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.

Caudle: Navy Must Boost Surge Capability to Face Peer Competition

Adm. Daryl Caudle, Commander, U.S. Fleet Forces Command, congratulates recruits during a capping ceremony inside USS Trayer at Recruit Training Command last October. *U.S. Navy | Mass Communication Specialist 2nd Class Christopher O'Grady*

ARLINGTON, Virginia – The U.S. Navy must improve its workforce training, maintenance and surge capability to meet peer adversaries such as Russia and China, and is taking new steps to accomplish that goal, said Adm. Daryl Caudle, commander of U.S. Fleet Forces Command.

Speaking at the Surface Navy Association's 36th National Symposium, Caudle said today's joint force was shaped by a two-decade land war following a sustained peace after the end of the Cold War, and military leaders are now trying to "get the rudder over" to a multi-domain, high-speed, long-range warfare against potential enemies such as Russia and China, or both together.

"When we need to turn the volume up quickly on delivering combat power, the hardest spigot I own is and will always be inextricably related to building and developing human capital

– our most precious resource – our warriors," he said.

Caudle said he is focusing on Contingency Response Forces, those required to be ready to flow for combat within 30 days. "This is where I am applying my efforts. Readiness cannot be left at the pier, delayed in the shipyard, or undelivered on a production line. Further, it can't be driven by empty recruiting stations or empty repair lockers."

The Navy's current Optimized Fleet Response Plan, or OFRP, "was not built to generate combat ready ships and air wings to meet the demand signal against peer adversaries," Caudle said. "During peacetime force generation, the OFRP provides a steady supply of ready naval forces for a wide range of global presence operations. But it is not optimized to shift into high gear and generate, deploy, and regenerate a large surge of combat ready maritime forces."

To help with that surge, Caudle's office is developing the Global Maritime Response Plan, intended to give the chief of naval operations "a way to shift the Navy from peacetime to wartime" by bolstering some key organizations within the service, combining others and devolving or shutting down lower-priority commands and functions. It will also include having shell contracts in place, ready to fill out and execute.

"The Global Maritime Response Plan development is well under way," Caudle said. "We are currently building out the Decision Support Matrices and the Response Conditions, or RESCONs, [think like DEFCON] that will be used to control how our Navy will be put on the required warfighting footing level to best support operational commanders."

In some cases, he said, the effort simply involves compiling and codifying plans already in place at Navy organizations.

Working with Industry

The defense industry has gained traction in getting armaments and supplies to the fleet, Caudle said, one year after chastising the industry for falling behind in meeting defense needs.

“Despite the significant challenges we face with long-lead time parts, shipyard delays, less than optimal living conditions during maintenance periods, and personnel shortages across many rates and NECs, you all are just crushing it,” Caudle told SNA attendees. At last year’s event, he delivered a blunt warning to industry that he wouldn’t tolerate ordnance delays blamed on COVID or supply chain issues.

“To be honest, after I spoke at SNA last year, I wasn’t so sure how my remarks would be received, and even more important, acted on by the defense industrial base,” he said. “After voicing my displeasure about our inability to produce and deliver ordnance on time and in sufficient quantity, complete maintenance availabilities with modernizations efforts on time and on cost, and the need to be at flank speed to improve productivity, efficiency and build rates from our public and private shipyards to deliver new construction and overhauled ships to our fleet … instead of an adverse reaction, I think it really struck a chord with industry leaders, leaders within the Department of Defense, and with many congressional members who see the problems I identified in the same way.”

Caudle said he has been impressed with how many industry partners have reached out to his office and Navy program managers to step up production “through improvements using a ‘Get Real, Get Better’ approach in which we embrace the red together, self-assess together, and correct identified challenges together. Truly assessing weak areas and shifting rudder hard over and revving the gas to get back on PIM [plan of intended movement].”

In a separate interview with media, Caudle said after last

year’s speech he worked with Vice Adm. Francis Morley, the principal military deputy assistant secretary of the Navy (research, development and acquisition) to bring in industry leaders that build munitions such as the Standard Missile and anti-ship missiles to “actually hear their perspective on places where we as the government could help them.”
Some solutions include multi-year contracts, how the Navy works with industry on quality control tests and test equipment improvements that need to be done.

“I probably overstated some things and got educated on some things, and I think they understood that we need these weapons, and their motivation to do that at pace was illustrated to me in spades,” he said.

