A Day to Remember

This is the anniversary of the 9/11 terrorist attacks on America, and on the world.

Once again, it is a day to reflect and remember. In fact, we who experienced the events of that day in any way must remember and share, lest we not forget. If you don't know about what happened that day, then you must become educated, and made aware of the events of that day in New York, Washington and Somerset County, Pennsylvania. It was an attack driven by hate, and an attack on all of us.

There is a saying that you die three times: when you take your last breath; when they cover your grave after your funeral; and when your name is uttered for the last time.

This is what I remember, and what I choose to reflect upon every year on this day. You will indulge me, I hope, because it is necessary for me to share this with others and share it every year on this day for as long as I can do so. It is the least I can do for a shipmate.

So, join me in saying his name: Michael Noeth.

*** Linseed oil:

Some things have an evocative smell.

When I was in command of the Naval Media Center in Washington, D.C., the executive officer of a ship based at Pearl Harbor – USS *Russell* (DDG 59) – called my staff at *All Hands* magazine in our Publishing Department. The XO had a Sailor aboard the ship who wanted to be a draftsman.

The "undesignated seamen" or SNs on a ship usually work in the deck force, chipping paint and handling lines. As they see what professional opportunities are available on board their ship, they can "strike" for a rating, like Radioman or

Quartermaster. A “Striker Board” will convene and review the needs of the ship, and the desires of the individual. If the Sailor is squared away, has done a good job with the deck force and the ship needs a Quartermaster (QM), for example, he or she can strike for that rating, and becomes a QMSN.

Seaman Michael Noeth wanted to be a Draftsman. The DM rating was one of the smallest ratings in the Navy. There were very few of them compared to Gunner’s Mates or Machinist’s Mates, and certainly none aboard a surface combatant. In fact, today the rating has been disestablished and the functions combined into the Mass Communications Specialist (MC) rating.

In this case, the executive officer wanted to do something good for his Sailor. And this was extraordinary, because USS *Russell* was about to depart on deployment. In spite of the fact that the ship was about to be on cruise for six months, the XO called us and asked if his Sailor could come and work with us to learn the DM rating so he would be prepared to take the DM test for Third Class Petty Officer. If he passed, he could become a DM3. If not, he could return to the ship and eventually strike for another rating. For our part of the deal, we had to cover his travel expenses. We said yes.

There are never enough Sailors in the Deck Force, especially on deployment, but the XO wanted to help a Sailor. So, SN Michael Noeth came to work for us in the Publishing Department at the Naval Media Center in Washington, D.C.

He was placed under the expert tutelage of our Draftsman First Class (DM1) Rhea Mackenzie. Seaman Noeth quickly made himself at home in a back corner of the *All Hands* magazine production spaces. And it was here he set up his easels, canvasses a and paints. When I would come by – which was often, because I was always wandering around Building 168 to see all of the interesting stories and projects our people were working on – I could smell the linseed oil he used for his brushes long before I reached his work area. He would have various

canvasses and illustrations in various stages of completion posted around his desk, as well as examples of artwork he admired or wanted to emulate.

As one of the 450 men and women of the Naval Media Center, he learned his trade from an experienced draftsman, created artistic content for *All Hands* magazine, and became a well-liked and contributing member of the command. At our Halloween party, he came in second place in our costume contest. He was a dead ringer "Alex" from Clockwork Orange, and was topped only by an even more convincing Cruella Deville from 101 Dalmatians.

Whenever I got near his work area, I would be greeted by the smell of his linseed oil, and I knew I would be in for some kind of surprise. Seaman Noeth painted the cover for several issues of All Hands magazine (such as the one with a cut-out porthole that opened to an ocean panorama. To see him tackle these assignments was a joy, probably because he was enjoying his work, and appreciative of the opportunity. On my visits, I would see the many versions and sketches he was working on, and I could see it all come together with the finished product.

He took the advancement exam and passed it. As his six-month temporary assignment came to an end, his command allowed him to transfer to my command on a permanent basis as they did not have any billets for a draftsman, and we did. Soon, he moved on to other Navy assignments as a Draftsman, all because his ship wanted to give him a chance to realize his dream, and my command wanted to help him get there. We felt good about helping him attain his goal. But most of all, because he was a Sailor who deserved it.

He did, indeed, become a talented Navy illustrator and draftsman. He served aboard amphibious assault ship USS *Wasp* (LHD 1), and was later assigned to the Navy Command Center where he skillfully created briefings and presentations for

Navy leadership. He was doing just that on September 11, 2001, when terrorists forced an airliner to crash into that building.

We must not forget. So, I choose to remember a bright, ambitious, creative young striker today, and whenever I smell linseed oil.

We will continue to speak his name.

