Navy Prioritizes Mental Health with New Playbook

The U.S. Navy has always been dedicated to ensuring that the bodies and minds of its Sailors are ready and prepared to win in combat. But there have been challenges over the years in helping Sailors with mental-health resources during active service, and as they transition out of the Navy into civilian life.

The Navy Culture and Resilience Office, N17, Office of the Chief of Naval Operations is addressing those challenges through its new Mental Health Playbook. This 28-page playbook, which was released in February, is designed to put mental health tools and resources into the hands of every Navy leader, no matter what their rank.

“Our goal is that everyone in our great Navy develops a shared understanding about how to conduct mental-health and preventative maintenance for our people, and then where to go for additional resources,” said Rear Admiral Brett Mietus, director of N17. “It’s an incredibly important topic to me and all of the Navy’s senior leadership.”

The Navy already offers a variety of mental-health resources. Navy N9 quality-of-life programs include Morale, Welfare and Recreation (MWR); Wounded Warrior; Mind Body Mental Fitness (MBMF); and Sailor Assistance and Intercept for Life (SAIL). There are also family advocacy programs, childcare and relocation programs, assistance programs, non-medical counseling at fleet and family-support centers, and more.

The Navy League of the United States has mental-health resources as well. For example, Sea-Air-Space’s Transition Connection Job Fair, which will be held from 10 a.m. to 2 p.m. on Monday in the Cherry Blossom Ballroom, is one of the ways

the Navy League helps with transitioning Sailors' overall well-being.

The Mental Health Playbook complements all these efforts through its mission to create a "climate of trust and respect with open, two-way communication; challenging inappropriate conduct or poor leadership; and eliminating stigma for seeking help." The Playbook is organized into five sections:

- Roles and Responsibilities, which is geared toward helping commanders create, "a community of support, where sailors feel connected to the mission, the command and each other."
- Conversations That Matter, which provides strategies for conducting mental-health discussions.
- Identifying and Responding to a Mental Health Related Concern, which discusses what to do when sailors are in mental or emotional distress.
- Navigating Support Systems, which helps sailors find the right support at the right time.
- Navy's Mental Health Capabilities and Resources, which describes the clinical and non-clinical tools available both inside and outside the military and provides contact information for a variety of programs.

"Most of the resources that are in the playbook have been out there, but they just haven't been put together in a way that's easily digestible and then usable by a fleet leader," Mietus said.

Mietus said the playbook is a response to requests and concerns from fleet members about the Navy's approach to mental health. He noted that while older Sailors aren't necessarily used to acknowledging or discussing mental-health issues, younger generations are much more attuned to their mental and emotional needs.

“Our goal is to eliminate stigma when it comes to mental-health care. I think the important thing for us all is to normalize conversations around it,” he said.

Small Businesses Make Big Waves

The demand for small business innovation, technology, and solutions has never been higher

If rural western Massachusetts looks like something out of a Norman Rockwell painting, it’s because that’s where Rockwell kept his studio. But in addition to the picturesque college towns, quaint villages, covered bridges, and magnificent scenery, the region also has a long history of heavy industry that dates to the industrial revolution. These industries historically harnessed rivers for power and created mill towns that made textiles, paper, leather goods, electrical

components, automobiles, and guns.

Pittsfield, Massachusetts is located 40 miles from Albany, New York and 140 miles from Boston. With a population of about 44,000, it is the county seat of Berkshire County (pop. 129,000). For many years the town's business was defined by its largest employer, the General Electric Company, which manufactured transformers, electronics and plastics, and employed 10,000 workers. Like much of western Massachusetts' heavy industry, it has moved elsewhere.

When General Electric left, it took many good paying jobs with it. But today, General Dynamics Mission Systems (GDMS) has a large, state-of-the-art facility involved in the design and manufacturing of complex electronics for defense purposes, such as submarine combat systems. In fact, General Dynamics' business is growing, attracting new and highly skilled workers, and providing an economic engine for Pittsfield and its surrounding communities.

Global Threats Push Innovation

According to Ann Rusher, GDMS vice president of supply chain management, there have been unprecedented changes in the national security business, largely because, "China and Russia are introducing new technology and new capability at an alarming rate."

To counter that trend, Rusher said defense companies have had to accelerate the pace of innovation to work closely and more collaboratively with smaller businesses, including those that have not previously worked in the defense sector. "We need that innovative spirit and agility that small businesses can bring."