In his remarks this year, Caudle cautioned that “while we have made some gains since my remarks last year at SNA, I would argue that we have not achieved the level of readiness, production, and deliveries required in both capabilities and capacity to claim we are ‘up on plane’ with a winning trajectory. Make no mistake about it – we face formidable threats on the horizon. And, while the nature of war never truly changes, these threats are fundamentally changing the character of how we prepare our Navy to fight.”

HII Touts Banner Year, but Carrier Scheduling Doubts Loom

A Pre-Commissioning Unit Gerald R. Ford (CVN 78) arrives at Naval Station Norfolk in 2017. Delays to contracting for a follow-on ship of the class could cause supply chain trouble, according to shipbuilder HII. *U.S. Navy | Mass Communication Specialist 2nd Class Kristopher Ruiz*

ARLINGTON, Virginia Shipbuilding giant HII had higher than usual growth through the third quarter of fiscal 2023, but a potential delay in contracting for two new aircraft carriers could lead to supply chain disruptions, the company CEO said in a media briefing on Jan. 8 in advance of the Surface Navy Association symposium this week.

“The company’s actually doing pretty great,” said CEO Christopher D. Kastner, who took over the company reins in March 2022. HII racked up 5% growth through Q3 of fiscal 2023, higher than its historical average of 3%.

“We’ve had a very solid 2023, we’ve grown at about 5% year-over-year through Q3, raised guidance on our top line for sales and free cash flow on our Q3 earnings call, so … we’re

kind of at an inflection point from a growth standpoint," he said.

Kastner said some company priorities appear to be supported in the pending fiscal 2024 defense authorization, including the LPD 33 amphibious warship. "Keeping the amphib line is very important to Ingalls" shipbuilding, Kastner said.

The company's two shipyards have 41 ships in production and its Mission Technologies division, which builds and develops unmanned systems, AI systems and others, had more than $5 billion in awards during the year, including a $350 million contract for small unmanned underwater vehicles.

Seventeen submarines will go under contract in the next year to 18 months, and progress is being made on the AUKUS program to provide Australia with nuclear-powered submarines.

"We expect revenue to flow in 2024," Kastner said. "We don't believe it will be financially material in '24, but there could be revenue flowing in '24."

Carrier Schedule

One potential fly in the ointment is the possibility of the next two-ship aircraft carrier buy being shifted by a year or two, from 2028 to 2029 or even 2030. In 2019, the Navy contracted for two carriers, CVN 80 and 81, the future Enterprise and Doris Miller.

"I think there's a broad understanding that the supply chain is a material risk to achieving the production schedules on future Navy programs. And our job as shipbuilders is to manage risk," Kastner said. "If we can eliminate one of those risks, or significantly reduce one of those risks by getting advanced procurement in place, well ahead of the ship being ordered, it only makes sense to do it. We know the ships are going to be built, they have broad support, so let's eliminate risk, let's get the major suppliers under contract early enough so they

can plan and they can make their production schedules.”

A Newport News Shipbuilding executive, who asked not to be named, said the company is promoting a 2-3-4 concept for USS Gerald Ford-class aircraft carriers to create a “stable, predictable and consistent cadence within our industrial base.” That means a two-ship buy; at least three years of advanced procurement funding; and four-year build intervals between ships. “I believe the 2-3-4 strategy needs to be codified as the standard moving forward,” he said.

A delay in the procurement of CVN 82 is “extremely disappointing,” and could break the momentum of a rebuilding carrier production line “and have a detrimental impact on the entire nuclear shipbuilding industry, including submarine construction,” he said.

Making Space for Women Aboard Coast Guard Cutters Helps with Retention, Careers

BM3 Hailey LaRue of the U.S. Coast Guard Cutter Wire in Saugerties, New York, in 2021. LaRue was able to serve on the Wire after Senior Chief Petty Officer Ramona Mason worked with service officials to create extra rack space. *U.S. COAST GUARD / Daniel Henry*

On June 1, the Coast Guard made history with the ascension of Adm. Linda Fagan to its top position as commandant, relieving outgoing commandant Adm. Karl Schultz. She took over as the first woman to head the Coast Guard and the first woman to head any U.S. military service.

Fagan arrived at that position at a time when there are still a few Coast Guard cutters afloat where women can't serve due to a lack of rack space. That's an issue the service has been working to eradicate for years and is on the cusp of doing so, a move expected to help boost women's careers in the service and increase retention.

Of the service's approximately 260 cutters, only 50 are male only, according to the Coast Guard, and those cutters are slated to be replaced. All new cutters coming online are able

to accommodate male and female crewmembers.

“With the modernization of our fleet, that will all be taken care of. All the newer cutters are being built with mixed crews on board in mind,” said Senior Chief Petty Officer Ramona Mason, the enlisted women afloat coordinator at Coast Guard headquarters in Washington, D.C. “All these new ones are already mixed-gender berthing.”

