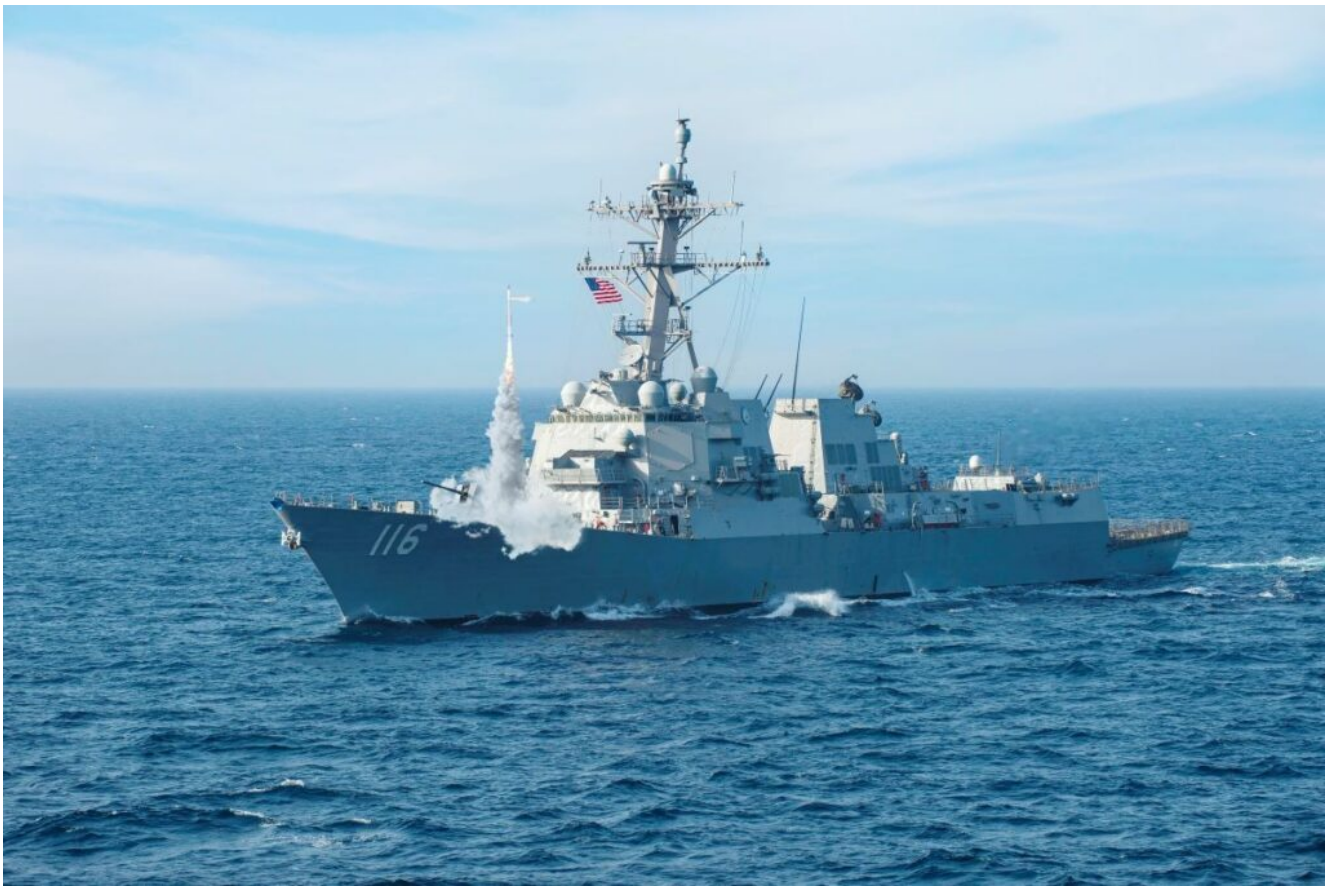
Lockheed Martin Advances Aegis Weapon System Coordination with Two Missile Systems



Lockheed Martin (Booth 1001) recently completed a successful Flight Test Aegis Weapon System-32 using the combat system to intercept a medium-range ballistic missile target using the Standard Missile-6 Dual II software upgrade.

The test, supported by the Missile Defense Agency, U.S. Navy, and Lockheed Martin, tested a real-world scenario and proved the versatility and strength of the Aegis Combat System, showing the latest weapon system configuration can defeat this class of threat working with the SM-6.

“We rapidly advance and integrate our technologies to ensure

the U.S. Navy has the capabilities its Sailors need to meet their toughest missions today and tomorrow," said Amr Hussein, vice president and general manager of multi-domain combat solutions at Lockheed Martin Rotary and Mission Systems. "This flight test utilized the latest updates to Aegis Baseline 9, which improves tracking, identification and intercept capabilities to solve for evolving, complex threats."

Lockheed Martin is the Combat System Engineering Agent (CSEA), responsible for the design, development, integration and test of the weapon system that successfully planned, searched, tracked, and conducted the engagement of the target, including launching and guiding the SM-6 intercept.

In response to written questions from Seapower, the company said the effort tested its latest designs as it continue to evolve and improve the system to defeat ever evolving and challenging threats.

The company has already integrated more than 60 into the Aegist Combat System, including a range of effectors and sensors, both domestically and for six international allies.

PAC Test

The company also investing in technology enhancements to integrate PAC-3 Missile Segment Enhancement (MSE) into the MK 41 Vertical Launching System to support employment with the Aegis Weapon System.

This integration would deliver a hardened defense to maritime fleets using an existing, well-tested interceptor to defends against threats including tactical ballistic missiles, cruise missiles and aircraft.

The company plans to participate in a live-fire event this year, although events are still largely under wraps. Last year, the company participated in an S-Band radio test which simulated the radio that Standard Missiles and others use to

get midcourse guidance.

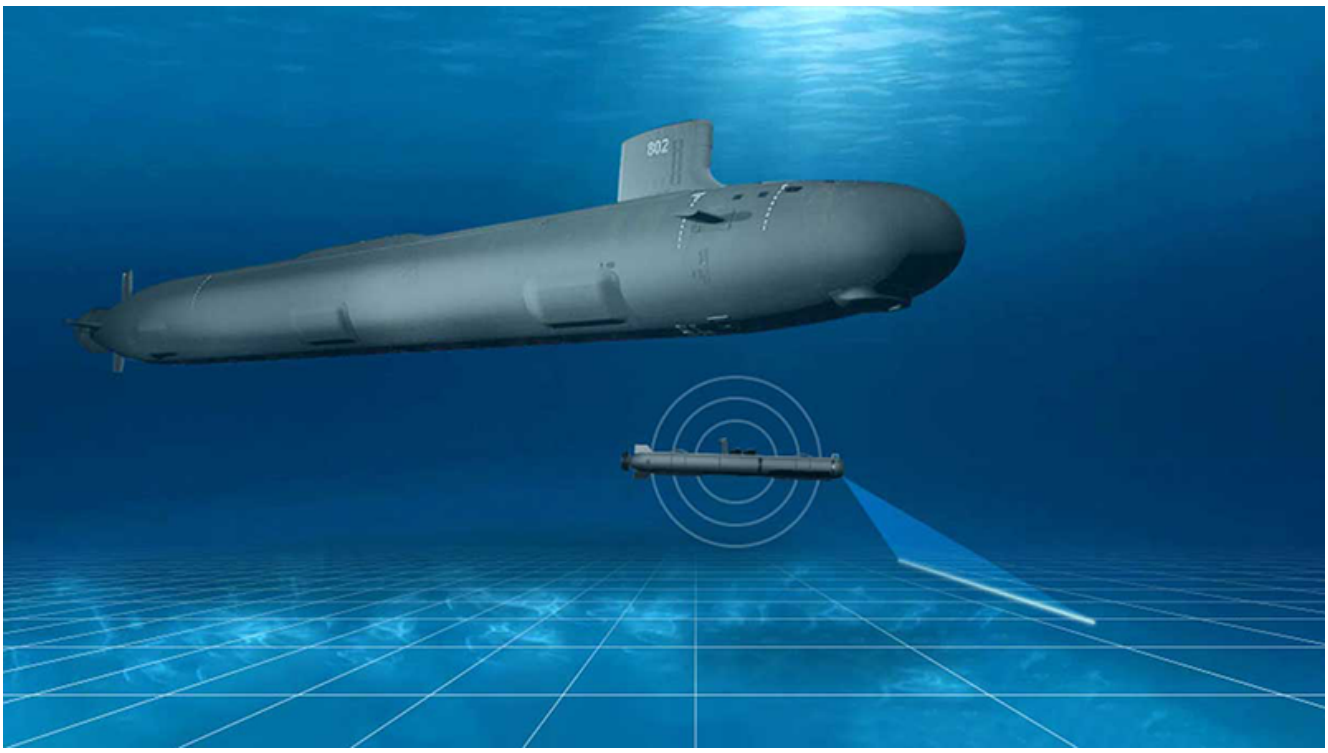
“That was a successful test, so all of the major lab-based, shore-based tests without doing a live fire have been successfully completed,” Tom Copeman, vice president of naval systems and strategy for Lockheed Missiles and Fire Control, told Seapower in an interview. “… All prepping for a live-fire event which is scheduled for 2024.”

The Aegis Combat System has a long and successful record, and the PAC-3 has a lengthy pedigree as well, “so we’re confident that the marriage of these two very, very mature systems will yield a much-improved capability for the United States Navy if they choose to move forward with it,” Copeman said.

The number of Aegis Weapon Systems and PAC-3 missiles could lead to a somewhat widespread use in the fleet should the Navy choose to go that route, and Copeman said “we’ll continue to internally invest to keep the project moving, so if they do decide to go, it could be fairly rapidly implemented if the Navy says they want to do it.”

“Think about the capacity that will enable, which is really a huge capability that we can give the U.S. Navy,” Hussein said.