To accomplish that, GDMS is fostering better ties with the community and its supplier base. The company brought together vendors and partners – particularly small businesses – to the Berkshire Innovation Center (BIC) for a "Supplier Day."

Rusher said the event was aimed at reestablishing connections and relationships, and to make small companies aware of the resources in and around the Pittsfield area, as well as across the country, to help them, “learn about, grow, and partner with us.”

She said that big companies like General Dynamics truly rely on small companies, with their innovation and agility. Rusher said that today, more than 60% of GDMS current active supplier base are small businesses. “We added 104 small businesses to our active database just in 2021. And across all categories of small business, we’ve increased our spend over the last five years by over 15%. And every single one of the categories of small business – the HUBZone, service disabilities, veterans, and women owned – they’ve all been increasing, from five percent all the way to doubling.”

Supply Chain Challenges

Rusher said General Dynamics not only wants to foster relationships between the company and small businesses, but also wants to facilitate the growth of those small businesses so that they can provide support to the entire defense industry. “By doing that, we can be a force multiplier for the government, and we can bring that innovative spirit, not just to us, but to the to the betterment of the country.”

“We’re a very successful company with an extremely talented workforce, but sometimes we need partners to help to solve some difficult problems,” Rusher said. “Not only have these small companies helped us solve tough technical issues, but they often bring a technology or a capability that’s so unique and state-of-the-art that when combined with the mission knowledge that General Dynamics has, it really is the differentiator to solve a problem and deliver exceptional capability.”

However, while the demand for innovative technology and

solutions has never been higher, the number of small companies in the defense sector has declined precipitously.

According to *Inside Cybersecurity*, Deputy Assistant Secretary of Defense for Industrial Policy Jesse Salazar acknowledged that small businesses are under immense market pressures.

“The number of DIB (defense industrial base) small businesses has shrunk by more than 40 percent over the past decade,” Salazar said. “One of seven believe they will never return to pre-pandemic levels of performance.”

“Just when we need them the most, the supply chain is shrinking,” Rusher said.

Rusher admits that it might be a little intimidating for a small company to establish a relationship and work with a large defense contractor like General Dynamics. “It might even be tempting to think that we like to go it alone. True, General Dynamics can do a lot of things. And we can do many of the things that perhaps a small business could do. But the reality is the small businesses we work with bring something very different, and way more than what we can do by ourselves,” she said.

“We don’t just want to work with you; we need to work with you,” she said to the Supplier Day attendees.

BIC Innovation Hub

The BIC in Pittsfield is a multimillion-dollar collaborative initiative between the Commonwealth of Massachusetts, private industry, local colleges, and local government that opened in 2020. BIC serves as a confluence of technology and ideas. It offers conference rooms, offices and laboratory space, all designed to bring people together so they share knowledge and expertise to address challenges and seize opportunities.

“We offer world-class research and development facilities and

equipment, interactive training and conference facilities, and shared access to advanced technology for local manufacturers," said Ben Sosne, BIC's executive director. "We can do more together."

Innovation centers like the BIC can offer online advanced manufacturing courses and access to content that serves companies and students, both locally and elsewhere. When potential employees learn about the technology being developed in the Pittsfield area, it can attract new qualified workers to companies like General Dynamics.

According to Sosne, a workforce with higher digital skills can command higher wages, but it also attracts more employers looking for people with those skills. "When we have a pipeline of new talent through apprenticeships, and the adoption of new technology, the higher the wages you can offer, and the more that you can attract that new talent. By working with local employers like General Dynamics and developing a curriculum that teaches methods and processes that meet their needs, you are essentially graduating an industry-ready group of engineering professionals and technologists."

"Employers like General Dynamics are an economic engine and a jobs-multiplier," said Benjamin Lamb Director of Economic Development with 1Berkshire. "One manufacturing job in the Berkshires supports 4.8 other jobs in the county."

The official regional economic development organization and regional tourism council of Berkshire County, 1Berkshire, represents the Berkshire business community and offers a powerful network of resources for members and companies. "This is where the synergy of marketing and economic development within the same organization in the same building with the same team can become very powerful," said Lamb.