Even before all the cutters are ready, “We have gotten extremely creative, to create more opportunities for female enlisted members to serve underway,” she said.

“With all these creative ways that we have come up with, our afloat numbers for enlisted women afloat has gone up. We have way more females serving on afloat platforms now than we ever did before, and the numbers have gone up every year,” Mason told Seapower. “And it’s all because they are choosing, they wanted to go afloat. We’re giving them the opportunities now.”

“Today more women are remaining in our service longer,” Schultz said in his annual State of the Coast Guard speech in 2022. “Today we have 375 more women in the service at the critically important E6/E7 and O-4 mid-grade leadership ranks than we had five years ago in 2017… that’s a 28% increase of women at these mid-career pay grades, and a trend that outpaces their male counterparts.”

He also said the service is “making progress” on the acquisition of 30 Waterways Commerce Cutters, tenders that will maintain 28,000 aids that mark more than 12,000 miles of navigable inland waterways.

“And, for the first time in history, our entire inland fleet will be able to accommodate mixed-gender crews, providing all junior enlisted members these unique afloat experiences,” Schultz said.

President Joe Biden spoke at the Coast Guard change of command

ceremony when Fagan took the service's top spot.

"When Admiral Fagan commissioned in 1985, only five years after the first women graduated from the academy, she was one of just 16 commissioned female ensigns – only 8 percent of her graduating class. She was the only woman aboard Polar Star for the first set of orders," Biden said.

"Currently, the Corps of Cadets at the Academy – more than 1,000 cadets strong – 40 percent are women.

Forty percent are women."

Even as more women enter the service, keeping them there can be a challenge.

A recent study by the RAND Corp., "Why Do Women Leave the Coast Guard, and What Can Be Done to Encourage Them to Stay?" listed a variety of issues that answered the title question, among them the lack of berthing.

"Female focus groups cited issues with advancement, including the perception of bias in subjective evaluations, as influencing decisions. Furthermore, participants noted that berthing restrictions for women can limit opportunities," the study says.

Mason said it's important to provide as many afloat opportunities as possible to female Coast Guard members, as it can affect their career.

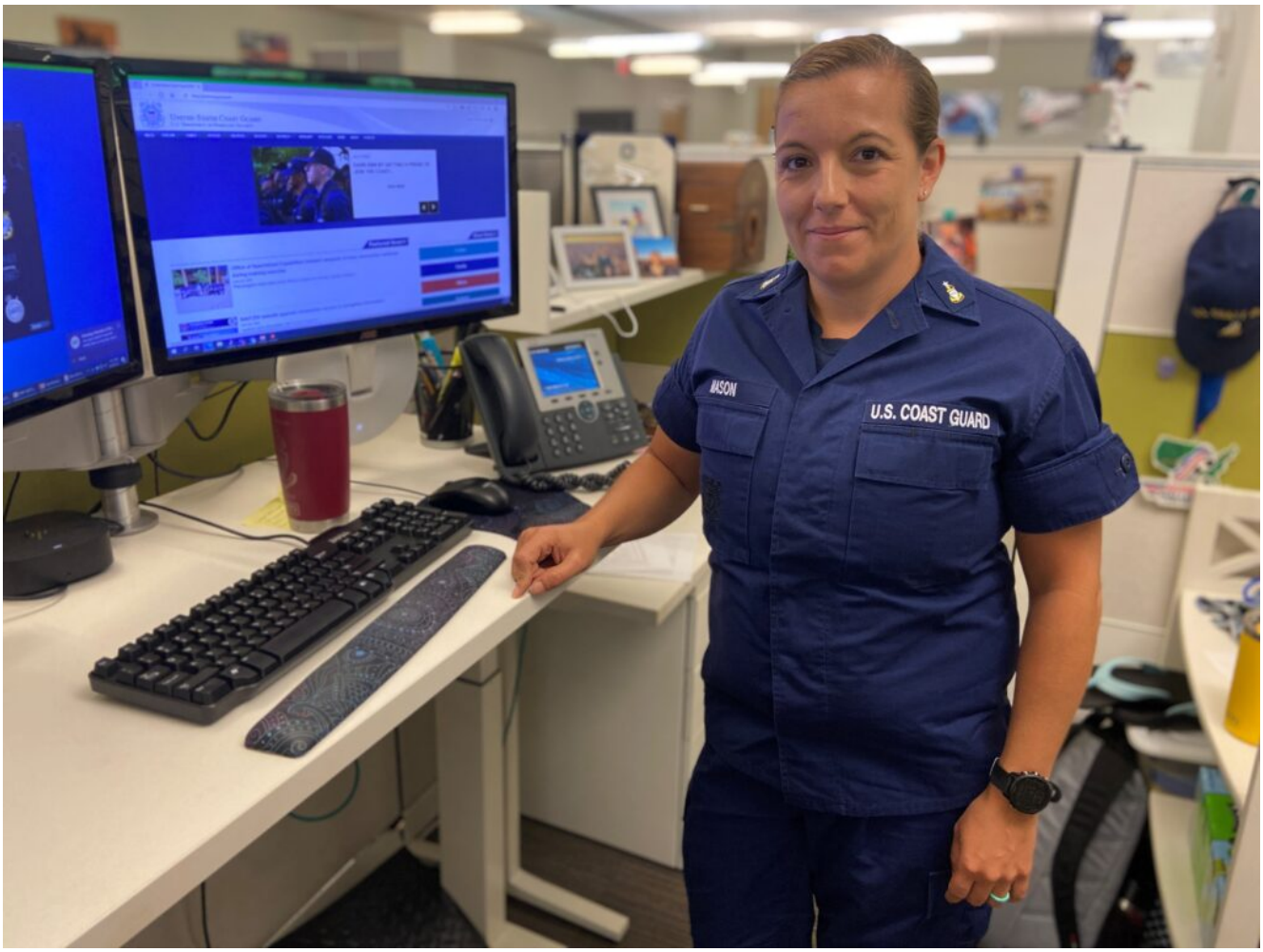
"Certain rates have requirements that you have to have a certain amount of years afloat, so it is a requirement for advancement. It's a requirement for certain ratings or certain competencies that you can only earn afloat," she said.

