, DASN RDT&E created temporary positions for DON professionals to champion a national-level effort to harness work being done in the warfare centers. Six SYSCOM positions were created that report into DASN RDT&E – three in NAVSEA, two in NAVAIR, and one in SPAWAR. Along with Denise Crimmins at NUWC, the other two NAVSEA rapid prototyping directors are Steve Hunt in Panama City focused on Mine Warfare, and June Drake in Dahlgren focused on Surface Warfare. NAVAIR directors are at Pax River focused on air, and China Lake focused on weapons. In these last two years the role went from temporary to permanent. In her role, Denise is keenly focused on swarm technology and artificial intelligence.

The US 2018 National Defense Strategy is focused on delivering performance to the warfighter “at the speed of relevance.” The two priorities are understanding the true needs of the warfighter and getting what they need to them quickly. The important link is working directly with the warfighter. This National Defense Strategy requires the operators, technologies and acquisition professionals to be integrated, working together on teams to achieve this objective. The National Defense Authorization Act (NDAA) is rolling out new accelerated acquisition authorities along the way.

Rapid prototyping aims to achieve quick wins, moving technology along faster to inform longer range programs. The needs are steep, but the difference is in working with the warfighter to prioritize needs and working the process in parallel to go faster.

Key to getting solutions fielded faster and more efficiently is accelerated acquisition pathways. DON realizes they need to move much faster than traditional acquisition processes allow (5000.02). DON is looking at alternative pathways, including wargames, limited trials, hackathons, ANTX, competitions, prototyping technology harvesting, and other approaches to try new ways to get needed technology into and through the system. Key enablers to accelerate acquisition is getting the business processes on board and this involves technical authority, Contracts, Finance and Legal. In the two years since these positions were created the emphasis went from rapid prototyping to making sure that capabilities get into the fleet through rapid prototyping, such as Other Transaction Agreements. One big advancement was the authorization to develop prototypes outside a program of record. In parallel, they are trying to ensure that the governing requirements in the SYSCOMs also move forward quickly.

There are a number of accelerated acquisition principles that are recognized as processes and are being streamlined. In addition to delaying the designation of “program of record,” some of these principles include accelerating the minimum viable product to the user, incrementally evolve the solution as the threat or technology evolved, and maximize on/off ramps. DON is challenging existing, limiting methodologies, and is trying new approaches. DON is using Naval Innovation

Process of Option (NIPO) to understand the problem and using open domains to solve problems. DON is using nontraditional ways to get ideas. They are trying to keep the dialogue open and unclassified.

A wide network of participants is coordinating efforts and communicating to make this happen. The Naval R&D establishment, the Defense industry, academia and the commercial industry are working together and learning from one another. These distinct communities are focused on keeping abreast of technologies and developments that could benefit the warfighter. By scanning what is out there and working with the warfighter, DON will be able to capitalize on the best our nation has to offer. The Navy, Army and Air Force are starting to coordinate efforts, and many programs coming out of OSD are looking for joint components.

Denise provided an overview of some of the different Navy Advanced Naval Technology Exercises. ANTX is a series of exercises where industry, academia and Government R&D organizations are invited to demonstrate emerging technical and engineering innovation that responds to USN and USMC missions. The original “Annual” Naval Technology Exercises started as a NUWC Division Newport initiative. The emphasis is to get technology out of the lab and into the water. In 2016, driven by Dr. Burrow, DASN RDT&E, a more national level ANTX was also established.

Denise briefed an upcoming effort, “Fight Naval Force Forward, Integration of Tactics and Technology.” The effort explores ANTX demonstrations and commercial solutions, opening ways to procure systems and creative ways to develop solutions as teams work closely with the warfighter, promoting a technology pull from the user. The continuum of effort goes from exploration and rapid prototyping to fleet experimentation and rapid fielding. More information on this effort can be found on FedBizOps:

<https://www.fbo.gov/index?s=opportunity&mode=form&id=424c4cf80eb7f3fb78ef8c753bd25747&tab=core&cvview=0>. The deadline for proposals is 21 December 2018.

This effort is a two-year campaign, with several expeditionary events with live and virtual constructs. The 21st Century Maneuver, Logistics and Force Protection Technologies exercise will be in July 2019 at Camp Legeune. DON continues to refine the methodology. The “timeline is intense, and the drumbeat is quick,” with requirements planning and demonstration cycle happening in less than a year. DON wants to deliver with speed, scale and rigor, with a low bar to entry for those who want to demonstrate technology related to the mission focus. The exercises are involving a full-fledged contracting strategy that makes sure that the Government is taking each step correctly in order to get needed solutions fielded through program. The approach is open and transparent.

At the end of Denise’s presentation, Peter Hargrove, NUWC Division Newport’s ANTX 2019 Director, talked to the group about the upcoming exercise. NUWC Division Newport is partnered with SENEDIA, OPNAV and US Fleet Forces Command for a theme entitled, “Undersea Security.” The details for this exercise are posted in the FedBizOps announcement, <https://www.fbo.gov/index.php?s=opportunity&mode=form&id=4f9ea5447ce6853a6768e512b62db3f9&tab=core&cvview=0>. The deadline for proposals is 30 November 2018.

