We Fight Tonight: Corps Capabilities for a Contested Indo-Pacific

Photo credit: U.S. Marine Corps

Since the 2018 National Defense Strategy reoriented the Joint Force toward great power competition, China – our primary pacing threat – has accelerated its military modernization and ramped up coercive behavior across every domain. Nowhere is this more evident than in the First Island Chain, where Beijing's revisionist ambitions collide head-on with our strategic interests. In this contested space, logistics is no longer a rear-area task – it's a frontline risk. If a capability can't be produced or pre-positioned inside the theater, there's a real chance it won't reach the warfighter at all.

The vast distance between the First Island Chain and the U.S.

power base, combined with China's expanding anti-access/area denial arsenal, or A2/AD, has turned the supply chain from a guaranteed support function into the modern battlespace's Achilles' heel.

Mitigation of this new reality demands a shift in power projection, deliberate global pre-positioning to set the theater and a sustainment strategy that keeps our platforms and support systems agile, resilient and ready for a fight over thousands of miles of unforgiving waters, from the U.S. homeland to dispersed Pacific archipelagos. A recent article in the Wall Street Journal outlined one plausible scenario, a strategic naval blockade of Taiwan, which makes the need for agile logistics and forward-positioned capabilities even more urgent.

When imagining the future fight, the battlespace transforms into a clash across a sprawling maritime theater with dispersed stand-in forces using interior lines and an intricate web of logistical support. The battlespace will be persistently monitored — defined by constant intelligence, surveillance and reconnaissance; autonomous systems; electronic warfare; degraded communications and navigation; and a menu of A2/AD capabilities that limit freedom of maneuver. These conditions fundamentally alter how Marines must think about and execute logistics.

Russia and Hamas targeted their enemies' homelands. China has also targeted the U.S. homeland, sending a signal that the United States and other vital points will not be off-limits from cyberattacks on critical infrastructure, strategic lines of communication, mobilization assets and weapon system vendors to disrupt forces and supply flows. Perhaps unsurprisingly, a recent Wall Street Journal report revealed that Chinese officials privately acknowledged their role in cyberattacks against U.S. infrastructure, admitting to years of intrusions into the computer networks of American ports, water utilities, airports and other critical targets.

In the vast expanse of the First Island Chain, Marines – along with the joint force and partner nation forces – operate today as dispersed, agile nodes, deliberately scattered to complicate enemy targeting and reduce signature detection.

Marine Corps Systems Command's Program Manager Combat Support Systems is actively developing and fielding a suite of capabilities that redefine logistics support in a contested landscape. Guided by the modernizing principles behind the force restructuring plan Force Design, we're building integrated systems where every innovation meshes and enables the Marine Air-Ground Task Force commander to counter threats and disruptions in real time.

The First Island Chain forms the forward edge of U.S. power projection – placing the front line of great power competition just miles from China and thousands from the continental United States. *Image credit: Hudson Institute*

To understand the task at hand, picture a system where every logistics capability supports the kill web. Deployable Logistics IT is a powerful enabler, ensuring asset visibility of medical supplies both in the continental United States and with forward units. Condition-Based Maintenance Plus applies machine learning to enhance decision-making by alerting commanders to maintenance issues and enabling timely resolution to prevent degradation in operational readiness. The Electronic Maintenance Support System equips Marines with diagnostic and networked tools to isolate and troubleshoot faults. Once a fault is diagnosed, Marine fabricators can use advanced manufacturing (3D printing) to produce replacement parts at the point of need in theater – mitigating potential disruptions to the supply web. Signature management capabilities cloak emissions of individual warfighters while the use of netting veils command and control nodes and larger equipment sets.

Meanwhile, an overhauled, more deployable medical support system extends care well beyond the traditional golden hour, ready to stabilize and treat casualties for longer durations, and provides surgical capability in smaller and more adaptive packages. Together, these interlocking capabilities transform potential disruptions into rapid recovery opportunities, sustaining warfighter survivability deep inside the weapons engagement zone and ensuring our forces remain agile and resilient – even when the logistics web itself is under stress.

The sections that follow highlight a few key elements of our integrated logistics capabilities that keep our dispersed Marines one step ahead in the contested Indo-Pacific battlespace.

Advanced Manufacturing

As aggression and the likelihood of kinetic operations increase, we can expect China to shape operations to affect

stand-in forces, disrupt reinforcements deploying from the continental United States to the Pacific, and target the supply chain and commercial vendors once considered protected within the bastion of the homeland. With every link in the supply chain vulnerable, rapid field repairs are essential to sustain operations. The PM CSS is reimagining advanced manufacturing to enable on-demand repairs and critical parts production directly in the field. This technology was tested in real-world scenarios: During Rim of the Pacific 2024, a combined team of Sailors and Marines used metal and polymer 3D printers to print critical components like reverse osmosis pump parts and lot-pressure air fittings aboard ship, keeping the amphibious transport dock USS Somerset (LPD 25) in the fight.