And while anyone in the Coast Guard can go afloat at any point in their careers, and are encouraged to do at least one tour afloat, "in order for advancement, in certain rates you have to receive the afloat time at a certain point in your career,"

she said.

Making even smaller Coast Guard cutters able to accommodate mixed crews has other benefits that can aid in retention, Mason said.

“We’ve opened up a lot of the smaller cutters with enlisted females, which have always been in higher demand for the females due to the shorter underway time and the family life you can have when you’re only away for two to three weeks versus two to three months,” she said. “With us opening the smaller space to females, it has helped with retention, because they now see they can get under way on small platforms and not be such a family burden.”



Senior Chief Petty Officer Ramona Mason has worked to find rack space aboard Coast Guard cutters to enable women to serve on them. *U.S. COAST GUARD / Richard J. Kolko*

Making Room

Part of Mason’s job is to find room on Coast Guard cutters for women even if they aren’t designed with separate living quarters. She does that by sometimes repurposing space.

In a 2021 post to the Defense Visual Information Distribution Service, Chief Petty Officer Ryan Burger recounts how he got a call from Mason after he was appointed officer in charge of the Coast Guard Cutter Wire, a 65-foot ice-breaking tug. She asked if he could accept a female Boatswains Mate Third Class. He said yes. When she asked if he could accept another female as well, he said they had to do some work.

They ended up removing a convertible fold-out rack that had been used for executive petty officers and revamping it to hold two racks. They then proceeded to make a similar change to two other 65-foot cutters operated by Sector New York.

“We’ve assigned women to these cutters in command cadre positions in the past, however, assigning a third-class boatswains mate aboard is new,” Mason told writer Daniel Henry. “For the first time, a woman in a non-command position has received orders to the Coast Guard Cutter Wire.”

Petty Officer Third Class Hailey LaRue, a boatswains mate who was then able to serve on the Wire and reported there in the summer of 2020, said the move broadened the learning opportunities available to her, which wouldn’t have been possible on the 87-foot cutter she had served on previously.

“I knew I wanted to go afloat out of A-school to get rated sea time so that it would help me in my future career,” LaRue said. “It’s smaller and it’s a tight knit crew. There are tons of learning opportunities on both deck and engineering side so you’ll become a better-rounded individual in your [rating]. There are opportunities you’ll get here that you won’t necessarily get on a bigger cutter where you’re focused on a specific area.”

Vice Adm. Linda L. Fagan is promoted to the rank of admiral during a ceremony at Coast Guard Headquarters, June 18, 2021. Fagan is the Coast Guard's first woman to serve as a four-star admiral. *U.S. COAST GUARD / Lt. j.g. Pamela Manns*

Cmdr. John Singletary, Chief of Waterways Management for Sector New York, told Henry, "providing this mixed gender berthing gives those members the opportunity to start their careers out early. They get to lead as a BM3 or a BM2. Eventually that path will lead to XPO positions on the new waterways commerce cutters that are being commissioned in late 2024."