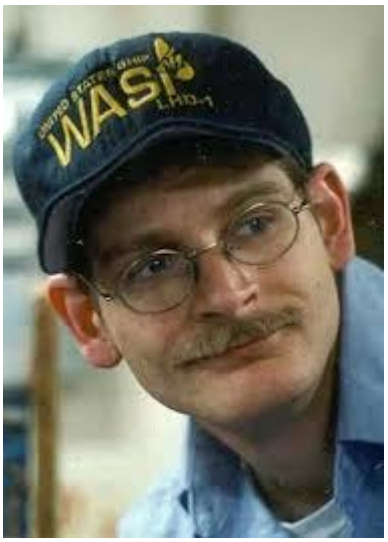
-30-

Please also see:

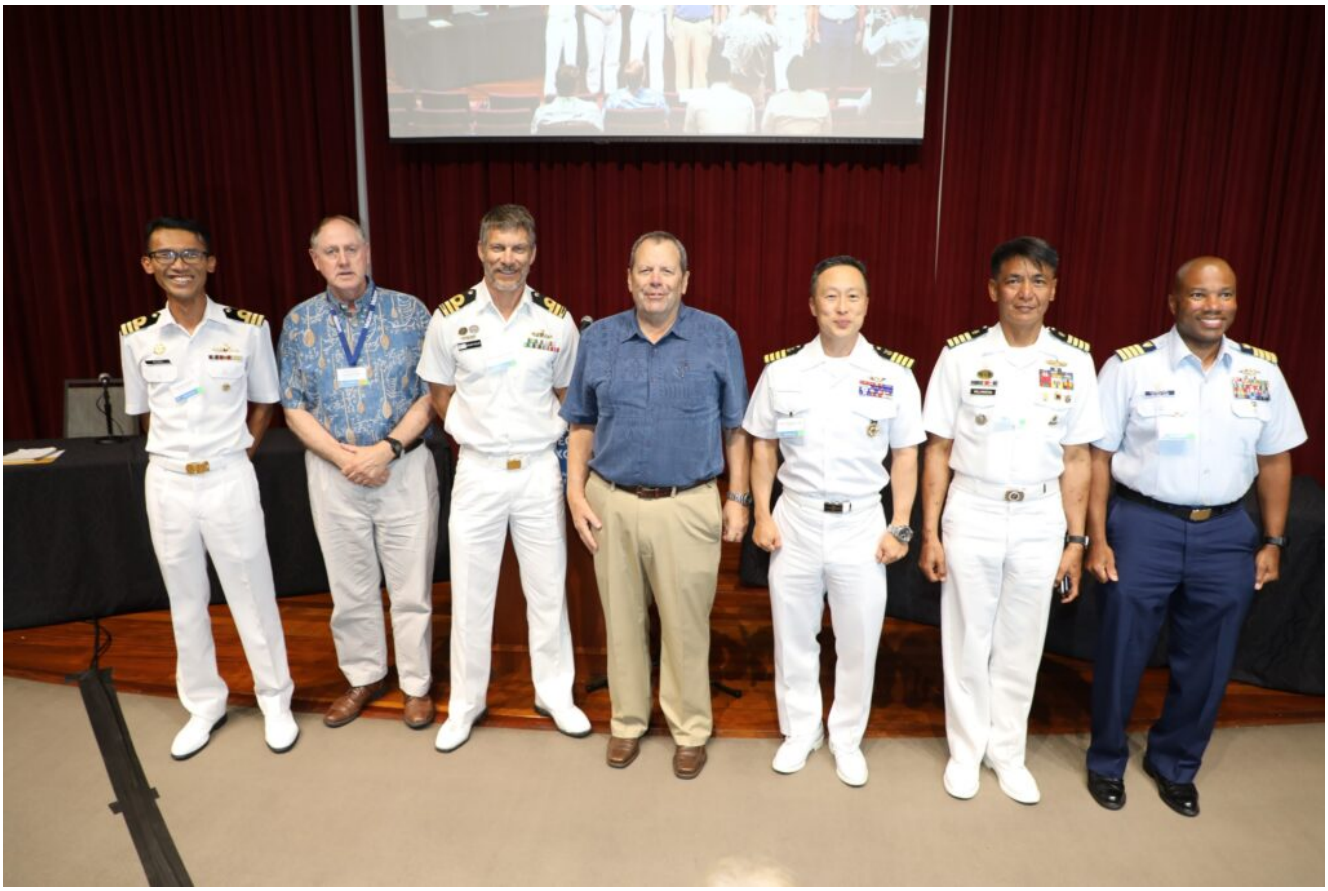
https://allhands.navy.mil/Stories/Display-Story/Article/1839561/we-will-never-forget/

https://www.washingtonpost.com/wp-srv/metro/specials/attacked/victims/v_358.html

https://pentagonmemorial.org/explore/biographies/dm2-michael-noeth-usn



Indo-Pacific Maritime Security Exchange will examine emerging capabilities and capacity



Highlight of the 2022 IMSE was the panel of commanding officers sharing their experiences in the just-completed RIMPAC 2022 exercise. Focused on interoperability and information sharing, the panel included ship commanding officers from Royal Malaysian Navy, Royal Australian Navy; Republic of Korea Navy; Philippine Navy; and US Coast Guard. (Navy League Honolulu Chapter photo)

Attend this event online

The Honolulu Council of the Navy League is once again hosting the Indo-Pacific Maritime Security Exchange (IMSE), a conference that brings voices from the Indo-Pacific together to discuss maritime security issues in the region. The event

will take place August 3rd and 4th as an online symposium.

“Our agenda is designed to stimulate a conversation,” said Larry Osborn, a retired Navy captain and president of the Navy League’s Pacific Region.

In a basic sense, IMSE looks at maritime security in its four key elements: freedom of navigation, unrestricted flow of commerce, the protection of ocean resources, and the exclusive rights of sovereign nations in their Exclusive Economic Zones (EEZs); an overarching theme is building partnerships for security, stability, and prosperity. IMSE will feature senior maritime leaders and subject matter experts from the region as speakers and panelists examining a broad range of topics to include the strengthening of multi-national maritime military capability, capacity building efforts that include security assistance and cooperation, law-enforcement on the high seas, and diplomatic efforts.