L3Harris Moves Ahead with Disruptive Capabilities



L3Harris successfully launched a recovered a Iver4 UUV from a submarine. Photo Credit: L3Harris

L3Harris (Booth 1037) hopes to use its expertise in autonomy software, uncrewed surface vessels and uncrewed underwater systems to help the Navy counter the looming threat of China and get more systems into service.

The company has a lot of interest in what Jon Rambeau, president of L3Harris' Integrated Mission Systems segment, called "disruptive capabilities," which includes moving airborne ISR capabilities from military aircraft to business jets and focusing on passive sensing and targeting for autonomous surface and subsurface vehicles.

"In the maritime domain … [we do] a lot of work around autonomous surface and subsurface vessels, and also a focus on passive sensing and targeting for the surface to allow the manned fleet to operate without having to light up their radars so often," Rambeau told Seapower in an interview. "We think that's a capability that can be deployed very rapidly, it's very mature and it's also very low cost."

The company also recently successfully deployed and recovered an uncrewed underwater vessel from a submarine's torpedo tube,

using one of its Iver4 vehicles.

“We were the first company to be able to demonstrate the capability to retrieve a UUV through a submarine torpedo tube while it was underway,” Rambeau said. “A pretty big accomplishment. Others had tried and failed and we were able to be successful on our first try, which was pretty impressive and not only that, but twice in one day, so pretty neat. That team just won our corporation’s top technology innovation award this year across the entire company.”

Replicator

The U.S. Department of Defense last year announced the Replicator program, a still largely undefined effort to launch thousands of attritable, autonomous aerial and surface systems to help counter China’s growing fleet.

“That’s something we’re very interested in being a part of,” Rambeau said. “I think some of those decisions are still being made about who and how we’ll participate, but we know there’s an initiative, obviously, to drive the large-scale deployment of unmanned systems, and we think the work we do is right in the heart of that. We’ve deployed hundreds of small, undersea vessels, we’ve deployed hundreds of small surface vessels over a number of years, some in the commercial side, some in the military side of our business, and that’s where a lot of our concentration has been, small and medium vessels for subsurface and surface operations, and a lot of work particularly around the autonomy capability.”

L3Harris has an in-house autonomy development team, a capability Rambeau said is very mature, and had two autonomous ships deployed under an urgent operational needs statement with Task Force 59 out of Bahrain, which has been demonstrating uncrewed surface vessel capabilities. The submarine-launched UUV effort also stemmed from an urgent needs requirement.

“One of the areas that we continue to focus on is that we know the customer pull is there for these, I would say disruptive capabilities, we have the technology well matured,” Rambeau said. “I think the question is, how do we quickly get from proof of concept to prototyping to production as fast as possible? Initiatives like Replicator are designed to try to move that along, and we’re hopeful that there will be opportunities for us to be part of that.”

Passive Sensing

Some of the passive sensing and targeting capabilities the company has developed for uncrewed systems can also be deployed on manned vessels, and L3Harris is planning to do some prototyping work with the Navy on that later this year.

“We’re still working through the details of how and where and when that will take place,” Rambeau said, “but we are looking to prove out the ability to sense and target an adversary without having to use a radar onboard a ship at all. That is our hope.”

Rambeau said he is seeing growing interest from the military in manned-unmanned teaming, a concept that has been around for years but which could gain new potency under a Replicator-type effort.

“I won’t speak for the Navy, but from my point of view I think that being able to link a small group of unmanned surface vessels with the manned fleet and allow those to be companions to get out ahead a little bit, do some reconnaissance, feed information back, there certainly are a lot of opportunities to employ the vessels in that way,” he said.

“… With the ability now to launch and recover an unmanned vessel from a submarine, that really gives an opportunity to extend the reach of the submarine fleet and also to provide greater survivability, because they may not have to go into harm’s way as deeply to gather data if they have an appendage

that can be set free and then recovered back with some information. Minehunting, that sort of thing."

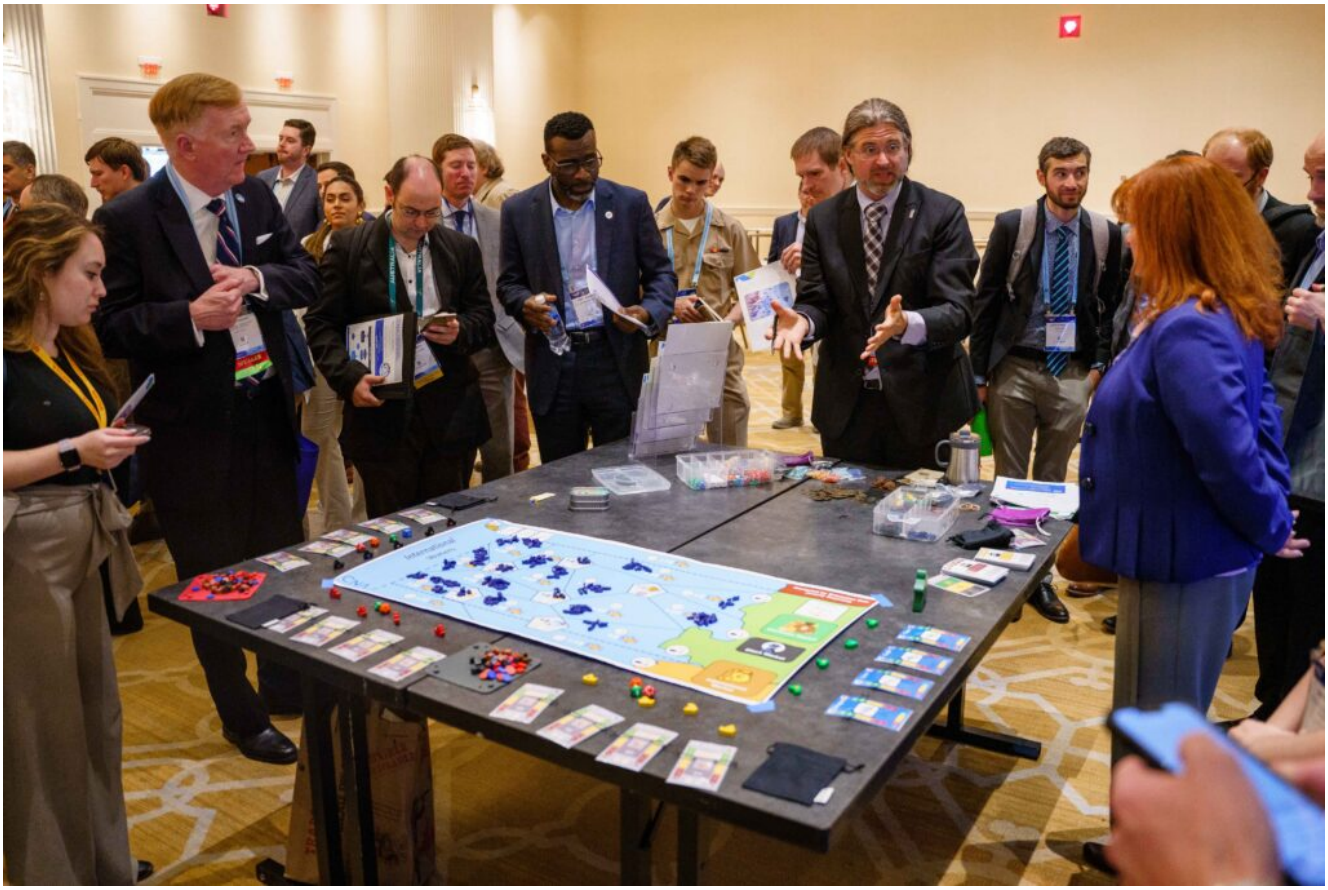
Gaming to Win and Learn at Sea Air Space

The Center for Maritime Strategy "Gaming to Win" event is in its second year at Sea Air Space and offers a little for everyone within the wider wargaming community.

It features the presidents of the Naval Postgraduate and Naval War College and directors of wargaming from NWC and the Marine Corps University Krulak Center. It also highlights top-flight wargames and their designers who will invite participants to play along, and then be part of a panel on the design and use of games.

The first panel on wargaming will Tuesday, April 9 from 2:45 to 3:45 p.m., followed by an interactive wargaming

demonstration from 3:45 to 5:00 p.m. and a second panel from 5:00 to 5:45 p.m., all in the Cherry Blossom Ballroom.