Not Just Afloat

The need to create berthing space for female Coast Guard members isn't just for the water. In late September 2021, Coast Guard Station Morro Bay in California, part of Sector Los Angeles/Long Beach, made such an addition, according to the Coast Guard.

The station is home to 27 Coast Guard members and two 47-foot

motor life boats. The station constructed a one-story, 806 square foot addition to the existing facility, creating room for up to six additional crewmembers and allowing overnight duty crews to be made up of men and women.

Women had been assigned to Morro Bay previously, but couldn't always be accommodated for some of their duties due to a lack of berthing.

"We needed a dedicated accommodation for [women] and we now have that with the building expansion," Petty Officer 1st Class Joshua Sheppard said in a My CG blog post. Women "can now be completely integrated as a member of the unit without being excluded from missions or opportunities and without posing a significant burden to the operational readiness."

Mason wasn't part of that effort – her duties extend only to women who serve afloat – and said the part of her job devoted to finding female berthing is coming to an end as the Coast Guard continues its modernization.

"The coordination part will go away, but the advocacy for women afloat will stay. My job is somewhat more transitioning into a women afloat career counseling position as well," she said.

"I do year-round career counseling with all the females in the Coast Guard that are interested in afloat assignments," working on resumes and timetables for them to go afloat, "when should they get underway, when do they have to get underway.

"So, the counseling part will stay around for the enlisted women of the Coast Guard."

Carrier Air Wing 9 Returns from Indo-Pacific Deployment

An E-2D Advanced Hawkeye assigned to the “Wallbangers” Airborne Command and Control Squadron (VAW) 117 arrives at Naval Base Ventura County (NBVC) following a seven-month deployment to U.S. 3rd Fleet and 7th Fleet areas of operations with Carrier Air Wing (CVW) 9, embarked aboard USS Abraham Lincoln (CVN 72). *U.S. NAVY*

SAN DIEGO – Carrier Air Wing (CVW) 9, embarked aboard Nimitz-class aircraft carrier USS Abraham Lincoln (CVN 72), returned from a seven-month deployment to the U.S. 3rd and 7th Fleet areas of operations on Aug. 9, USS Abraham Lincoln public affairs said in a release.

CVW-9 is the first carrier strike group to deploy with a U.S. Marine Corps F-35C Lightning II squadron, Marine Fighter Attack Squadron (VMFA) 314, and the second to deploy with a Navy CMV-22 Osprey squadron, Fleet Logistics Multi-Mission

Squadron (VRM) 30.

During the deployment, Carrier Air Wing (CVW) 9 executed more than 21,307 fixed-wing and helicopter flight hours comprising of 10,250 sorties, 8,437 launches and 8,487 aircraft arrestments.

“Carrier Air Wing 9 Sailors and Marines worked together over the last seven months, providing a credible deterrent to any potential adversary in the Pacific,” said Capt. Lew Callaway, commander, CVW-9. “Naval aviators culminated 100 years of aircraft carrier aviation history operating fourth- and fifth-generation aircraft from a Nimitz-class aircraft carrier at sea. We are grateful for the chance to serve, and celebrate our return to home port, family, and friends.”

CVW-9 participated in dual carrier operations in the South China Sea with the Carl Vinson Carrier Strike Group, as well as joint exercise Valiant Shield in June 2022, and bilateral exercises Noble Fusion in February and Jungle Warfare in March, both with the Japanese Self-Defense Force. Most recently, CVW-9 trained alongside 26 participating nations during Exercise Rim of the Pacific 2022 in July.

“Words cannot express just how proud I am of the Sailors and Marines attached to CVW-9,” said Master Chief Petty Officer Craig Vavruska, command master chief, CVW-9. “They expertly applied their training and faced each mission with strength and resilience. Their families have a lot to be proud of.”

CVW-9 and Lincoln deployed Jan. 3 as part of the Abraham Lincoln Carrier Strike Group. Along with CVW-9 and Lincoln, the ABECSG also consists of the embarked staffs of Carrier Strike Group (CSG) 3, and Destroyer Squadron (DESRON) 21; the Ticonderoga-class guided-missile cruiser USS Mobile Bay (CG 53), and the Arleigh Burke-class guided-missile destroyers USS Fitzgerald (DDG 62), USS Gridley (DDG 101), USS Sampson (DDG 102) and USS Spruance (DDG 111).