According to the IMSE website, nearly all of the thirty-six countries that comprise the Indo-Pacific region are maritime nations. The region contains nine of the ten busiest seaports in the world and more than half of global maritime trade transits the region. The national sovereignty and economic well-being of nations in the region are dependent on the maintenance of the rule of law and international norms on the high seas as described in the United Nations Convention on the Law of the Sea. Today this rule of law is being challenged by expansionist territorial claims in the South China Sea, harassment of foreign vessels in international waters, and IUU fishing. Countering these threats to maritime security in the region requires the collaborative efforts of like-minded nations in the military, diplomatic, law-enforcement, and commercial arenas.

Osborn said the IMSE team strives to have half of the speakers be representatives from the various countries in the region. “Specifically, we want to give a voice to all the nations

large and small to include Pacific Islanders, as well as some of the more some of the larger nations, like Japan, or the Republic of Korea. Collectively, our peace, security and prosperity are dependent on the seas."

The 2023 conference content will be divided into three segments. "The first segment is going to look at illegal, unreported, and unregulated (IUU) fishing and its nexus with transnational crime. The second segment will examine the various treaties, alliances and affiliations in the region and how they interplay. In our third segment, we will focus on emerging maritime capabilities, starting with the People's Liberation Army Navy (PLAN) and the Chinese Maritime Militia. We'll also look at some of the navies in the region to include Japan, Republic of Korea, Australia, and others. And I think each of them has a story to tell about their navies and their emerging capabilities and capacity," said Osborn.

As examples, Osborn points to India's indigenous aircraft carrier; acquisition of MH 60 Romeo helicopters and P-8I Poseidon maritime patrol aircraft, which will give them enhanced anti-submarine warfare capability, as well as a future buy of "Multi-Role Carrier-Borne Fighters."

"India occupies a very strategic position on the sea lanes between Asia and the Middle East and Europe. And they are expanding their ability to keep those sea lanes open and secure," he said. "Japan has announced that they're going to develop counter strike capability and they're also enhancing their destroyer fleet with anti-ballistic missile capabilities. The Republic of Korea is building large amphibious ships to respond anywhere in the region to a crisis or humanitarian disaster. Taiwan has an indigenous frigate construction program underway to replace their mostly-hand-me-down surface combatants and is building eight submarines of its own design. There are other examples, too, in the region."

Another facet of emerging capabilities is in the arena of maritime domain awareness. “We’ll be looking at the technologies involved in delivering maritime domain awareness, from aggregators and processors to collectors and sensors,” Osborn said.

In the final series of panels, senior maritime leaders will examine the increased transparency of the oceans and how to make sense of it or act upon it.

The attendees will learn about “fusion centers” such as the Information Fusion Centre (IFC) is a regional Maritime Security (MARSEC) center hosted by Singapore, and the Information Fusion Centre – Indian Ocean region, hosted by India. “We’ll discuss the foundation of the technologies that make these fusion centers work, and how operators and data are brought together.”

“Today’s operators are faced with huge amounts of data, but with the right analytical tools, including artificial intelligence, they can detect anomalies and draw an operator’s attention to where it needs to be, and determine the best course of action,” said Osborn.

According to Osborn, the content will appeal to a broad audience. “Anybody interested in maritime security or sustainable fishing, will find the conference content very compelling.”

He said the on-line format makes it easy to attend, “No matter where you are in the world, you can log-in and see the most recent content or see other material that has already been posted.”

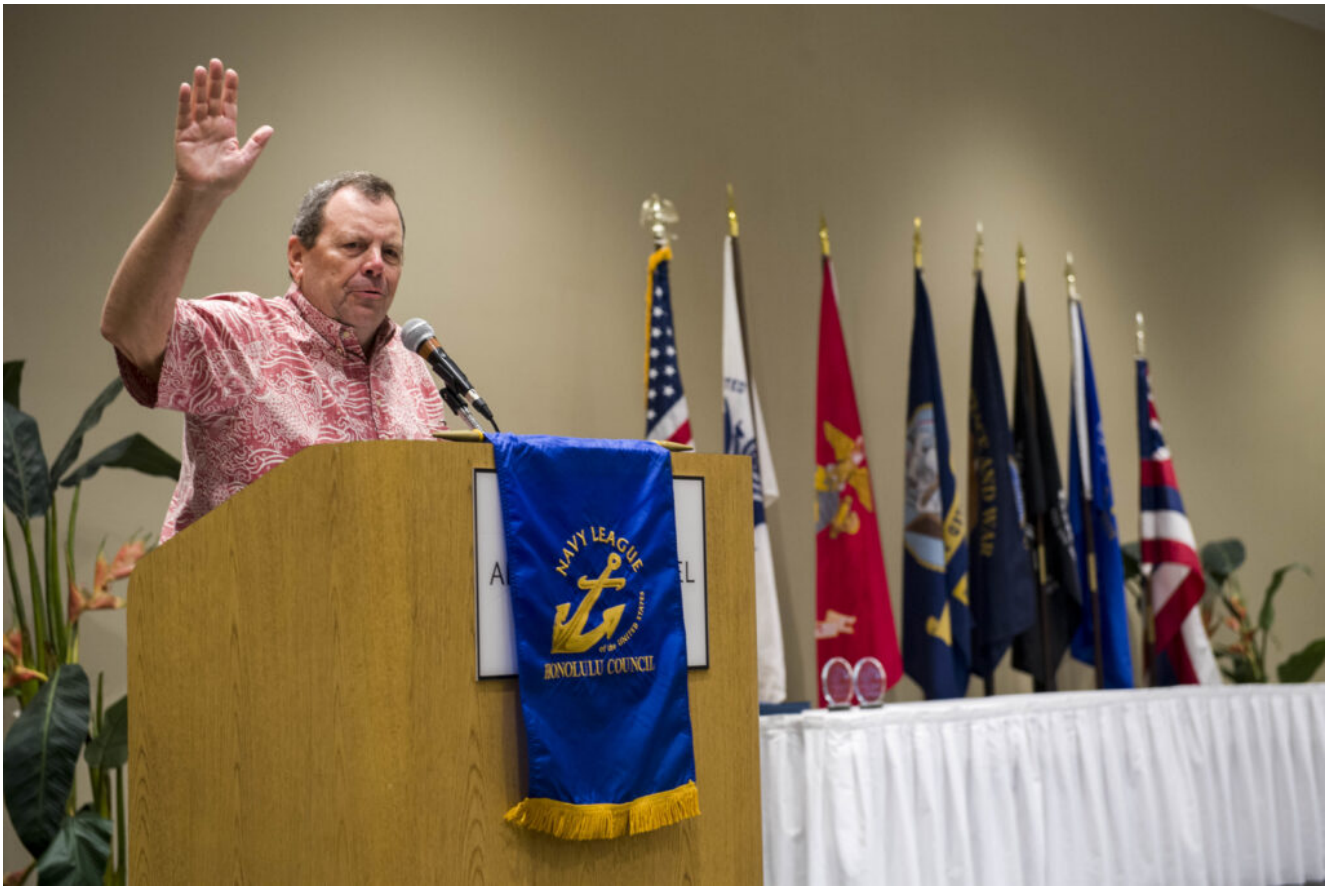
The cost to register is just $15.00, but Navy League members can register for free.