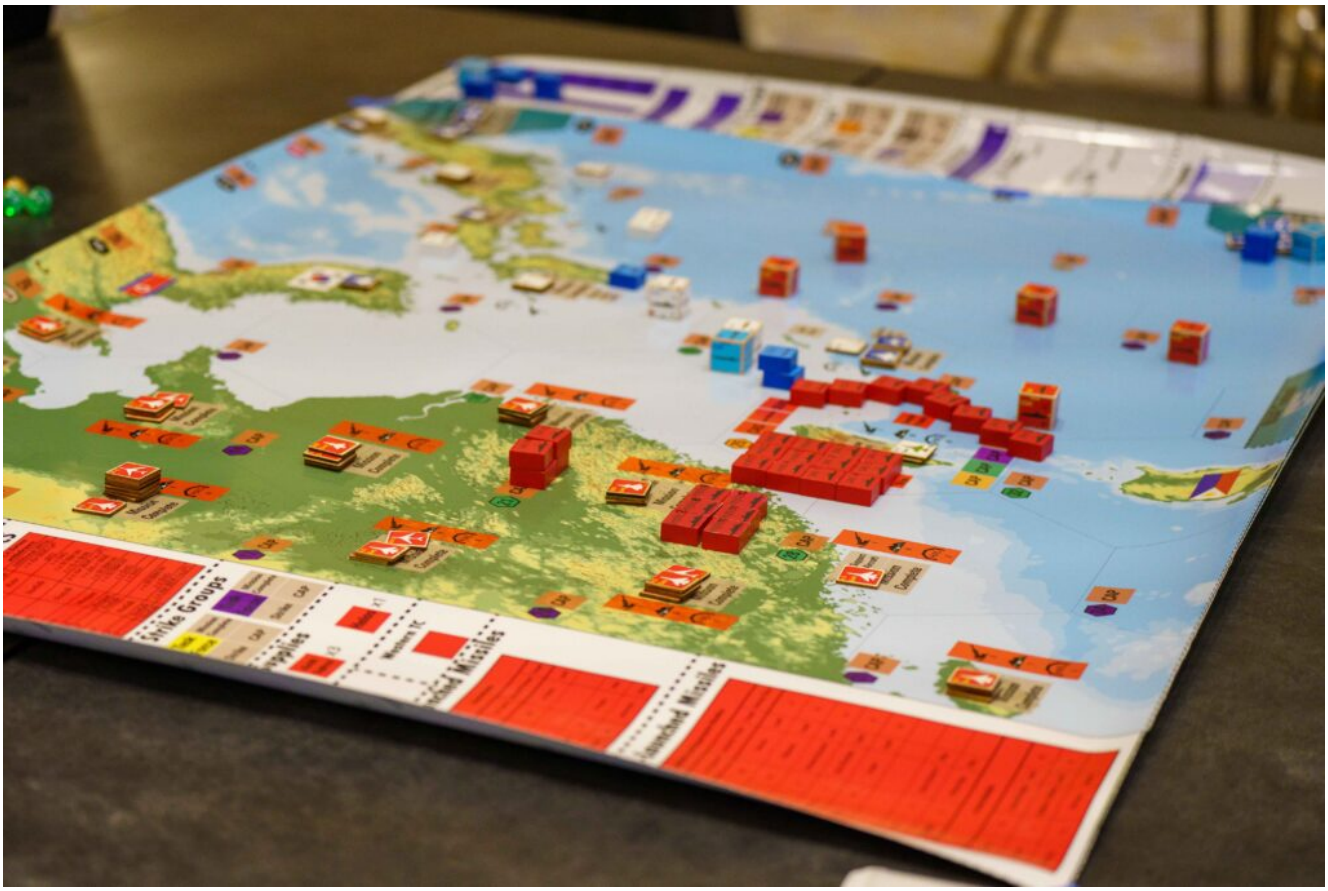


Discussion at last year’s inaugural wargaming eventDiscussion at last year’s inaugural wargaming event. Photo Credit: Dan Goodrich

While the panel is called “Gaming to Win,” that is really not what wargames actually do for military commanders and civilian leaders. They perform a vital role in testing assumptions that commanders might possess, as well as offering them the opportunity to explore multiple “what if” scenarios. The late Peter Perla, a famous wargamer, described them as “a dynamic representation of conflict or competition, in a synthetic environment in which people make decisions and respond to the consequences of those decisions.” Wargames do not answer the question of which side will win, or what weapon system(s) are most effective in war. War games build confidence or raise doubts in existing plans. They are a useful tool in evaluating plans but come with limitations that are not always apparent.

Limitations on Wargaming

Some wargame results are interpreted as the “sure path to victory,” or the “inevitable road to defeat” depending on who reads the results and how they interpret them. Wargame results are sometimes seen as either confirming the rise of a specific weapon system or the condemnation of another to obsolescence. These are false interpretations of game results. First, wargames are only as “good” as their input data. That not only includes order of battle being correct, but also, when available, aspects of gaming that the Naval War College calls “the intangible aspects of military planning.” How “ready is any one opponent ship, aircraft, or submarine in terms of material readiness? Can that platform perform its intended mission as designed?



The board at last year’s wargaming event. Photo Credit: Dan Goodrich

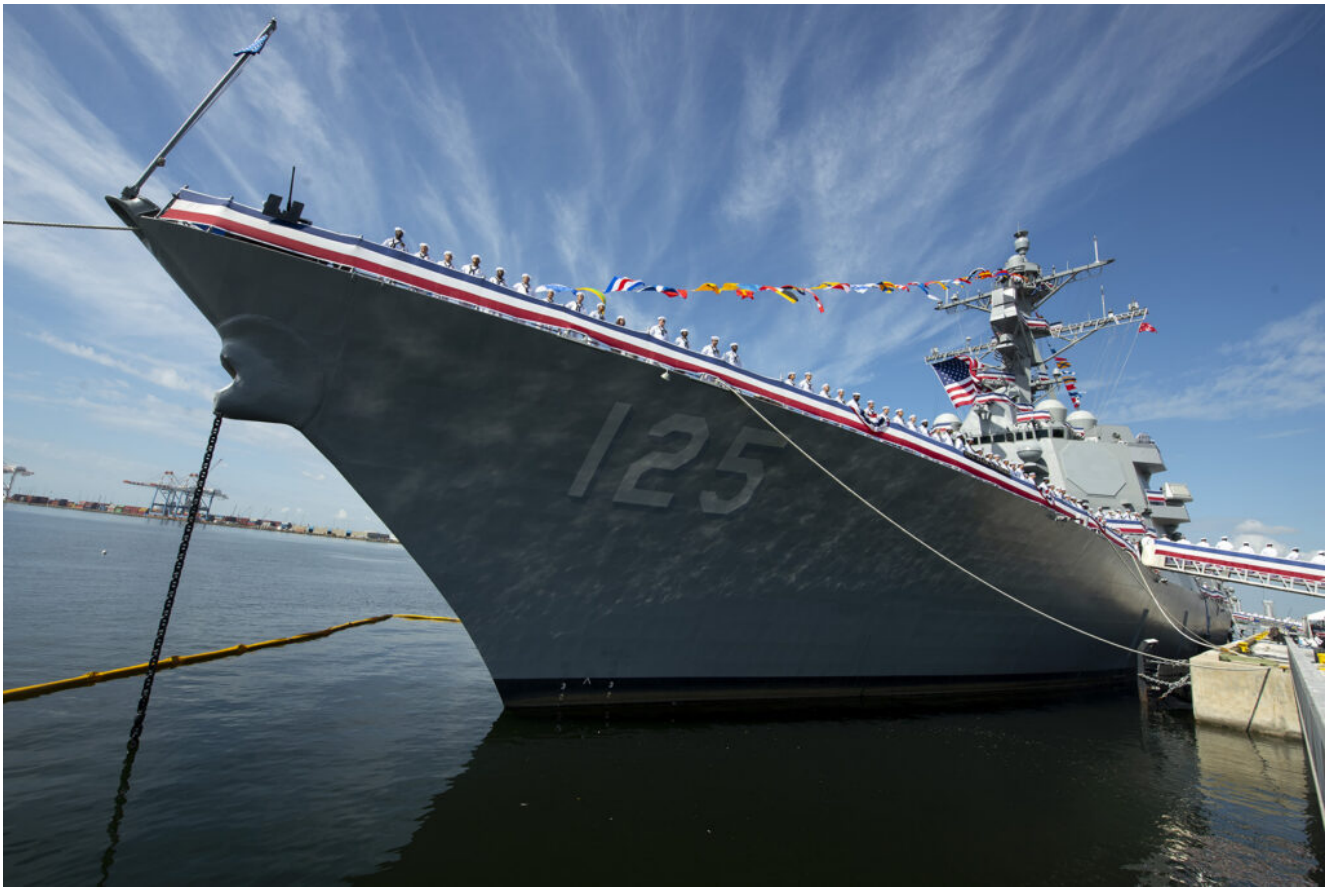
What looks good on paper is not always what it appears. The Russian missile cruiser Moskva was generally rated by Cold War and 1990s-era wargames as able to sustain at least four hits from a medium-sized cruise missile like the U.S. Harpoon

weapon and remain afloat. In the real world, the Moskva was sunk by two such weapons, with some reports suggesting the Russian crew immediately abandoned the stricken vessel and did not undertake damage control actions to save her.

Another intangible aspect of wargame design and conduct is the leadership and conduct of the Red Cell, the team of experts who simulate what the opposing forces do. This has in some cases been a past challenge. From the late 1940s to the late 1970s, U.S. Navy leaders believed the growing force of Soviet submarines had only one main purpose, and that was to attack NATO resupply routes from North America to Europe. Russian leaders like fleet commander Admiral Sergei Gorshkov proclaimed the Soviet navy would confront Western navies on the high seas. The large German submarine fleets of World Wars I and II were designed to break Allied supply routes across the Atlantic. Why else would the Soviets build such a force? Intelligence gathered from wiretaps on Soviet undersea communications cables in fact revealed the Soviet navy's main purpose for its submarines was defense of its ballistic missile submarine force and the protection of the Soviet Union from nuclear attack by Western naval forces. Soviet doctrine said the war would be over before the West could even consider reinforcing NATO by sea.

Getting all of these aspects of wargaming as accurate as possible from the start is essential to setting the stage for game results that can be used by commanders to evaluate plans and the systems to execute them in both peace and war. Wargaming is pursued with victory as the goal, but if it is not sourced with accurate information, it can be a futile exercise.

HII Responds to Post-COVID World with Flexibility, Supply Chain Support



Sailors man the rails during the commissioning ceremony for the Arleigh Burke-class Flight III guided-missile destroyer USS Jack H Lucas (DDG 125) in Tampa, Florida Oct. 7, 2023.
CREDIT: Department of Defense | EJ Hersom

Shipbuilder HII (Booth 1323) has embarked on a range of efforts to improve its workforce, bolster the supply chain and boost its capital investments, HII President and CEO Chris Kastner said in a briefing on the eve of Sea-Air-Space 2024.

The company saw as far back as 2015 there would be significant demand for ships, but couldn't anticipate a worldwide pandemic that affected supply chains and the workforce, followed by rampant inflation, Kastner said.

"There's really unprecedented demand in shipbuilding right now

that we saw coming, and it has arrived," he said. "With Navy leadership … the industry has been getting after this since COVID started."

The company and its subsidiaries have been outsourcing some of the work they used to do, which helps bolster the supply chain, Kastner said. Since 2020, HII has helped create more than 200 new suppliers and outsourced 3.6 million hours of work.

It has also spent $450 million on workforce training and is providing new technology tools at its workforce, including artificial intelligence to help make its practices more efficient. "If we can use AI to improve our processes, we're going to do that," Kastner said.