Small Businesses are Essential Partners

"General Dynamics designs, engineers and makes all kinds of

systems that are used for national security, so we take a lot of pride in that," said Pittsfield Mayor Linda Tyer. "They are an essential partner here in the city of Pittsfield and throughout the Berkshires. They are a large employer, providing 1,600 skilled jobs for our community. But there are many opportunities for our small companies to be part of the supply chain that serves General Dynamics, so that we are strengthening the economy here in Pittsfield and the Berkshires. Our plastics manufacturers and engineering companies help provide plenty of opportunity for those small businesses to benefit from the presence of General Dynamics."

Tyer said that workforce development is an essential part of the future and the success of General Dynamics and small businesses, no matter what kind of work they are doing. "It's incumbent upon academic institutions like our community colleges and four-year colleges, as well as institutions like the Berkshire Innovation Center (BIC), as well as the state agencies that provide workforce training opportunities and internship programs, to make sure they are partnering with each other and the employers who need talent and have the job opportunities," she said. "That's why having the BIC here is so important to the future of the innovation economy here in Pittsfield."

State Representative Tricia Farley-Bouvier, who represents Pittsfield, agrees. "General Dynamics reaches throughout the region to bring new talent to the Berkshires, not only with intellect and their skills, but the energy that they bring to our community. They spend their dollars in the outdoors and arts economy and in our shops and cafes, and volunteer in the Berkshire County. We want to ensure that we have a reliable local supply chain for this global company of General Dynamics, and ensure that the pipeline is a short one," she said. "I think workforce development is the biggest challenge right now, and that's across the board in every industry here in western Massachusetts. But we're very well positioned in

Berkshire County because our high schools are producing really good workers and launching them into STEM careers, and that is an excellent source of talent for General Dynamics."

Farley-Bouvier cautioned that General Dynamics can't stand back and wait for the workforce to come to them. "General Dynamics has been and needs to continue to be part of that solution. They need to continue to be in at Taconic High School, MCLA (Massachusetts College of Liberal Arts), and Berkshire Community College and be part of those solutions. One of the most successful things that General Dynamics has done, and other smaller companies around Berkshire County have copied, is to provide paid internships. Paid internships are critically important because they level the playing field. It used to be that everybody took unpaid internships because there weren't a lot of jobs out there. But the only people who could take an unpaid internship were those students whose families could support them. The young people who were economically distressed had to take those low paying service jobs over the summer because they had to pay their bills," she said.

"Fortunately, General Dynamics is really invested in these students, and it's paid off for them," said Farley-Bouvier. "And we need to do a lot more of that to ensure that we have a reliable local supply chain for this global company of General Dynamics."

Ports Seen as 'Vital Resource' for National

Security

Rear Adm. John Mauger, Coast Guard assistant commandant for prevention policy, makes a point during a port security panel discussion at Sea-Air-Space 2022. *LISA NIPP*

NATIONAL HARBOR, Md. – The economic role U.S. ports play can't be overstated because they are a vital resource, a Coast Guard official said in an April 6 panel discussion at Sea-Air-Space 2022.

"Twenty five percent of U.S. GDP and employment for one in seven Americans are generated because of port-based activity," said Rear Adm. John Mauger, assistant commandant for prevention policy. "We also know this is a vital resource for our national security. It's how we project power and [provide] humanitarian aid around the globe."

Tony Padilla, a senior adviser for maritime trade and development at the U.S. State Department, agreed on the importance of ports.

“International trade in our nation’s ports support the employment of nearly 31 million people, provide about $1.5 trillion in personal income and generate over $5.5 trillion in economic activity, thereby accounting for one quarter of the nation’s GDP,” Padilla said. “Many of our ports safeguard government owned vessels and commercial sealift vessels, so our military can project power abroad. Simply put, without seaports, our economy would be crippled.”

There’s also a dark side to ports that is difficult to monitor said Christopher Hickey, a senior systems engineer at the Naval Research Laboratory.

“There are about 250,000 ship tracks worldwide on a good day,” Hickey said. “But you have to add in the hundreds of thousands of dark ships – the ships not emitting AIS [automatic identification system] – that traverse the globe. While a fair amount of illicit maritime activity takes place aboard AIS-compliant ships, it is these dark ships, or dark targets, that typically pose the greatest threats.

“Domestically, the United States has long maritime borders that for the most part are not monitored on a 24/7 basis, creating a permissive environment that enables massive amounts of illicit goods and cargos to be imported and exported. Drugs. Money. Weapons. And, worst of all, the trafficking of people – all of this moving illegally across our maritime borders every day,” he said.