The major sponsor for this year’s IMSE is the U.S. Agency for International Development (USAID), which has a large interest

in protecting sustainable fishing for coastal nations.

For more information: https://www.imsehawaii.org/

To register: https://www.imsehawaii.org/registration.html

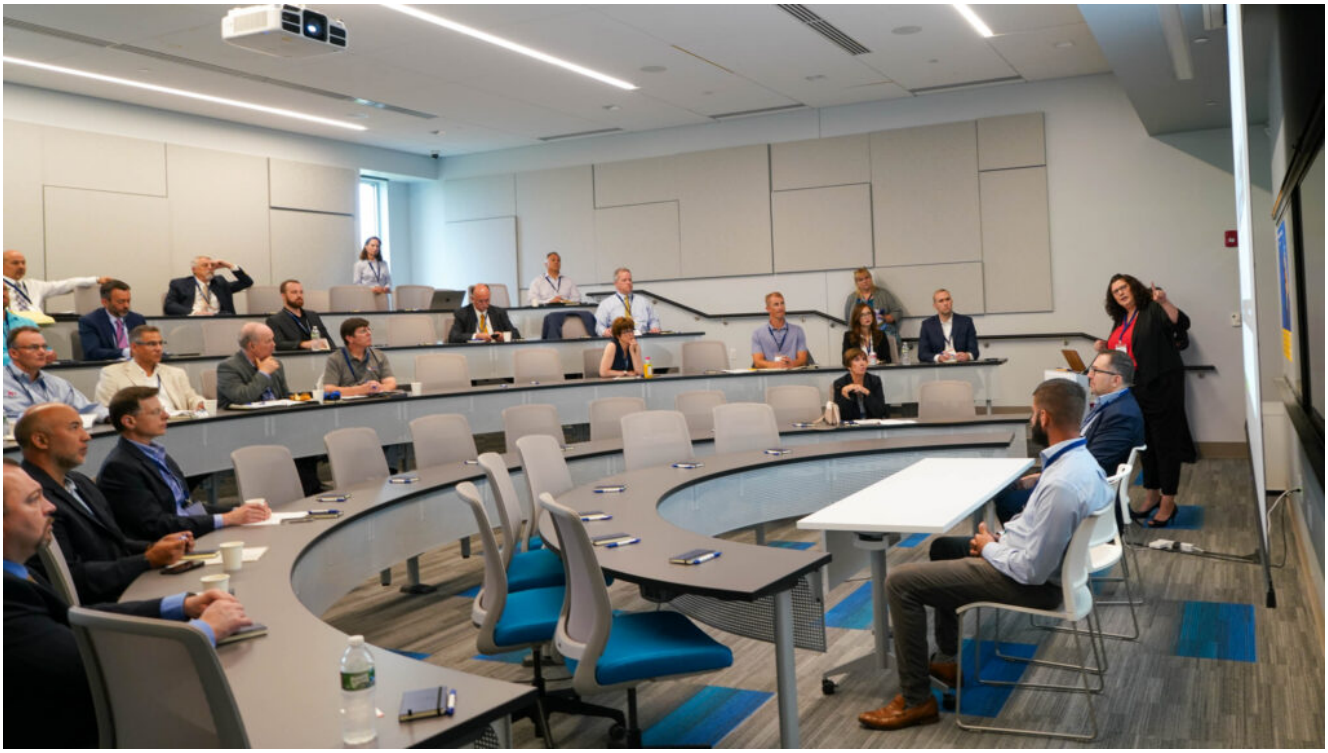


181115-N-NU281-1050 HONOLULU (Nov. 15, 2018) Retired U.S. Navy Capt. Larry Osborn, Navy League President, Honolulu Council, delivers remarks at the 58th Annual Sea Services Awards ceremony. The event honors top performers in the U.S. Navy, Marine Corps and Coast Guard. (U.S. Navy photo by Mass Communication Specialist 2nd Class Justin R. Pacheco)

Cold Waters Spark Warm Relationship

SEA_Apr23_Cold-Waters-002Download

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.”