Issues with shipbuilding came to the fore just this past week, as the preliminary results of a Navy shipbuilding study showed major programs are years behind schedule, including the first Columbia-class submarine and the future USS Enterprise aircraft carrier.

Advanced procurement is critical to avoiding such issues, Kastner said, one reason the shipbuilder has been pushing for a two-carrier buy for CVNs 82 and 83, similar with what was done for the future Enterprise (CVN 80) and Doris Miller (CVN 81), which were procured as a two-ship buy.

"We would like to get started in [20]26, potentially in 25 on the critical suppliers, in regard to 82," Kastner said. "There's no doubt that a two-ship buy with 80 and 81 really reduced the risk of 81. The risk we had on 80 was alleviated with 81."

As for the future USS District of Columbia, the first boat in the Columbia class, Kastner said it has a "very robust" risk management effort, "but you're going to have first-in-class issues. And couple that with a lot of green labor, that can yield to workmanship issues, and efficiency issues, and you

get potential schedule issues. It’s a first-of-class ship, and you’re rebuilding a workforce coming out of COVID.”

He noted that two shipbuilding programs involving HII are doing well, the LPD amphibious transport dock and DDG Flight III.

“What are the characteristics of those programs? Stable designs – and when the design changed it was very thoughtfully implemented, I’m talking about DDG Flight III – on time advanced procurement. Consistent workflow. All of those … and a really good core group of shipbuilders,” Kastner said.

Workforce Adjustments

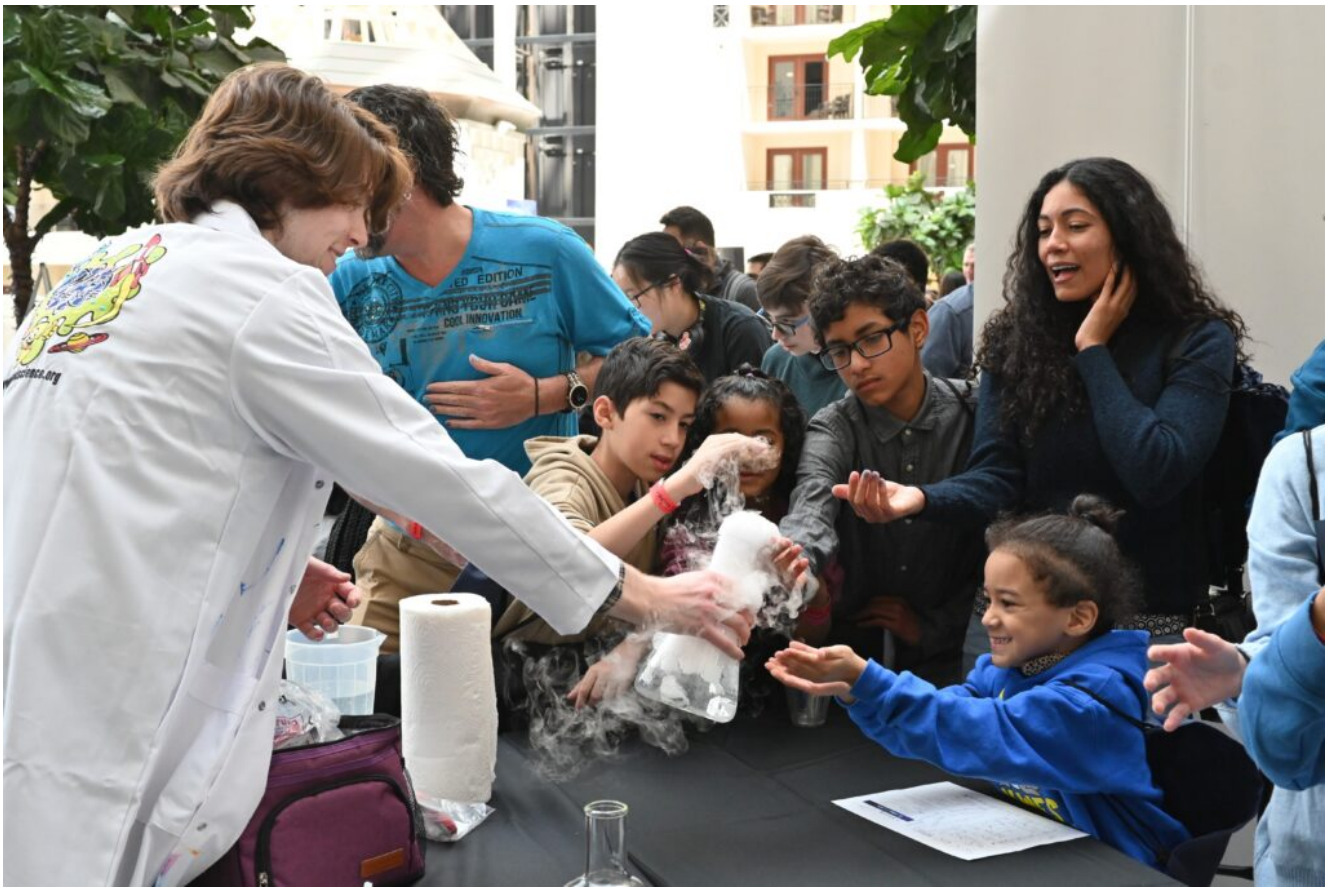
“It’s a fact of life that you have a less experienced workforce than you had before, across the board. There’s significant loss of skill after covid. That’s been broadly understood, and it’s been a cross section of our talent base,” Kastner said.

That’s where HII is trying new things, including providing more flexibility for shipbuilders when they come in, including more time off early in the process. The company also has more programs to help their new hires enter the shipbuilding workforce.

“We used to just train them and send them out to a crew. Now, we train them, we bring their foreman in the training center and we put them out as a team. So, they have a framework and a cultural that they’re developing with their team, so they feel like they’re not alone when they go out into the shipyard,” he said.

HII is also recruiting from areas where people are likely to stay, according to data analytics. It is also using targeting incentives, where good performance and attendance lead to a boost in pay.

STEM Expo Brightens National Harbor with Exciting Science Demonstrations



The STEM Expo brought 5th through 12th grade students face to face with exciting science concepts on Sunday, April 7, filling the Cherry Blossom ballroom with laughter and gasps of wonder.

The event featured interactive workshops, hands-on demonstrations, STEM career information and just plain fun, including the famous nitrogen ice cream booth and a visit from Slapshot, the feathered mascot for the Washington Capitals hockey team.

While the event was fun, there was a serious purpose behind it, according to representatives from HII, the shipbuilder that was the Champion Sponsor for the event, alongside sponsors CACI and Booz Allen.

VR and 3D Printing

HII gave attendees a slice of real-life modern shipbuilding, demonstrating the use of virtual reality for ship inspections and welding and also showcasing 3D printing, or additive manufacturing, which is being used to create some components in the real world.

“It’s a safe space to fail, is what it really is. They learn these objectives here and don’t have any real-world consequences like injuries or anything,” said Grant Ronquillo, a software engineer at HII’s Newport News Shipbuilding.

It’s also the kind of training these students could expect to get if they pursued a career in shipbuilding.

“We’re working with our training programs to get this implemented as part of the standard training within Newport News Shipbuilding and across HII,” Ronquillo said, while behind him a STEM Expo visitor made her way through a simulated 3D room.

Visitors to HII’s booth were also shown a virtual welding booth and a 3D printer. The VR welding demonstration allowed students to take a turn, receive instruction on how to do better, and then try again, said Brian Treat, the lead general foreman at Newport News Shipbuilding.

“They think it’s the real thing,” he said, but it removes all the risk. “What’s key here is removing all the risk of real-life welding, allowing them to feature the same attributes and talk through it before somebody would go do it in real life.” Again, it’s how welders are actually being trained.

The additive manufacturing is another technology that some kids are already familiar with, said Perry Haymon, the chief technology engineer at HII's Ingalls Shipbuilding.

"We brought this today to demonstrate to the kids how 3D parts are printed," Haymon said. It's a technology that's making its way into shipyards.

"We do polymer as well as metallic," he said. "It's a great technology, it's a good thing to get into, for the kids to learn, because they like to draw, they like to create, so by doing solid models, now they can actually take that and put it into a printer and actually see what they've created."

Engaging Students

STEM is important because "it's such a broad field and it can be used in so many ways," said Notashia Thomas, a program manager at STEM sponsor CACI.

"When students come to this particular expo, they are exposed to just a myriad of options, and I think it really excites them. I absolutely see the children getting engaged. At our table we've been doing design principles. They try a design, they try it again, they try it again until they see it work, and that's what STEM is all about; the problem solving, the persistence that's involved. It's just great to see them engaged."

The Navy sees the value of STEM as well, contributing several displays and demonstrations for the expo, including in robotics and medicine.