L3Harris Forms Agile

Development Group to Address Near-Peer Threats

NATIONAL HARBOR, Md. — L3Harris Technologies has established a new entity, the Agile Development Group, or ADG, to foster rapid technology development to counter near-peer security threats through innovation and cooperation.

Speaking to *Seapower* at Sea-Air-Space 2022, Sean Stackley, president of Integrated Mission Systems at L3Harris, introduced Dave Duggan, president of the new L3Harris Agile Development Group. The group is dedicated to overcoming inertia and rapidly developing the technology to address future threats with new ideas and acquisition of or partnering with enterprises and allies with high-potential technology.

“Our mission is to deliver innovative, vital solutions within a fraction of the time and cost of industry norms,” Duggan said in a release announcing the group. “We’re listening to our customers and taking calculated risks to rapidly develop new capabilities that will urgently address emerging threats.”

Duggan told *Seapower* that the group is comprised of "highly empowered development teams working with the latest digital tools with an agile development process that backs it up to enable us to respond to our customers need for doing business differently and developing new capabilities in a much faster timeline than historical norms."

Duggan said the building of the ADG began four to five years ago and has grown to about 2,500 employees, which the company described as "dedicated engineers, program managers, technicians and operations professionals focused on advanced, front-end and rapid capability development."

The ADG entity expects to add additional personnel as it grows.

Initial projects of the ADG included broadband RF, advanced optics, and advanced unmanned systems and weapons, Duggan said.

The ADG has facilities in Florida, Texas, Ohio, California and Virginia.

"The ADG will have a designated internal investment fund to mature and burn down risk of critical enabling technologies. The ADG's lean, empowered development teams and digital engineering development approach will deliver solutions at the expeditious pace the [Department of Defense], allies and other domestic and international customers demand," the release said.

L3Harris, headquartered in Melbourne, Florida, said the fiscal 2023 budget proposes a 10% increase in research and development funds which, if enacted, will provide opportunities for the ADG to demonstrate its value.

COVID, War in Ukraine Complicate Global Supply Chain, Speakers Say

Maj. Gen. David Maxwell, vice director of logistics, Joint Staff, U.S. Marine Corps, speaks during a panel discussion on the global supply chain. *LISA NIPP*

NATIONAL HARBOR, Md. — The global shipping network is extremely fragile in the wake of the COVID pandemic and the war in Ukraine, speakers on a panel about supply chain logistics said April 6.

Maj. Gen. David Maxwell, vice director of Logistics, Joint Staff, U.S. Marine Corps, said current Navy and Joint Staff operations are focused largely on the Ukraine crisis and "the

distribution side of the house," while also addressing broader challenges.

"Over the last month and a half, what you see is U.S. TRANSCOM's [U.S. Transportation Command's] ability to leverage really both the military capacity and capability that we have, as well as significant support from the commercial industry in being able to both deploy forces in a very dynamic, responsive time, but also to deliver material in support of Ukraine and the nation's efforts to sustain the Ukrainian forces," Maxwell said.

"As we have been spending that time delivering the forces, posturing them, as well as delivering material, [we are] stepping back into the next part of the question, which is, where do we reconstitute? How quickly can we reconstitute supplies and materials that not only have been drawn down out of Department of Defense resources but also that have been drawn down from partners and allies who have contributed? And how quickly and effectively and efficiently can we get back and reconstitute those materials for those partners and allies and U.S. forces?"

Kurt Wendelken, vice commander of Naval Supply Systems, said the military faces the same distribution issues as the commercial world, but the products are very different.

"A lot of these systems that we operate are built for us by key partners, and they are very complex pieces of equipment," Wendelken said. "Although we did get an education in supply chain during COVID about its general fragility, the products that we're dealing with are very complicated. They are not shampoo, they are not Snickers, they are not things from Amazon. [For] partners like [Lockheed Martin], it can take them a year to two years to go make those things for us, and that is assuming they understand what our demand signal is."

Abby Lilly, vice president of global supply chain at Lockheed

Martin Rotary and Mission Systems, said human capital is also a big concern. In recent months, she said, there has been a 15% to 20% turnover in some companies that support Lockheed Martin.

“Those companies are struggling to hire new workers to train them to do what we need to do,” Lilly said. “Labor availability is one of the key things that we are concerned about. If you think about the great resignation that has happened in this country in the last several months and the number of people who have left the workforce, that is affecting the defense industrial base.”