Layer by Layer: 3D Printing is Navy’s Flexible Supply Source

Featured in Seapower Magazine Feb/March Issue (p. 21)

Layer by Layer (click here to view on mobile)Download

U.S. Navy Surface Warfare Tactics Instructors (WTIs) to Converge in Washington

U.S. Navy Surface Warfare Tactics Instructors (WTIs) are converging in Washington for a conference January 9-12. The conference, known as a “Re-Blue,” is coordinated and hosted by the Naval Surface and Mine Warfighting Development Center (SMWDC), who leads the Surface Warfare WTI program.

Trained and Qualified Instructors

WTIs are highly trained and qualified surface warfare officers who have specialized knowledge and expertise in one of the warfighting areas of integrated air and missile defense (IAMD): anti-submarine and anti-surface warfare (ASW/ASUW), mine warfare (MIW), and amphibious warfare (AMW). WTIs provide their commanding officers with tactical expertise and provide advanced training to warfighting teams.

About 130 WTIs are expected to participate.

Leadership, Technology, and Skills

While at the Pentagon, the WTIs will hear keynote remarks from leadership across the surface force, have an opportunity to refresh their knowledge on updated tactics, and receive briefings on best practices from SWMDC’s flagship underway training, SWATT – Surface Warfare Advanced Tactical Training.

The conference is taking place with the Surface Navy

Association’s 35th Annual Symposium in nearby Crystal City, Va., allowing the WTIs to hear from Navy and Marine Corps leaders and see the latest in products and technologies from exhibiting companies.

“Our WTIs are assigned across the fleet in various shore and afloat billets, some as the only WTI at a command,” said Rear Adm. Christopher Alexander, SMWDC Commander. “I’m looking forward to giving everyone the opportunity to come together with the greater WTI cadre, refresh their knowledge on the latest in surface tactics, and at the same time offer them the opportunity to attend SNA’s Annual Symposium.”