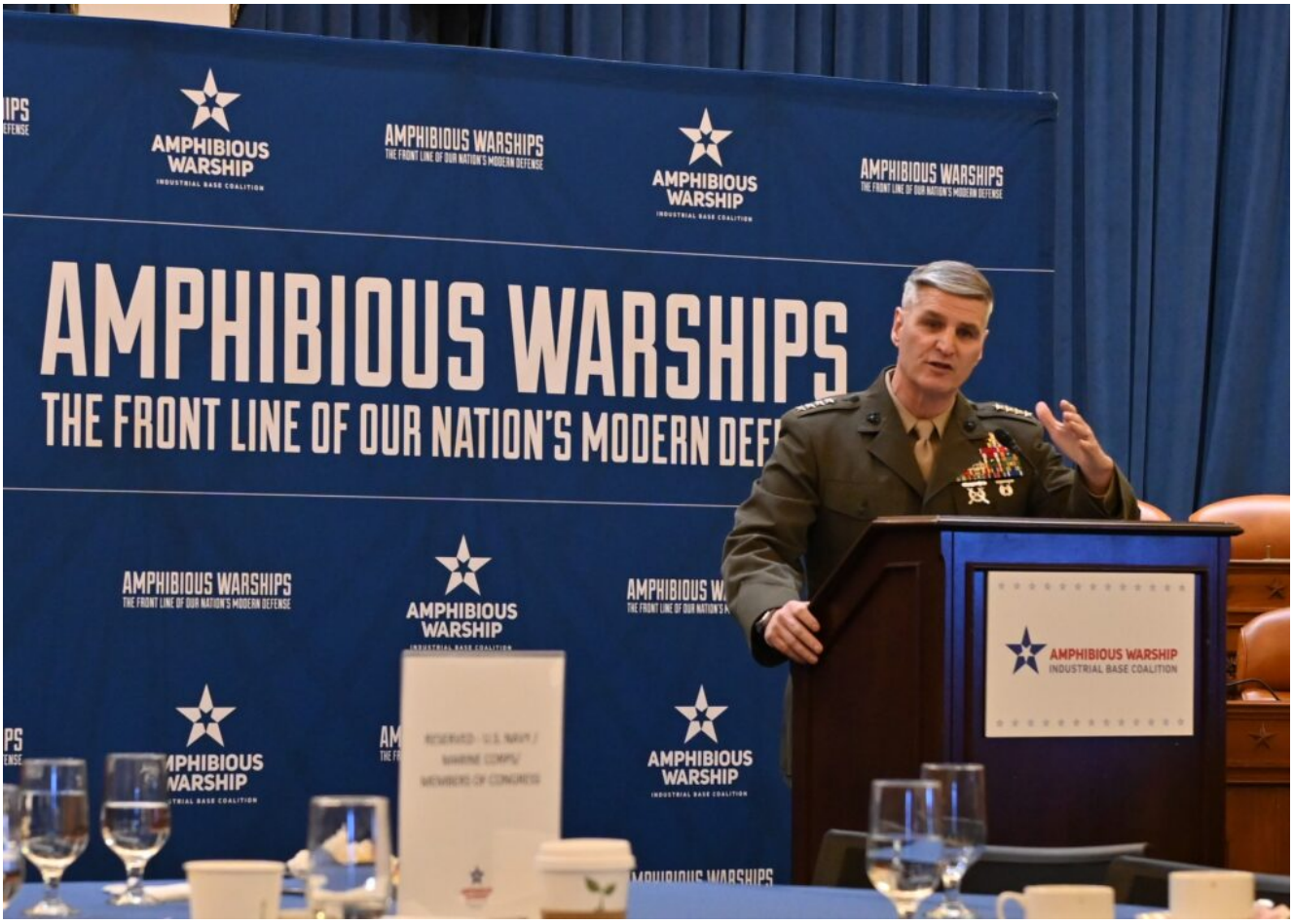
"What is the value of STEM? The importance of STEM in the Navy cannot be overstated," said Commander Shannyn Fowler, commanding officer of Navy Talent Acquisition Group Richmond. "It's the backbone of how we operate, in terms of our engineering programs, in terms of our aviation programs, information technology, cyber warfare, explosive ordnance

disposal, and so many more. It’s what keeps our Navy afloat, it’s what keeps our aircraft in the sky, and it’s what keeps our enemies afraid of us.”

Fowler said she was pleasantly surprised by the enthusiasm she saw in the students coming through the expo.

“The enthusiasm is beyond measure,” Fowler said. “The excitement of young people between the ages of 5th grade and 12th grade and in STEM programs is beyond my expectation walking in on this.”

Lawmakers Stand Firm for 31 Amphibious Ship ‘Floor’



Gen. Mahoney speaks to members of the Amphibious Warship Industrial Base Coalition. *Brett Davis*

WASHINGTON The U.S. Marine Corps needs a minimum of 31 amphibious ships and Congress is prepared to force the issue if the Pentagon balks, lawmakers from the House and Senate told members of the Amphibious Warship Industrial Base Coalition on March 7.

“Until they [the Marine Corps] can walk on water, we better be building more ships,” said Rep. Rob Wittman (R-Virginia).

He and other lawmakers from both parties said amphibious ships are critical for projecting both hard and soft power around the world.

Sen. Dan Sullivan (R-Alaska) said a floor of 31 amphibious ships is written into defense authorization, but a previous Navy budget projection “never once” hit that 31 number. He said Chief of Naval Operations Admiral Lisa Franchetti has assured him the new one will.

“We’re going to make them build what the Marine Corps needs,” Sullivan said.

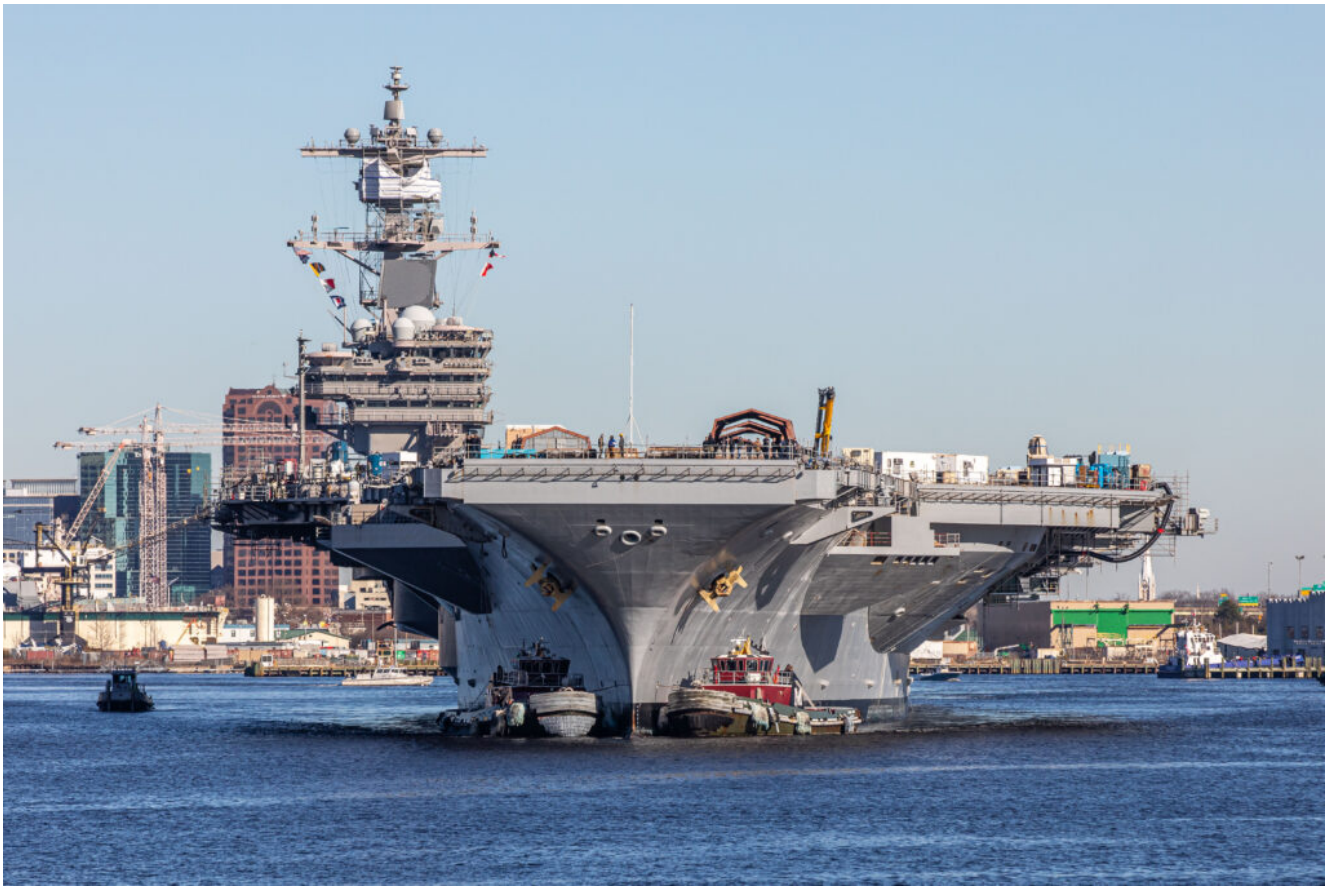
Sen. Roger Wicker (R-Mississippi) said, “this is the most dangerous national security climate we’ve had in decades. Thirty-one amphibs. Three hundred and fifty-five ships. Do the right thing.”

Sen. Tammy Baldwin (D-Wisconsin) said maintaining an adequate amphibious fleet is “an issue of national security for all of us.”

General Chris Mahoney, the assistant commandant of the U.S. Marine Corps, also addressed the group and noted how easy it is for adversaries to interfere with international shipping, citing the attacks by Houthi rebels in the Red Sea.

“I’m going to remain in lockstep with the CNO when she says, ‘I need more players on the field,’” Mahoney said. “We need to keep the [production] lines hot, multiple lines.”

Delay to CVN 82 Buy Could Endanger Industrial Base, New Industry Report Says



Norfolk Naval Shipyard welcomed USS George H.W. Bush (CVN 77) for a Planned Incremental Availability Jan. 11. The Navy should continue with two-ship buys for future carriers at regular intervals, a new industry report says. *Norfolk Naval Shipyard | Shelby West*

Delaying the next two-aircraft carrier buy beyond fiscal year 2028 would lead to sizable delays, growing cost and would have a serious impact on the shipbuilding industry and its supply base, according to a new report from the Aircraft Carrier Industrial Base Coalition (ACIBC).

“There are significant challenges that most of the companies in the supply base face,” ACIBC Chair Lisa Papini told Seapower, including “inflation, supply chain disruption and workforce issues.”

As was expressed last week by shipbuilder HII, the industry favors a “2-3-4” approach, with a two-carrier buy, three years of advance materials procurement and four years between carrier construction.

“Companies in the supply chain are planning work based on the stability of that schedule. When we maintain that schedule, that is when we are optimized and when we will perform at our best,” she said.

The ACIBC report notes that even a two-carrier buy in fiscal 28 means six years between the construction of CVN 81 and 82, and “nearly 50% of AP [advanced procurement] suppliers are already expected to have stopped continuous production [i.e., ‘go cold’] for their respective CVN material/equipment by then.”