NAVSEA Office Seeks to More Rapidly Modernize Ship Technology Through Common Hardware: Official

Damage Controlman Fireman Abigail Alejo performs a maintenance check aboard amphibious assault ship USS Tripoli (LHA 7), April 1. *U.S. NAVY / Mass Communication Specialist 3rd Class Sebastian Minshall*

NATIONAL HARBOR, Md. – A Naval Sea Systems Command office is seeking to more rapidly modernize ships through a common hardware effort that would make software upgrades easier, an official told attendees at the Navy League's annual Sea-Air-Space symposium April 6.

Ryan Moore, deputy major program manager, said in a briefing on integrated combat systems that his team has focused on the issue of ship hardware and how to ensure commonality across ship classes to better speed technology upgrades to the fleet.

"We're trying to field hardware on the ships that is common rather than different for each variant," Moore said. "We want to deliver a common hardware suite that's a system that can be rapidly updated. We're doing so by creating a common cabinet and leveraging common software licenses."

Moore said the Navy is trying to get away from the practice of using major ship availabilities to make hardware upgrades and "cutting holes in the ships." Instead, his office is working toward a different approach in which the hardware has modules that can be changed.

"We're able to shorten up installation timelines," he said. "We can rapidly go and update these components. … It allows us to go off and address any issues that come up from a hardware perspective."

So, for example, if a ship has an outdated server that became obsolete, and a newer, more advanced server is now available, the team can install the new server because the hardware has been decoupled from the software.

"You don't have to do a form-fit-function redesign," Moore said. "That's the goal here: being able to rapidly modernize respective platforms."

Sea Services Reach Tipping Point in Maintaining Readiness While Recapitalizing Forces

A Boeing unmanned MQ-25 aircraft is given operating directions on the flight deck aboard the aircraft carrier USS George H.W. Bush (CVN 77) in late 2021. *U.S. NAVY / Mass Communication Specialist 3rd Class Hillary Becke*

NATIONAL HARBOR, Md. – This year's Sea/Air/Space conference occurred at a critical time for the sea services as they confront strategic rivals in multiple geographic areas and warfare domains.

Aging force structure in all three sea services makes in harder to deter aggression. New technologies and concepts offer the naval services tools to improve their ability to deter and to defend and defeat opponents as needed. In addition, the Navy faces significant financial hurdles in recapitalizing the undersea component of the nuclear deterrent in the Columbia-class ballistic missile submarine while at the same time trying to build a new force for 21st century missions.

The challenge is to maintain the readiness of existing, legacy

forces while both recapitalizing existing capabilities, and transitioning to future forces. These new force structure components are likely to include more unmanned units, connected within robust networks capable of fighting and winning inside opponent-imposed limitations such as anti-access/area denial bubbles.

Aging Force Structure

Many of the sea service's existing platforms and systems date from the late Cold War and the 1990s. They have seen extensive service in the first Gulf War, operations in the Balkans in the 1990s, and since 2001 in combating rogue states and violent extremists in Iraq, Afghanistan and around the globe. Limited defense budgets have forced the postponement of needed maintenance between deployments.

Like aging automobiles that do not get serviced at the dealer garage when needed, many ships, aircraft and submarines have equipment problems that prevent them from accomplishing their missions. Famous Cold War-era ship classes like Ticonderoga–class Aegis cruisers, Los Angeles–class nuclear attack submarines, many of the Navy's amphibious warfare ships and even the earlier units of the post-Cold War Arleigh Burke–class destroyers are approaching and, in some cases, have exceeded their planned service lives. Keeping these aging units on the front lines of global deterrence imposes additional costs on the services and the taxpayers. Like the aging automobile, these costs soon come to outweigh the utility of keeping these ships in commission.

Active Adversaries

Across the period of the post-Cold War era (1991 to the present) U.S. adversaries have not been idle in analyzing U.S. capabilities and fielding platforms and payloads to combat them. Both the People's Republic of China and Russian Federation have watched and learned from U.S. joint force

operations of the last 30 years. The PRC remains the “pacing threat” and now fields a fleet of over 350 combatants, along with numerous coastal and maritime militia forces. The PRC also has an extensive force of land-based cruise and ballistic missiles, aircraft and sensors that threaten U.S. forces thousands of miles from the Chinese coast.