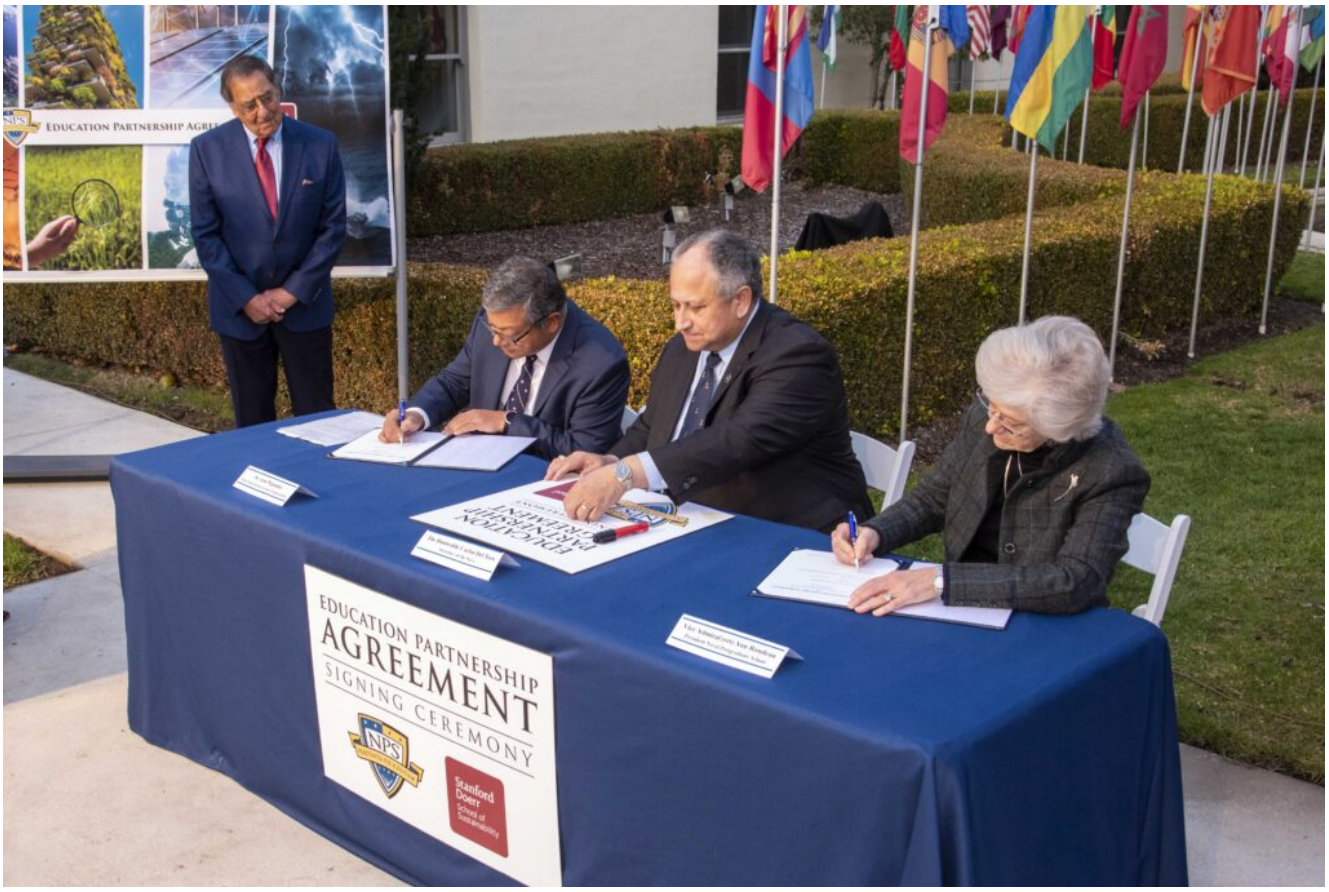
Maintaining a Competitive Edge

WTIs help maintain the competitive edge of the surface fleet and are the foundation of SMWDC’s five lines of efforts:
• Warfare tactic instructor production
• Advanced tactical training
• Doctrine and tactical guidance development
• Operation support to combatant commanders, numbered fleet commanders, and task force commanders
• Capability assessments, experimentation, and future requirements

The program is open to all qualified surface warfare officers in paygrades O1 to O4. Chief warrant officers and limited duty officers may also apply to the program.

Naval Postgraduate School and

Stanford University Formalize Partnership to Address Global Climate Change, Energy Security and Sustainability



Secretary of the Navy Carlos De Toro was on hand for the signing of an Education Partnership Agreement between the Naval Postgraduate School (NPS) and the Stanford Doerr School of Sustainability on Dec. 15. *U.S. NAVY / Javier Chagoya*

MONTEREY, Calif. – The Naval Postgraduate School (NPS) and Stanford University Doerr School of Sustainability have created a formal partnership to address the challenging issues of global climate change, energy security and sustainability.

The announcement was made on Dec. 15 at the NPS campus in Monterey, California.

The Education Partnership Agreement (EPA) was signed by NPS

President Vice Adm. (ret.) Ann E. Rondeau and Dr. Arun Majumdar, dean of the Doerr School of Sustainability, during a ceremony that was presided over by Secretary of the Navy Carlos Del Toro.

“Bold climate action is a mission imperative for the Department of the Navy, and we must harness all of the tools at our disposal in order to make urgently needed change,” said Del Toro. “This collaboration between the Naval Postgraduate School and Stanford University will bring together two globally recognized hubs of research and innovation, focused on realizing solutions that our Navy and our nation can employ now and in the future.”

According to a press release from NPS, the Navy’s climate strategy highlights two major performance goals in its response: building climate resilience and reducing climate threats. But, the release said, it also underlines the importance of leveraging and empowering the education of Sailors and Marines to meet the challenges of climate and energy security and sustainability through knowledge and innovation.

“The combination of expertise, operational experience, education and entrepreneurship in this partnership with Stanford and their Doerr School of Sustainability is truly unique and a powerful contribution to the global climate challenges ahead of us all,” said Rondeau.

The NPS Climate and Security Network (CSN) brings together the school’s collective expertise on climate security and creates opportunities for interdisciplinary collaboration and information sharing. Through the CSN’s efforts, NPS student and faculty have contributed to the development of key climate strategies and plans within the Department of Defense and conduct research to inform future force design, force generation and deployment considerations.

The Doerr School is a new addition to the Stanford campus. Launched in May 2022, the school works with local and global collaborators to understand the challenges of climate change and find solutions that can be executed with impact at scale. The school includes multiple academic departments, including the Woods Institute for the Environment and the Precourt Institute for Energy; a sustainability accelerator to drive policy and technology solutions at scale; and a newly established Oceans Department located at the Hopkins Marine Station in Monterey.

Academic collaboration and research partnerships between NPS and Stanford are not new. Both schools have partnered on research efforts, leveraging each other's strengths as well as their proximity in Northern California – the schools are 90 minutes apart by car.

Under the partnership agreement, NPS and the Doerr School of Sustainability will conduct joint research with the CSN and other NPS departments and groups, including the Energy Academic Group, Center for Infrastructure Defense, Meteorology, Oceanography, National Security Affairs, Defense Management and Engineering to investigate climate security, energy security, sustainability and more.

Lack of Crew Keeping New Zealand Naval Vessels at the Pier

ARLINGTON, Va. – The Royal New Zealand Navy has tied up three of its nine ships due to crew shortages.

279-foot offshore patrol vessels titled the HMNZS Wellington and HMNZS Otago and 180-foot inshore patrol vessel HMZNS Hawea are in docked at the Devonport Naval Base because there aren't enough Sailors to operate and maintain the ships.

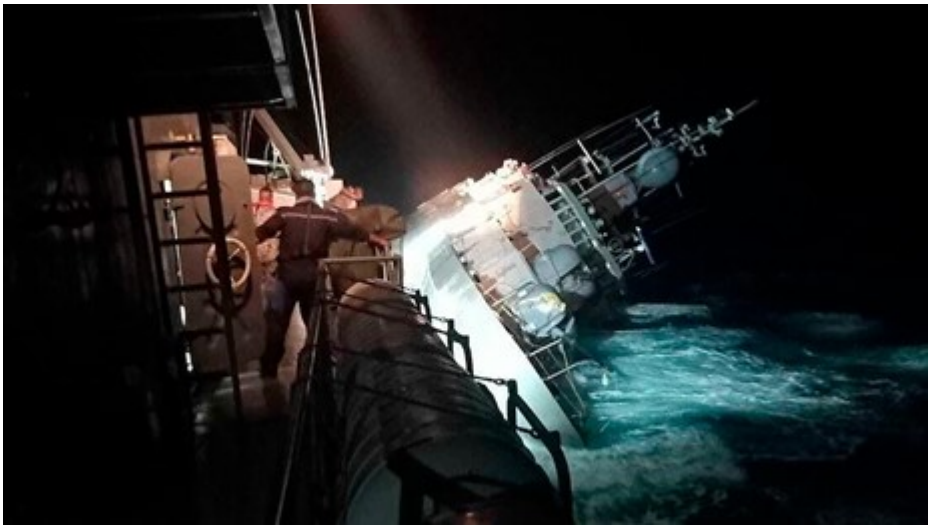
Wellington, which reportedly returned early from a scheduled three-month deployment in November because of manpower shortages, is the latest ship to be taken from service and placed in a "care and custody" status.