Bumping the contracting for CVN 82 beyond fiscal 2028 would make things even worse, with 40% of carrier suppliers “saying they will need to lay off workers and/or deprioritize military shipbuilding and explore more commercial options,” the report says.

Papini said the delays and uncertainty are harmful to the industrial base, which is widespread — aircraft carriers are built and maintained with parts from more than 2,000 businesses in almost every state in the country.

A two-carrier buy means more lead time for raw material, which is now taking longer to procure than in the past, and also on the workforce itself, Papini said. “If we can place material on order earlier, that would help with the schedule.”

It would also help avoid “peaks and valleys” where shipbuilders become idle and are forced to lay off workers, which in turn makes the overall industry less attractive to workers.

“When that happens, we lose trained, highly qualified people,” she said. “And there’s a ramp-up period if we have to start up again. The workforce is at its best with steady, consistent funding and shipbuilding schedules.”

The decision on the buy for CVN 82 and 83 is expected to be in

the next president's budget, expected to be released soon. ACIBC is planning to conduct briefings on Capitol Hill in March with a second, more comprehensive report.

Papini said she welcomes the recent announcement from Secretary of the Navy Carlos Del Toro that he has ordered a comprehensive review of the Navy shipbuilding industry, with an interim progress review due in 45 days.

"He's got a commitment in there that he is looking at recommended actions for achieving a healthy U.S. shipbuilding industrial base," she said. "I think we're talking about ways to achieve that, that's hopefully what this survey is raising."

The new study includes a look at three main major challenges to aircraft carrier suppliers, their impact and ways to resolve them, as drawn from a survey of suppliers across the country:

Inflation

- Challenge: 95% have faced challenges due to rising costs from inflation
- Impact: 79% have experienced raw material cost increases of at least 7%
- Resolution: 91% regard multi-ship "block buys" critical to offsetting inflation and contributing to the health and future of their company.

Supply Chain Disruptions

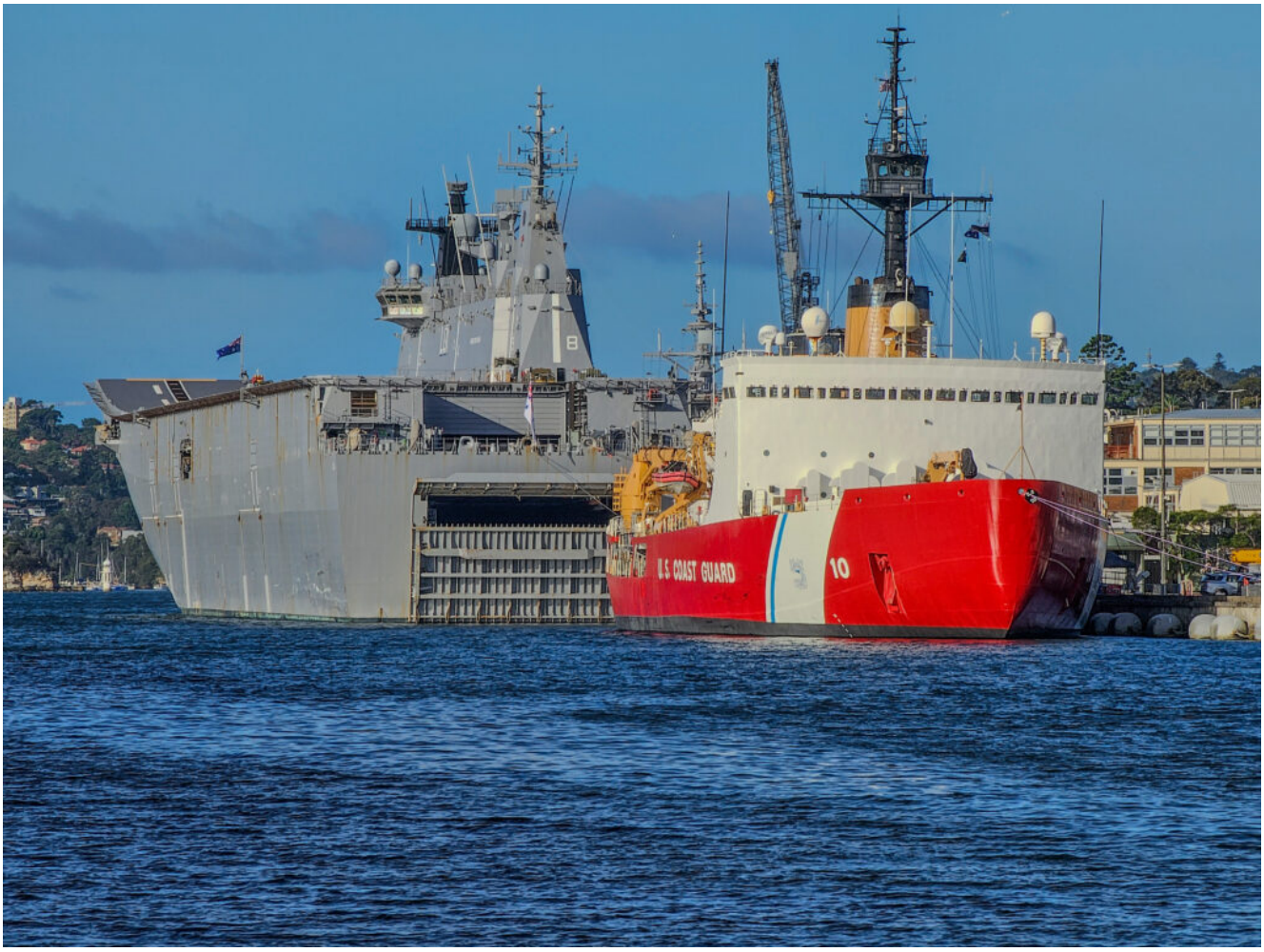
- Challenge: 91% have faced challenges as a result of material availability/delivery
- Impact: 76% have experienced an increase in the amount of time it takes to build and deliver their products
- Resolution: 64% regard earlier advanced funding critical

to addressing increased material lead-times and meeting required in-yard dates.

Workforce Issues

- Challenge: 85% have faced challenges hiring, training, and retaining their workforce
- Impact: 32% believe workforce-related challenges have had a detrimental impact on their ability to fulfill contracts
- Resolution: 76% believe 3- or 4-year centers are optimal build intervals with 60% saying operating under four-year construction intervals will enable the hiring, retention and training of a workforce.

Polar Security Cutter Must Overcome Shipyard Shortages Before it Can Break Ice



U.S. Coast Guard Cutter Polar Star (WAGB 10) is seen moored up next to HMAS Adelaide (L01) at HMAS Kuttabul, Sydney, Australia, Dec. 12, 2023. *U.S. Coast Guard | Petty Officer 3rd Class Ryan Graves*

ARLINGTON, Virginia — The polar security cutter, the Coast Guard's planned next-generation icebreaker, has an obstacle to break through before it can begin breaking ice — a lack of welders and engineers in the shipbuilding industry.

Rear Admiral Chad L. Jacoby, the assistant commandant for acquisition and chief acquisition officer for the Coast Guard, brought up that concern while giving an icebreaker update at the Surface Navy Association's national symposium on Jan. 11.

"We have one polar icebreaker, the Polar Star, right now. It's almost 50 years old. And it's pretty much breaking up McMurdo [McMurdo Station, Antarctica] every year, so it's fully occupied," he said. As a class of one the Polar Star has zero redundancy, "but we are doing a service life extension on that

in order to be able to use the Polar Star until we can build a polar security cutter."

The service has authorized three prototype fabrication units, "so welding has started," Jacoby said. "But it's an interesting challenge. … the availability of trades and the availability of engineers. So, while we're welding, and we need to ramp up very rapidly certified welders on this EQ47 steel, which is very hard to work with, we also need to advance the global design at a rate where they meet in the future and we can authorize production."

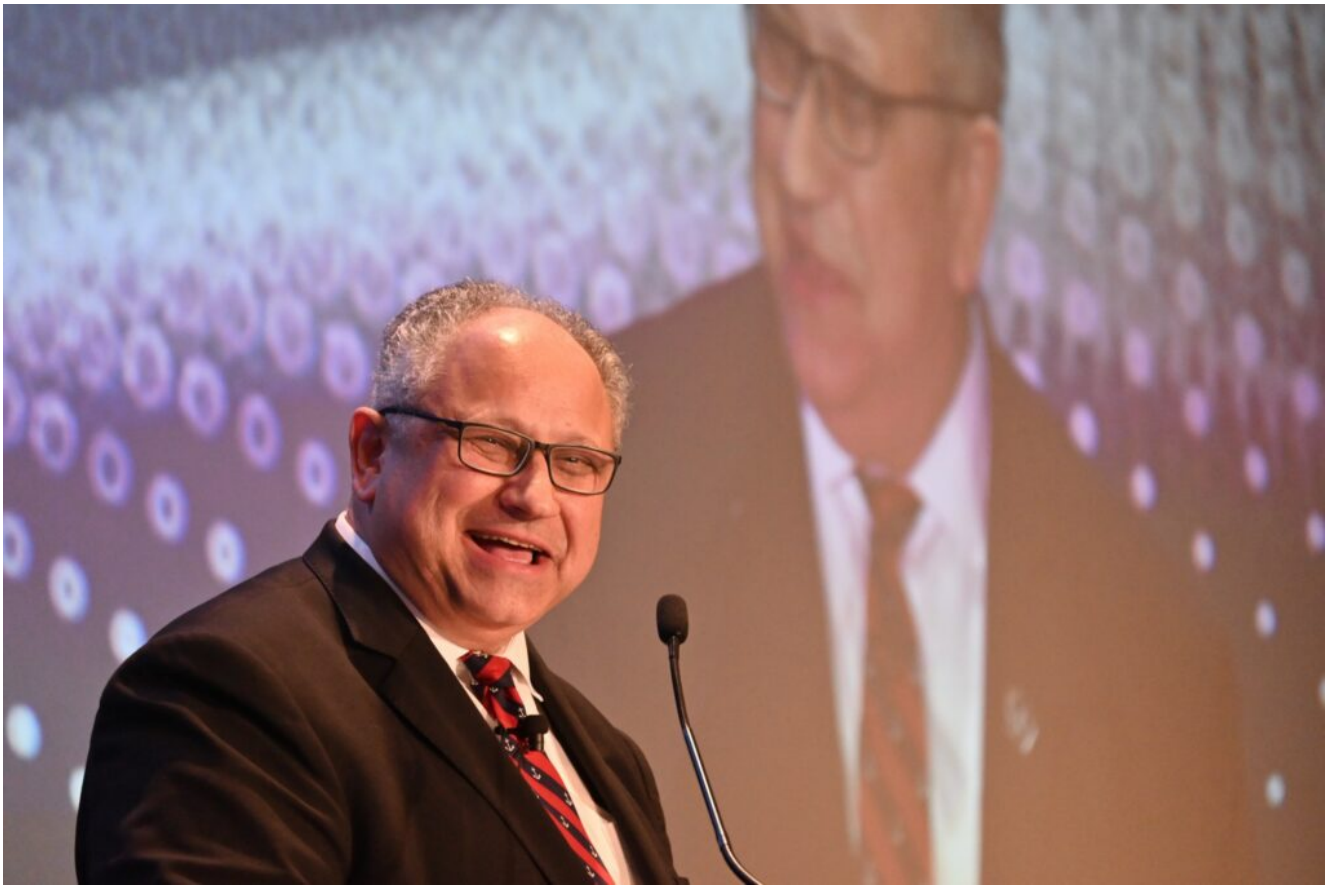
Those are both challenges, he said, acknowledging, "we are behind."