Today, our advanced manufacturing units are forging bonds with partner nation forces by fabricating parts to support Indo-Pacific Command hosts such as Australia, the Philippines, South Korea and Japan. By integrating advanced hybrid-metal and liquid metal jetting technologies into containerized, expeditionary fabrication units, Marines are reshaping the traditional supply chain model — one that often begins in or flows through CONUS and may prove untenable in the opening phases of conflict. This capability pushes manufacturing to the edge, enabling rapid, theater-level production and reducing reliance on vulnerable long-haul logistics.

Complementing this capability, the Digital Manufacturing Data Vault prototype serves as a secure repository to store, process and share technical data packages and digital drawings, ensuring that military and allied industrial partners can rapidly produce required components on demand. This comprehensive approach not only shortens supply chains but also helps keep forces mission-capable, even in the most austere and contested environments.

EOD and Combat Engineering

Explosive threats are one of many A2/AD tools China could throw at us to reduce freedom of maneuver. Explosive ordnance disposal and combat engineering capabilities are being overhauled to meet the demands of a high-threat A2/AD environment. The Littoral Explosive Ordnance Neutralization capability is tailored for coastal environments and littoral transition points, ensuring effective neutralization of explosive threats from very shallow water, from surf zones and on to the beach. For EOD, the LEON capability consists of five increments of equipment: remotely operated vehicle, personal dive equipment, uncrewed underwater vehicle, uncrewed surface vehicle and amphibious underwater ground vehicle.

The Stand-off Defeat of Explosive Hazards family of systems seeks to deploy advanced sensors and ground-penetrating radar for standoff detection via uncrewed air and ground vehicles, keeping Marines out of harm’s way. The integrated sensors and auto-target recognition will identify threats and communicate across the tactical network. Together, these integrated solutions empower our EOD and combat engineer teams to swiftly and safely counter explosive threats, ensuring Marines remain protected and mission-capable in the most contested environments. The LEON and SDEH capabilities are a toolkit to increase mobility for commanders and ensure a path for maneuver into theater and intra-theater for forces and supplies.

Expeditionary medical capabilities like those shown in this field surgical suite enable damage control resuscitation and surgery close to the point of injury, extending patient hold times to support the Expeditionary Advanced Base Operations concept. *Photo credit: Program Manager Combat Support Systems*

Expeditionary Medical Systems

As kinetic threats escalate, expeditionary medical capabilities become essential to sustaining Marine forces. Credible medical care gives Marines confidence to go into harm's way. The Expeditionary Advanced Base Operations concept created a new paradigm in many log functions, and medical is at the front of the line for modernization. The "golden hour," a term coined during the Global War on Terror to describe the decisive period following an injury and casualty evacuation, is no longer the mantra. Now the focus is on sustaining 96-hour patient care hold times due to the distance between units and the overall contested environment. The PM CSS is facilitating that strategy shift by fielding modular, lightweight systems such as damage control resuscitation and damage control surgery. Distributed Marine units are equipped to deliver life-saving trauma interventions directly in austere environments where traditional evacuation routes and

timelines could be unsupportable.

Complementing these innovations, advanced medical devices like the Expeditionary Portable Oxygen Generation System and Expeditionary Medical Refrigeration Unit ensure reliable access to medical-grade oxygen and blood products, even when power is reduced or unsupportable. Concurrently, a pilot modernization effort is underway within the 1st Marine Logistics Group Medical Logistics Company Warehouse. The goals are to provide a garrison and deployable capability with radio-frequency identification scanning, a dashboard for medical asset visibility and a decision support tool that can aid in deployment and ordering optimization — saving taxpayer dollars on wasted supplies and reducing labor requirements. These integrated solutions ensure Marines receive uninterrupted, advanced medical support, dramatically enhancing survivability and sustaining lethality deep within contested zones.

Uniforms and Signature Management

Operating in the contested Indo-Pacific — especially within the First Island Chain — requires our Marines to obscure sophisticated enemy sensors across multiple spectrums. Our Ultra-Lightweight Camouflage Net System sets a new standard in electromagnetic battlefield concealment by reducing signature in the visual, infrared and radar bands. Designed for rapid deployment by a small team, ULCANS effectively masks vehicles, artillery and personnel, ensuring operational stealth in dynamic environments. Building on this breakthrough, next-generation clothing articles are in development that incorporate advanced technology to mitigate near- to long-wave infrared signature. These innovations and enhancements elevate traditional uniform products from an era of visual concealment using standard textile industry practices to advanced production capabilities that provide Marines with tools to enhance survivability and lethality on an increasingly multidomain transparent battlespace, ensuring tactical

superiority.