Wellington and Otago have crews of 50 personnel and perform missions similar to U.S. Coast Guard medium endurance cutters. The Hawea has a crew of 27, and is similar in size and mission to U.S. Coast Guard fast response cutters.

Personnel from the three ships have been reassigned to other ships in the New Zealand fleet to keep them operational. No date has been set to return the ships to full duty. One of the causes for the attrition is competition from better paying jobs. Officials have cited a "widening gap between our sailor remuneration and what the highly competitive job market is offering."

As the U.S. and its allies and partners in the Indo-Pacific Region counter China's growing economic and military posture in the region, the need for the presence of naval and coast guard ships becomes more acute. With 15,000 personnel, New Zealand's defence force is not large by regional standards, but it does provide search and rescue coverage for a large part of the South Pacific, and provides vital support to smaller nations in Oceania. Having fewer ships available makes the job even harder.

Thai Navy Corvette Sinks in Heavy Seas



The HTMS Sukhothai is seen from the deck of HTMS Kraburi (FFG-457) just prior to sinking. ROYAL THAI NAVY

ARLINGTON, Va. – The Royal Thai Navy (RTN) corvette HTMS Sukhothai (FS 442) has sunk in the Gulf of Thailand after foundering in heavy seas Dec. 1.

Of the crew of 106 personnel, 75 have been reportedly rescued as the search continues for the remaining 31 crewmembers.

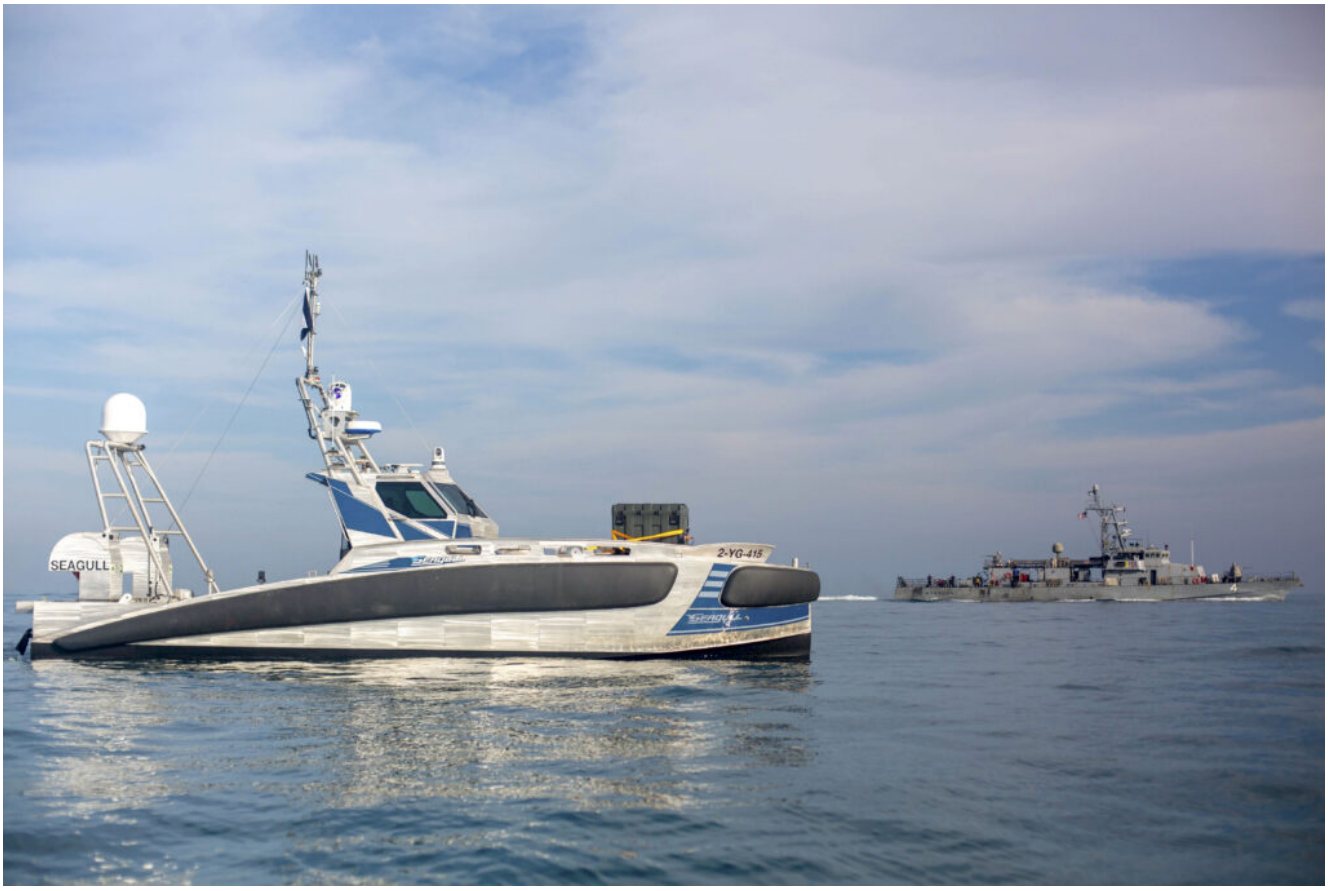
According to Thai Navy statements, the corvette encountering rough seas which caused flooding of the propulsion and electrical spaces. The loss of power prevented the ship from pumping out water to regain stability.