Across all Coast Guard construction programs, "every shipyard says they're going to hire 1,000 or 2,000 more people in order to execute the contracts that we have in place. They all happen to be on the Gulf Coast, so if you add up all those numbers, it's probably physically impossible for every one of those individual shipyards to hire 2,000 more people in order to meet the production rates that we're asking for. So, we are bumping up against probably a physical limitation of the number of workers and engineers out there."

The future polar security cutters aren't just icebreakers, Jacoby said.

"You may have noticed that I called the existing ship an icebreaker. The future ship is a polar security cutter and the distinction there is the polar security cutter is going to do way more than break ice. If you're familiar with the national security cutter, it will have national security cutter-level capabilities: sensors, equipment, on a hull that can go anywhere in the world in any season. So, we're not just breaking ice, we're not just having presence, we're going to be able to execute almost all Coast Guard missions up in the Arctic, down in the Antarctic, anywhere in the world."

Navy Must Innovate to Meet its Challenges, Del Toro Says



Secretary of the Navy Carlos Del Toro speaks at the Surface Navy Association symposium. *Seapower | Brett Davis*

ARLINGTON, Virginia — The U.S. Navy will soon conduct a promised demonstration of a system to rearm ships while still at sea, Secretary of the Navy Carlos Del Toro announced June 10 at the Surface Navy Associations' national symposium.

"Last year here at SNA, I announced that we would conduct an at-sea demonstration of 'rearm at sea' using the transportable rearming mechanism, called TRAM, at Port Hueneme. In this critical decade, the near-term deterrent effect of fielding TRAM in the fleet cannot be overstated," Del Toro said.

In the year since, he said the funding was procured and

preparations are being finalized for the test, “which I have directed to take place no later than this coming summer,” he said.

TRAM is designed to allow the rapid reloading of Vertical Launching System cells in up to sea state 5 – waves of eight to 13 feet – using the fleet’s existing interfaces. “This capability will herald nothing short of a revolution in naval surface warfare logistics,” he said.

“As TRAM delivers an at-sea reload missile capability to the fleet, we look forward to working with industry to improve our missile supply through efforts like the Naval Modular Missile program as well,” he said. “That program will use common components across the family of naval missiles, increasing our efficiency and resilience in manufacturing.”

The sea services are coping with aging equipment and facilities, sub-par recruitment and surging threats around the world – Del Toro noted the “pacing threat” of China, the ongoing threat of Russia and the newer threats from Iran-backed Houthi rebels in the Red Sea.

He and other speakers said the services are responding to these issues with innovative equipment, such as TRAM, closer ties with international partners and a renewed focus on the warfighter.

“To maintain a global, sustainable maritime posture, we must continue to innovate. Innovate,” Del Toro said. “The company, the enterprise that is not constantly innovating is dying on the grapevine.”

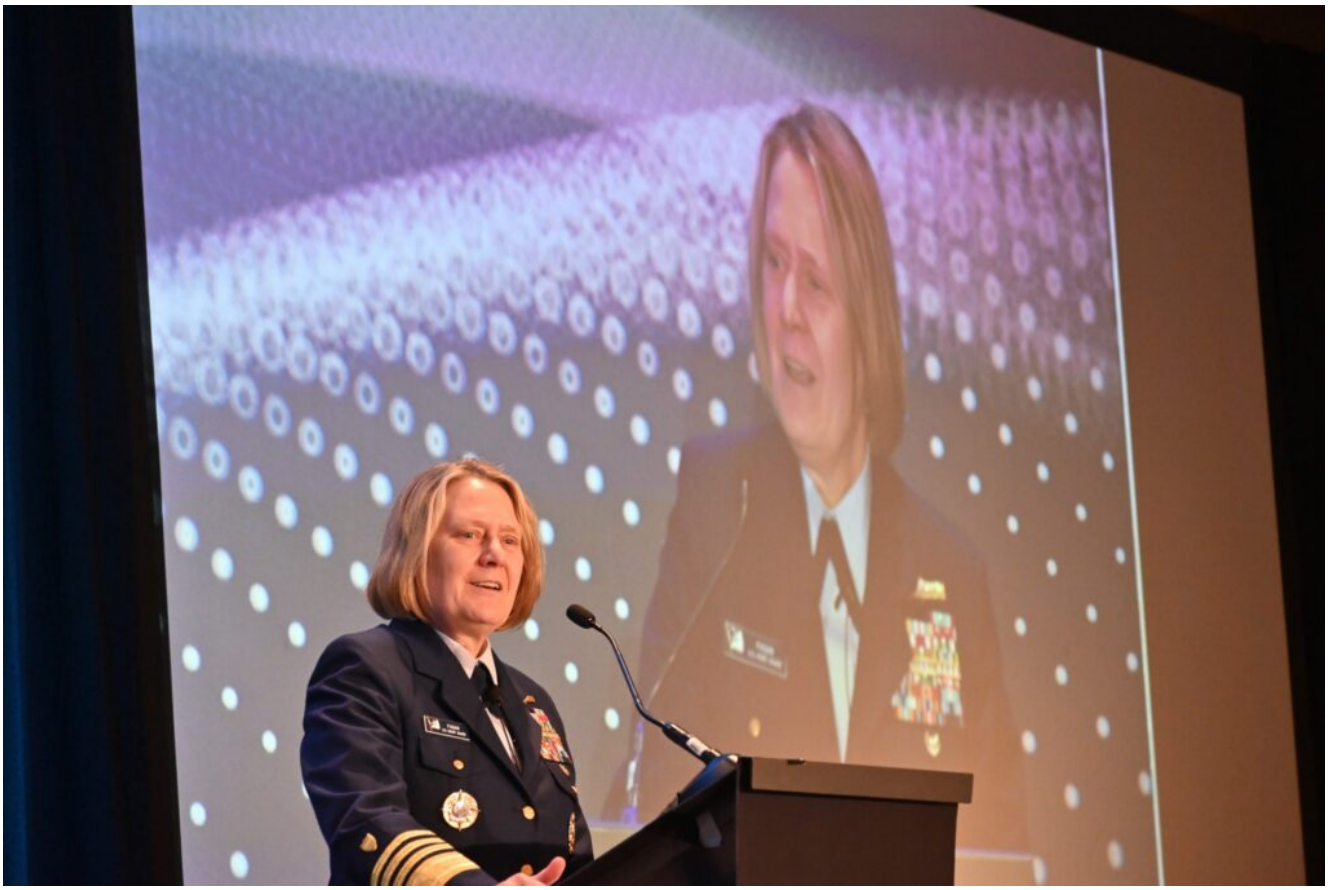
That includes new platforms such as the DDG (X) next-generation destroyer as well as a hybrid fleet that includes unmanned systems, such as have been demonstrated in real-world deployments by Task Force 59.

“Our hybrid fleet is not a distant vision anymore, or a hazy

concept outlined on a napkin, uncertain and undefined. The hybrid fleet today is a tangible reality, operational and actively preparing to help dominate the battlespace in every way," he said.

Navy plans also include strengthening partnerships with other nations, such as the ones who have signed up for Operation Prosperity Guardian to respond to Houthi attacks in the Red Sea.

"We simply cannot do this alone," Del Toro said. "As history has taught us, the United States of America has flourished because of our many international partners, our friendships … by consistently deploying alongside our allies and partners abroad, we force our adversaries to face a stark reality — that a fight with the American naval forces and the forces of like-minded nations will be costly and ultimately unwinnable."



Coast Guard Commandant Linda Fagan speaks at the SNA symposium. *Seapower | Brett Davis*

Coast Guard Commandant

Coast Guard Commandant Linda Fagan also spoke Jan. 10 and also stressed the value of international partnerships for the Coast Guard as it maintains a strong presence in the Arctic and fights illegal, unreported and unregulated (IUU) fishing.

“In some regards, we’re like many of the world’s navies,” she said of the Coast Guard’s worldwide footprint.

One of those international tasks is the struggle against IUU, where ships from one nation illegally enter the exclusive economic zone of another country to steal fish or other sea life.

“It is a crime, it’s theft of natural resources, it erodes sovereignty, and there are nations who are operating with impunity and stealing from other nations, and the Coast Guard has a role in helping those nations enforce their own sovereignty and create capacity to counter that activity,” she said.