Beyond these core innovations, the PM CSS is advancing a suite of complementary capabilities that enhance a resilient logistics web. Our power modernization initiatives reduce fuel demands and streamline mobile energy solutions. Meanwhile, digital tools like CBM+ and automated test systems ensure commanders maintain real-time situational awareness, enable diagnostics and rapid maintenance, and support circuit card repair in theater – keeping equipment in the First Island Chain and reducing wasteful efforts to return gear to higher echelons of maintenance in CONUS or to rely on today's overstressed supply chain.

Uncrewed aircraft systems with computer vision for airfield recon, deployable ICD-705-compliant shelters, augmented-reality-aided navigation, bridging, polymer ammunition and lighter, integrated personal protective equipment further ease logistical burdens and increase lethality. Together, these building blocks – designed to support the EABO concept – strengthen the distributed, logistics network needed for a future fight in the contested Indo-Pacific region.

While these capabilities do not regularly make headlines, they are the critical elements to enabling the EABO concept and strategy in general. Each innovation, whether in rapid field repairs, extended medical care or next-generation stealth textiles, forms an integral link in our resilient kill and logistics webs, ensuring dispersed Marines remain agile and ready for any threat or challenge.

Colonel Paul Gillikin, an infantry and special operations officer, is the program manager for Combat Support Systems at Marine Corps Systems Command in Quantico, Virginia.

USS Cape St. George Arrives in San Diego after Modernization

Ticonderoga-class guided missile cruiser USS Cape St. George (CG 71) arrives at the mouth of San Diego Bay, April 22, 2025. Cape St. George, previously based at Everett, Wash., completed her homeport change to Naval Base San Diego. (U.S. Navy photo by MC1 Kelby Sanders)

From Lt. Grace Kording, April 24, 2025

SAN DIEGO – The Ticonderoga-class guided-missile cruiser USS Cape St. George (CG 71) arrived Apr. 22 in its new homeport of Naval Base San Diego, California from Naval Base Everett, Washington, after conducting phased modernization at Vigor Shipyard in Seattle. This move was a permanent change of station for the crew and family members.

“I am so incredibly proud of this dedicated crew and for all

of the hard work and sacrifice that brought Cape St. George back to life. Repairing and restoring systems after an extended modernization was a herculean effort, and this talented crew is the reason the ship was able to return to sea and reintegrate into our Navy's fighting force," said Capt. Jennifer Pontius, commanding officer of Cape St. George.

The cruiser began modifications in June 2021 and is scheduled to conclude in 2025. During this time, Cape St. George underwent extensive upgrades to its hull, mechanical systems, engineering, and combat systems in preparation for rejoining maritime operations.

"It's been a long, rigorous journey bringing Cape St. George's power plant back to life, but I am proud of the work we have done. I was filled with so many emotions when we got underway after spending numerous hours restoring the engine room equipment, but I understand this is only the beginning of our mission," said Gas Turbine Systems Technician (Mechanical) 2nd Class Annsia Stewart. "We are ready to make San Diego our home!"

The upgrades ensure Cape St. George remains one of the most technologically advanced and lethal ships in the U.S. Navy.

"I arrived at Cape St. George while it was dry-docked, and it has been an amazing experience seeing the reconstruction to get the ship fully operational. It is an incredible opportunity to set a foundation for future Sailors," said Lt. j.g. William Neel, Strike Officer.

Cape St. George was commissioned June 12, 1993. The ship's name commemorates the battle fought in the South Pacific off the island of New Ireland in the Bismarck Archipelago on Nov. 25, 1943. Modern U.S. Navy guided-missile cruisers are multi-mission Air Warfare, Undersea Warfare, Naval Surface Fire Support, and Surface Warfare (SUW) surface combatants capable

of supporting carrier strike groups, amphibious forces, or independent missions. The mission of Commander, Naval Surface Force, Pacific Fleet is to man, train, and equip the Surface Force to provide fleet commanders with credible naval power to control the sea and project power ashore.