The Russian Federation has been unable to modernize its forces as planned ands suffers from severe planning and logistics shortfalls as evidenced by its botched and bogged-down invasion of Ukraine. The Russian navy submarine force, however, while much smaller than its Cold War Soviet equivalent contains a new generation of very quiet submarines including the Borei–class SSBN, the Yasen–class guided missile submarine armed with Kaliber cruise missiles and several special purpose submersibles that could cut seabed cables and otherwise harm underwater infrastructure.

Like a submersible version of the German World War II battleship Bismarck, Russian submarines like the Yasencan threaten multiple targets at sea and ashore. In addition to China and Russia, North Korea continues to menace its neighbors with both conventional and now nuclear weapons while Iran contributes to instability in the Middle East with its regime’s Revolutionary Guard Corps that harasses shipping, fires random missiles and threatens mine laying operations in the key Strait of Hormuz through which most Middle East oil moves to global customers.

Violent extremists, while beaten back in many areas, remain a threat and like the Houthis in Yemen field increasingly effective weapons, including cruise missiles. The overall threat environment to the U.S. sea services is likely higher than at any point since the end of the Cold War.

Path to the Future

The U.S. sea services have equally done hard thinking on

current and future threats and are building a path to future joint force far more capable than present, legacy platforms. Unmanned systems technology is spiral developing at a dizzying rate with both small and medium unmanned surface and small unmanned underwater units now available for intelligence, surveillance and reconnaissance missions. The Navy will soon field the MQ-25A Stingray unmanned tanker aircraft, substantially improving the range of carrier-based aircraft.

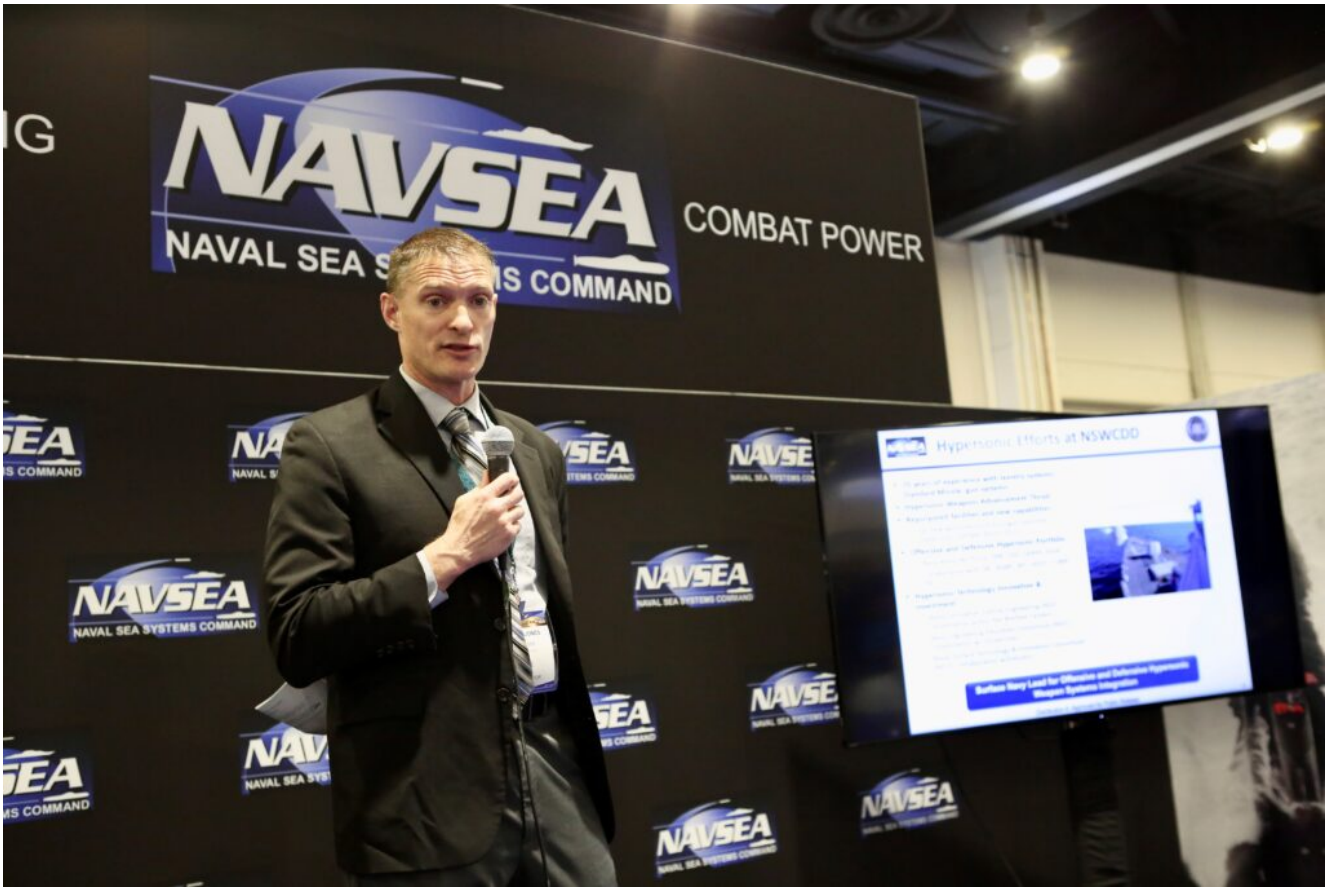
The Marine Corps plans to use many unmanned systems in support of its new littoral regiments and the Coast Guard also plans to use more unmanned systems. These and new manned ships including the Constellation-class frigates, DDG-X, light amphibious warship and others provide a path toward a larger, 500-ship Navy with both manned and unmanned units to better deter and if necessary, defeat opponents in multiple warfare domains.