The RTN dispatched ships to assist the Sukhothai, and HTMS Kraburi (FFG 457) arrived just before the ship sank. Other ships and aircraft arrived on the scene to rescue crew members.

The 251-foot, 960-ton Sukhothai was commissioned in 1987.

Other Thai Navy ships are assisting in the search for survivors, including the frigate HTMS Bhumibol Adulyadej (FFG-471) and landing platform dock HTMS Angthong (LPD-791).

Maritime Domain Awareness Starts with Seeing What's on the Sea



An Elbit Systems Seagull unmanned surface vessel operates alongside the patrol coastal ship USS Monsoon (PC 4) in the Arabian Gulf, Nov. 29, during Digital Horizon 2022. The three-week unmanned and artificial intelligence integration event involves employing new platforms in the region for the first time. U.S. ARMY / Sgt. Brandon Murphy

MANAMA, Bahrain – The U.S. Fifth Fleet's Task Force 59 is conducting Digital Horizon, an unmanned systems demonstration featuring a flotilla of different unmanned surface vessels to help build maritime awareness.

Digital Horizon is one of the ways that Task Force 59 is

moving ahead with its objective of establish an international fleet of 100 unmanned systems by next summer.

While several platforms are currently operationally deployed by TF 59, Digital Horizon brought 10 new systems to Bahrain to work together to use their sensors and unique capabilities to share data to TF 59's shore-based Robotics Operations Center (ROC) by means of a communication "mesh network." At the ROC, the information is processed and analyzed using artificial intelligence and machine learning to sift through the voluminous data and determine what is normal activity and what is extraordinary so the abnormal contacts can be further investigated.

The unmanned surface vehicles (USVs) taking part in Digital Horizon include Elbit Systems' Seagull; Exail DriX; L3Harris Arabian Fox and MAST-13; Marine Advanced Robotics WAM-V; MARTAC's MANTAS T-38 and Devil Ray T-12; Ocean Aero TRITON; Open Ocean Robotics Data Xplorer; Saildrone Explorer; Seasats X3; and SeaTrac SP-48. Unmanned aerial vehicles (UAVs) are also participating in Digital Horizon, including two vertical take-off and landing systems, Aerovel's Flexrotor and Shield AI's V-BAT, as well as Easy Aerial's tethered UAV, which is carried in a container on top of one of the USVs.

Silvus Technologies is providing the line-of-sight radio communications system and Accenture Federal Services and Big Bear AI are providing data integration and artificial intelligence systems for the exercise. An Ocius USV is also operating off Western Australia and linking into the network.

Each of the different participating platforms offer unique specialized capabilities and attributes. All carried basic sensors such as cameras and AIS transponders. Some had more sophisticated sensor payloads like radar and meteorological. Some are relatively large and fast, while others are small but able to remain at sea for extended periods. Some could deploy small USVs or small aerial

surveillance drones, and one could submerge and operate underwater. The USVs had various means of power and propulsion, including diesel engines, solar panels and sails.

The companies that have brought their systems to the exercise responded to a call for industry partners to share their technology and help TF 59 learn how to build effective networks and evaluate commercially available systems capable of performing well in the harsh at-sea environment in the Fifth Fleet area of operations. A selection committee of experts from different disciplines measured the dozens of candidate systems and technologies against a set of criteria to pick the companies to come and take part in Digital Horizon.

For Digital Horizon, Capt. Michael Brasseur, commander of Task Force 59, said TF 59 and the industry partners are taking a methodical approach. “For the purposes of our exercise, we are at the early stages, getting our communications and network established. Then we’ll start daytime operations, and then we’ll go 24/7. What we’re trying to do is not easy to accomplish with these different platforms and technologies, particularly here in the challenging operating environment of the Arabian Gulf.”

While reporters were able to see USVs on the pier, being placed in the water, and operating at sea, Brasseur said the exercise will later employ the UAVs, with the information from each of the platforms “all integrated on a single pane of glass” at the ROC.

“We’ll be running a series of vignettes that emulate real-world operations around this region to test how these systems perform and how the data is integrated,” Brasseur said. “We’ve been working through our communications and making sure we were able to receive and present live video and radar feeds, and making sure that data flow could be integrated into the system where we can leverage the machine learning and AI

moving forward with the exercise. The scenarios and the challenges will become more complex as the exercise progresses. We'll have a better understanding of the limitations of the sensors and the communications, as well as the power of the machine learning and AI to make sense of all the data."

TF 59 is already deploying USVs from operational hubs in Bahrain and Aqaba, Jordan, with the objective of having 100 operational platforms by summer 2023. According to Brasseur, meeting that goal will be achieved by including partner nations in the region with a shared interest in creating the most complete understanding of the maritime environment. Digital Horizon will inform how best to employ the available technology to achieve that goal.

"The pace of innovation is amazing," said Brasseur. "We are challenging our industry partners in one of the most difficult operational environments, and they are responding with enhanced capability, fast."