USS New York, USS Oak Hill to Participate in Fleet Week New York 2025

NEW YORK – USS New York (LPD 21) leaves New York Harbor at the conclusion of Fleet Week New York 2019. Fleet Week New York, now in its 31st year, is the city’s time-honored celebration of the sea services. It is an unparalleled opportunity for the citizens of New York and the surrounding tri-state area to

meet Sailors, Marines and Coast Guardsmen, as well as witness firsthand the latest capabilities of today's maritime services. (U.S. Navy photo by Chief Mass Communication Specialist Roger S. Duncan)
April 24, 2025

NORFOLK, Va. – Fleet Week New York returns to New York City on May 21 – 27, 2025, with two U.S. Navy ships, two Coast Guard cutters, and five U.S. Navy Academy Yard Patrol boats (YPs). Additionally, our Canadian neighbor will join the week-long celebration.

Ships from the U.S. and Royal Canadian Navy will participate in the Parade of Ships on Wednesday, May 21.

USS New York (LPD 21) and USCGC Calhoun (WMSL 759) will be available for public ship tours Friday and Saturday, May 23-24, from 9 a.m. to 4 p.m. Public ship tours in Staten Island will be available on May 22-
26, from 9 a.m. to 4 p.m.

The event has been held nearly every year since 1984. This year's theme is "Honoring the Past, Defending the Future: 250 Years of Sea Service Excellence," which celebrates the rich history of the sea services, honoring service members from the past, present, and future who play a crucial role in supporting the fleet while carrying out our maritime strategy and strategic objectives.

"This year marks the 250th birthday of the Navy and Marine Corps, and as we continue to evolve as a fighting force, we are reminded that our greatest strength comes not only from our sea service members, but from the people we serve," said Rear Adm. Carl Lahti, Commander, Navy Region Mid-Atlantic. "Fleet Week New York reminds us that behind every uniform is a story—of family, of sacrifice, and of service to something greater than self. As we celebrate 250 years of the Navy and Marine Corps, we are proud to return to a city whose

strength and spirit mirror the very heart of our nation.”

Ship and pier locations include:
– Manhattan, Pier 88 South: (Ship public tours on Friday & Saturday, May 23-24, from 9 a.m. to 4 p.m.)
• San Antonio-class amphibious transport dock, USS New York (LPD 21) from Norfolk, Virginia
– Manhattan, Pier 90 North: (Ship public tours on Friday & Saturday, May 23-24, from 9 a.m. to 4 p.m.)
• Legend-class cutter USCGC Calhoun (WMSL-759) from Charleston, South Carolina
• Harry DeWolf-class offshore patrol vessel HMCS Frédérick Rolette (AOPV 434) from Halifax,
Canada

– Manhattan, Intrepid Museum, Pier 86: (Ship public tours on Thursday & Friday, May 22-23, from
10 a.m. to 4 p.m.)
• Five U.S. Naval Academy YPs from Annapolis, Maryland

– Homeport Pier, Staten Island: (Ship public tours will be May 22 – 26 from 9 a.m. to 4 p.m.)
• Whidbey Island-class dock landing ship USS Oak Hill (LSD 51) from Norfolk, Virginia
• Bay-class cutter USCGC Sturgeon Bay (WTGB 109) from Bayonne, New Jersey
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Please note: Canadian Navy Harry DeWolf-class offshore patrol vessel HMCS Frédérick Rolette (AOPV 434) will not be available for tours.

The week-long event will include a variety of public military demonstrations. It is an unparalleled
opportunity for the citizens of New York and the surrounding tri-state area to meet members of the sea
services, as well as witness firsthand the latest capabilities

of America’s maritime services.

Marines Surpass 1,000 MQ-9A Flight Hours as Capabilities Expand

From General Atomics Aeronautical Systems Inc.

SAN DIEGO – 23 April 2025 – General Atomics Aeronautical Systems, Inc. is proud to announce that the U.S. Marine Corps has passed more than 1,000 flight hours with MQ-9A unmanned aircraft in support of service-level training exercises and weapons and tactics instructor courses. This accomplishment involved a combined aircrew of dedicated Marines and GA-ASI personnel, highlighting the seamless integration and operational effectiveness of the MQ-9A platform within the Marine Air-Ground Task Force (MAGTF) and the MAGTF Unmanned Expeditionary (MUX) Program.

These demanding exercises showcased the advanced capabilities of the MQ-9A by integrating cutting-edge technologies such as the SkyTower networking support pod, Automatic Identification System, latest-generation Lynx® multi-mode radar and various other tactical networks and capabilities. The joint teams successfully conducted satellite launch and recovery activities operating out of a strategic expeditionary landing field near Marine Corps Air Ground Combat Center Twentynine Palms, Calif., further demonstrating the platform's precision targeting and reconnaissance abilities in realistic training scenarios.