For example, the coast Guard’s fast response cutter Frederick Hatch just completed a 47-day expeditionary patrol to support Operation Blue Pacific, which includes operations with authorities from the Philippines, Palau and Papua New Guinea. The ship’s crew helped those nations take enforcement actions against ships fishing illegally in their waters.

Far from the balmy Pacific, the service also plays a key role in supporting shipping in the Arctic and Antarctica. This is challenging given that the service has only two functioning icebreakers, the heavy icebreaker Polar Star and the medium icebreaker Healy.

The service plans to buy three new polar security cutters to replace the aging Polar Star, which was commissioned in 1976 (Fagan herself served as an ensign on it).

While climate change means there’s less ice for longer periods of time in the Arctic, it’s still there, and “getting a polar

security cutter fielded is an absolute top priority for the organization," she said. "We're on budget, we're on contract for the polar security cutter."

As with the Navy, the Coast Guard struggles with aging equipment (such as the Polar Star) and recruitment numbers that aren't hitting the target. "The Coast Guard is not unique in our need for people," she said.

At the beginning of COVID, recruitment went down and has stayed down. The service has invested in recruiters and "we have stopped that descent," and the talent the Coast Guard is attracting is "bright, they are motivated, they know why they want to serve, they understand the value proposition of the Coast Guard," she said.

There are ways the Coast Guard can deal with the shortage of personnel, including speeding the decommissioning of aging cutters, as well as making serving on ships more attractive, such as by adding communications services like SpaceX's Starlink.

Fagan said when she served on the Polar Star, she basically disappeared for four months, calling her parents when the ship pulled into Australia. But recently, while Healy was in the Arctic, the CO was sending her photos of polar bears and walruses in real time.

"These are the kinds of investments that become critical for on-board lifestyles … crews want to be able to talk to their families and not disappear for four months," she said. "This is the workforce that we're on-boarding and we need to provide the tools that enable those kinds of engagements and expectations of the force."

Navy Honors 'Human Tugboat' by Naming DDG 142 for Hero Charles French

Secretary of the Navy Carlos Del Toro announced Jan. 10 that

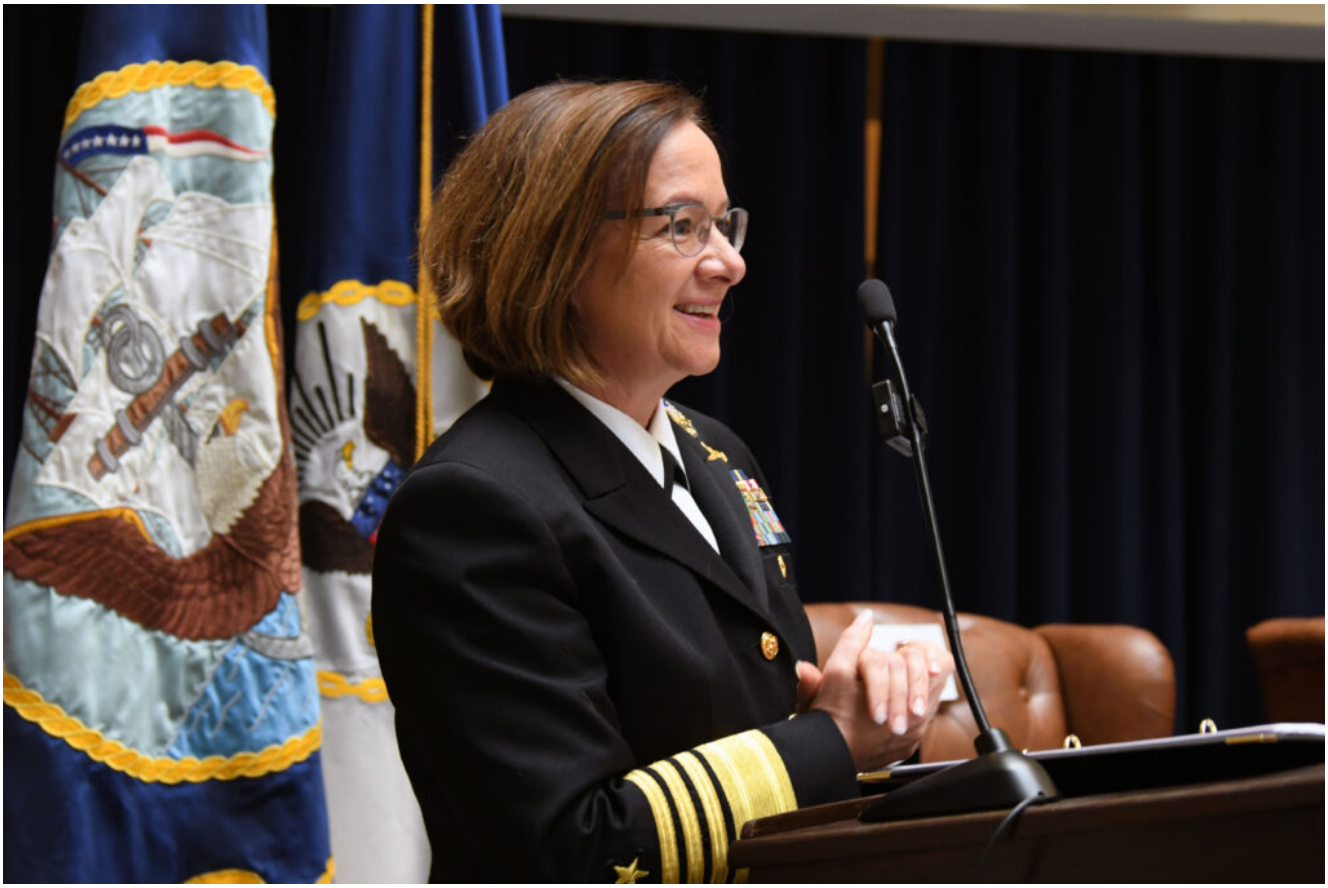
the Navy's newest destroyer, DDG 142, will be named after Petty Officer First Class Charles Jackson French, dubbed the "human tugboat" for an act of bravery in World War II.

On Sept. 5, 1942, French's ship, the USS Gregory, was sunk by the Japanese navy during the battle of Guadalcanal. He gathered 15 injured shipmates and swam through the night to carry them to an island where they would be safe from capture," defying the odds and the sharks with nothing but his own grit and compassion," Del Toro said.

He was recommended for the Navy Cross for his actions, but received only a letter of commendation, which Del Toro said is "what I actually give out today for a really good PowerPoint presentation."

Del Toro said the Navy is finally giving French his due, naming a rescue swimming training pool at Naval Base San Diego for him, and now, "with long overdue recognition," DDG 142.

Peacetime Naval Planning Can be Crucial to Future Wartime Footing, CNO Says



Chief of Naval Operations Adm. Lisa Franchetti, shown here speaking in December at Washington, D.C.'s historic Navy Yard. *U.S. Navy | John Belanger*

ARLINGTON, Virginia – The United States and its Navy are at a historical inflection point similar to ones it experienced in the past, and service officials and planners should respond the same way officials did then, said the Navy's relatively new chief of naval operations, Admiral Lisa Franchetti.

Speaking Jan. 8 to the Surface Navy Association's annual conference, Franchetti said the situation of the U.S. now is similar what was going on in the 1930s and 1970s. In both cases, visionary service leaders in peacetime looked ahead and prepared for war and built a Navy that was up to the task.

"I consider the 1930s and the 1970s as two decisive decades that sort of rhyme, in key ways, with where we are today," she said. "… There are historical parallels that offer key lessons for us today."

In the 1930s, the United States was still reeling from the

Great Depression and had a shrinking shipbuilding base.

Fleet planners, their eyes on the threat from Imperial Japan, conducted a series of maneuvers, called fleet problems, to provide realistic training for Sailors. Planners also conducted extensive wargames. That let to a series of war plans that prompted the move from a fleet based on World War I battleships to a more integrated force that included aircraft carriers, dive bombers and torpedo bombers, all of which proved vital in World War II.

Ninety-five percent of the ships that fought in the war, including at the battles of Coral Sea and Midway, and in the Guadalcanal campaign, were fought with ships born from peacetime work.

“How we fight determines what we fight with. Warfighting concepts must drive the design of our warfighting platforms, our capabilities and our strategies,” Franchetti said.

In the 1970s, the Navy was a power projection force focused on supporting land troops in Asia amid a limited defense budget and high inflation. The nation had a hollowed-out shipbuilding industry and ended up with an aging fleet unprepared for escalating maritime competition from the Soviet Union.

Navy planners and leaders, including CNO Elmo Zumwalt and his successors, conceived of a fleet capable of global sea control, resulting in strategies that would “lay the intellectual groundwork” for the Navy’s weapons buys in the 1980s, which led to the introduction of the F/A-18 Hornet, the Los Angeles- and Ohio-class submarines, the Spruance and Arleigh Burke destroyers, Aegis, Harpoon and Tomahawk weapon systems, and others, she said.

Warfighting Lens

All of those systems were planned in peacetime but crucial when war came, Franchetti said, and the country is in a

similar position now. She and other leaders are looking a new concepts, weapons and tactics through exercises and war games, as was done in the 1930s and 1970s, although now with advanced simulation technology.

“Today, our U.S. Navy is taking a similar approaching by viewing everything we do through a warfighting lens,” Franchetti said. “We have energized our wargaming enterprise at the Naval War College and at our Warfighting Development Center to empower leaders at all levels to think differently about how we need to operate in uncertain, complex and rapidly changing environments. Leaders who are ready to take initiative and be bold.”

The Navy is also undertaking fleet exercises and battle problems to develop and refine operational concepts to define the requirements for the future fleet, she said, including with Task Force 59, which has tested unmanned systems and other hardware and software in real-world situations.

“The actions taken during these respective decades remind us that we must be forward thinking in prioritizing our warfighting advantage, and that we must increase our capability and capacity in peacetime so we can be ready to surge effectively in war,” she said.