Team Effort

The move to a future force of capable manned and unmanned naval forces requires a team effort of civilian policy officials, military officers and industry to reach the goals articulated by Navy Chief of Naval Operations Adm. Mike Gilday, Marine Corps Commandant Gen. David Berger and Coast Guard Commandant Adm. Karl Schultz for their respective services and for the joint force overall.

The sea services must move from current, costly legacy forces toward a new combination of manned and unmanned surface, subsurface, air and expeditionary units capable of meeting the challenges of the 21st century.

Official: Dahlgren Recently Tested ‘Hypercone’ Hypersonic Test Projectile



Aerospace engineer Adam Jones said the Navy wants to use Hypercone to gather data to benchmark Naval Surface Warfare Center Dahlgren Division’s modeling and simulation capabilities. *LISA NIPP*

NATIONAL HARBOR, Md. — The Navy continues to work on a conical projectile called Hypercone as it tests hypersonic capabilities, an official told attendees at Sea-Air-Space 2022 on April 6.

Adam Jones, aerospace engineer at Naval Surface Warfare Center Dahlgren Division (NSWCDD), said he couldn’t provide any details on the Hypercone firing at White Sands Missile Range in the New Mexico desert.

“Our goal is to provide another opportunity to provide

testing," Jones said. "We know that just across the board there are challenges in aero thermal and aero sciences across the board. And we want to use this as a platform to gather the data that we need to help continue to benchmark our modeling and simulation capabilities."

The Navy has not revealed much about the Hypercone effort, part of a larger push for advancing hypersonic technology. In an October 2021 statement, NSWCDD described the purpose of the technology.

"Dahlgren is applying its deep knowledge of advanced gun systems, guided projectiles, and telemetry to support hypersonic research and development," the statement reads. "For example, scientists and engineers are developing advanced guidance and control for future hypersonic systems. NSWCDD recently conducted the first of several planned tests by launching a conical projectile, dubbed Hypercone, to collect aerodynamic and aerothermal data relevant to hypersonic flight conditions.

"Dahlgren also has multiple efforts focused on accurately modeling the flow around a hypersonic vehicle," the statement adds. "Recently, Dahlgren's hypersonic efforts have expanded to include roles in the development of offensive missile boost-glide weapons and other collaborative efforts across the DoD."

Asked whether Hypercone could be turned into an offensive weapon, Jones declined to say.

Textron Offers King Air 260 for Navy's Multi-Engine Training Aircraft

Marine 1st Lt. Matthew Reith performs a preflight inspection of a Navy T-44C Pegasus training aircraft on the flightline at Naval Air Station Corpus Christi, Texas. *U.S. MARINE CORPS / 1st Lt. Pawel Puczko*

NATIONAL HARBOR, Md. – Textron Aviation is offering a version of its King Air 260 business twin turboprop aircraft to the U.S Navy as a replacement for the service's Beech T-44C training aircraft, a company official said.

Brett Pierson, Textron Aviation Defense's vice president for sales and strategy, told *Seapower* April 6 that the King Air 260 could be modified to meet the requirement for the Multi-Engine Training System (METS), including an aircraft with a high angle-of-attack capability.

Pilots being trained for the E-2 aircraft require such a requirement for training for carrier landings.

The Navy’s 2023 budget proposes the procurement of 10 METS, with a total of 58 in a three-year run.

According to a draft request for information posted May 26, 2020, the Navy is looking at existing twin-engine aircraft to replace the service’s fleet of 54 T-44Cs used to train Navy, Marine Corps, and Coast Guard pilots to fly aircraft such as the V-22 Osprey, E-2C/D Hawkeye, P-8 Poseidon, P-3 and EP-3 Orion, C-130/KC-130/HC-130 Hercules, E-6 Mercury, C-40 Clipper, HC-27 Spartan and HC-144 Ocean Sentry.

The T-44A, a variant of the Beech King Air 90 business aircraft, first entered service in 1980. The existing T-44As all have been modified to the T-44C configuration.

The Navy said the METS should have an FAA type certification for single- and dual-pilot operations under day and night visual flight rules and under instrument flight rules. It shall cruise at speeds greater or equal to 195 knots and shall be able to operate at a minimum of 20,000 feet above sea level. The aircraft also should have an endurance of 3.5 or more flight hours.

The pressurized aircraft cockpit will have side-by-side seating, as well as a jump seat for an instructor. The cockpit will be equipped with multifunction displays with digital moving map; redundant VHF and UHF radios; an integrated GPS/inertial navigation system; Automatic Dependent Surveillance-Broadcast; flight management system; weather radar, radar altimeter, and a cockpit data recorder.

The METS aircraft also shall have tricycle landing gear and a reconfigurable cargo bay in the cabin.

Pierson said the basic King Air is very close to what the requirements are.

Textron also builds the UC-12W operational support aircraft, a variant of the King Air 350, for the Marine Corps. The company

also built the Navy's T-6A/B Texan II single-engine training aircraft. Beech and Cessna are now brand names for some of Textron Aviation's products.

Naval Air Warfare Centers Have 'Sense of Urgency' to Field Improvements

U.S. Navy's Blue Water logistics Unmanned Aerial System, from the Naval Air Warfare Center Aircraft Division's UX-24 Unmanned Test Squadron, takes off from the flight deck of Military Sealift Command's fleet replenishment oiler USNS Joshua Humphreys (T-AO 188) while the ship was at sea in the Atlantic Ocean, July 16. This UAS flight proved the

feasibility of using unmanned aircraft to transport small payloads of cargo from one ship to another while operating in a maritime environment. *U.S. NAVY / Bill Mesta*

NATIONAL HARBOR, Md. – In an era when the defense acquisition process often appears ponderous and painfully slow, the Naval Air Warfare Centers have a "sense of urgency" and, the organization, talents and authorities to move needed improvements to naval aircraft and systems from concept to fielding in a fraction of the expected time. That speed of achievement is a weapon of war," Jerry Swift, director AIRWorks, a division of the Naval Air Warfare Center Aircraft Division (NAWCAD), said April 6.

The network of NAWCs can move quicker than the standard acquisition process due to the ability to quickly scan commercially available technologies, work with industrial partners on acquiring needed components, and internally performing rapid prototyping and testing, Swift said in a briefing at Sea-Air-Space 2022. And it has authorities Congress provided in acquisition reforms to execute that accelerated process, he said.

The NAWCs do not produce aircraft, but they assess the capabilities of those platforms, identify gaps and then move rapidly to find, test and field the needed improvements, Swift said. He offered the example of meeting the need of a blue water logistic program for a small unmanned aircraft with vertical takeoff and landing capability with a 50-pound payload. They screened the available systems, quickly trim the list and within a year conducted shore-to-ship, then ship-to-ship ability and fielded the system in less than the normal multi-year time frame, he said.

He also listed similarly rapid development and fielding of a way to install a number of anti-mine technologies into a pod that is now being deployed on the MQ-8C Fire Scout UAV, and a gunner's seat for the MH-60 helicopters that reduced the gunner's back problems on long missions and could withstand

the impact of a hard landing. That seat is now fielded in the entire MH-60 fleet, he said.

The centers' work is guided by the demands from NAWCAD commander Rear Adm. John Lemmon, to install a "sense of urgency," and from Vice Adm. Carl Chebi, commander of Naval Air Systems Command.

"We're here to make sure that Navy and Marine Corps aviation remains relevant," he said.