Previously, an uncrewed aircraft required a crew positioned at the airfield where it was operating to fly it for takeoff via direct line-of-site radio link. Then a mission crew could take over the aircraft from anywhere via satellite. Today, satellite launch and recovery means the main Marine mission crew, which can be sited anywhere, flies the aircraft from takeoff via the satellite link. This capability, validated in the Marine Corps operations, enables huge flexibility and expands the locations from which units can operate.

A key element of these exercises also included not only live-fire training but also comprehensive mission planning, networked communications, and multi-domain coordination. These events provided invaluable experience in integrating the MQ-9A into complex, distributed combat scenarios across the full range of Marine Air-Ground Task Force operations. From supporting maneuver elements with real-time intelligence, surveillance and reconnaissance to validating command and control networks, the MQ-9A consistently demonstrated its adaptability and operational value. This milestone underscores the platform's critical role in enhancing situational awareness, mission execution, and overall effectiveness across the battlespace.

"Reaching 1,000 flight hours for these rigorous training

exercises alongside our Marine Corps and Air Force partners is a testament to the reliability and adaptability of the MQ-9A platform," said GA-ASI President David R. Alexander. "This achievement highlights the power of collaboration and the critical role the MQ-9A can play in supporting the MAGTF's mission readiness."

The successful integration of the MQ-9A platform across recent operations represents a major milestone in aligning capability with the MAGTF construct. These events showcased the MQ-9A's ability to support distributed operations, extend sensor coverage, and provide persistent intelligence, surveillance and reconnaissance in support of dynamic mission sets. The coordinated efforts of Marines and GA-ASI personnel underscored the platform's high degree of interoperability and its growing role in enabling expeditionary operations in contested environments.

To date, GA-ASI has delivered 17 MQ-9A UAS to USMC. The USMC awaits delivery of three additional aircraft by the end of this year.

T-54As Visit NAS Whidbey Island

OAK HARBOR, Wash. (March 27, 2025) A T-54A Marlin, assigned to Training Wing Four, taxis while the pilot monitoring gives a shaka at Naval Air Station Whidbey Island, Wa. March 27 2025. A pair of T-54As arrived at NAS Whidbey Island Mar. 27 after completing their first cross-country flight to Washington State, showcasing the range capacity as the Navy's newest multi-engine trainer. (U.S. Navy photo by Lt. Sara Wedemeyer)
By Lt. Sara Wedemeyer, Chief of Naval Air Training, March 27, 2025

WHIDBEY ISLAND, Wash – A pair of T-54As arrived at Naval Air Station (NAS) Whidbey Island Mar. 27 after completing their first cross-country flight to Washington State, showcasing the range capacity as the Navy's newest multi-engine trainer.

This cross country was used as training flights within the Flight Instructor Training Unit (FITU) Syllabus. The Instructors Under Training (IUTs), taught by FITU Instructor Pilots (IPs), will be the next generation of squadron IPs and the first to teach student naval aviators how to fly the T-54A.

Lieutenant Hunter Jones, one of the visiting naval aviators, believes the T-54A will make a difference in the lives of student naval aviators at Training Wing Four, Naval Air

Station Corpus Christi.

“We are thrilled to begin training the next generation of pilots in the T-54A, a platform that will significantly enhance our ability to prepare naval aviators for the challenges ahead,” said Jones. “Flying the T-54A from Naval Air Station Corpus Christi to Naval Air Station Whidbey Island truly demonstrates its capabilities. Students are set to start training on the new plane in the next few weeks and this milestone would not have been possible without the exceptional leadership of Cdr. Michael “Textron” Brammer and the entire Multi Engine Training System (METS) FIT Team at Training Wing Four. Their dedication and expertise have been instrumental in ensuring the seamless transition to this aircraft.”

The T-54A fleet is located at Naval Air Station (NAS) Corpus Christi as a member of Training Wing Four. The Navy’s newest generation of student naval aviators will use the T-54A to earn their wings of gold and go on to fly aircraft such as the P-8A Poseidon, E-2D Hawkeye, CMV-22 Osprey, E6-B Mercury, and the C-130 Hercules.

Museum to Showcase Navy Military Medical Innovations

Principal Investigator of the U.S. Naval Research Laboratory (NRL) Navy Coronavirus Rapid Response Team (NCR2T) Team, Brett M. Huhman, Ph.D., P.E. from the Advanced Pulsed Systems Section and former NRL Engineering Technician Mike Jabari prepare a Xenon source for evaluation testing. Designed for whole-room disinfection, the team determined how effective the source would be from a light perspective, and Naval Surface Warfare Center Dahlgren Division followed up with a site visit to perform biological efficacy testing in the Ultraviolet Characterization Lab at NRL-DC Headquarters, May 2020. (U.S. Navy photo)

By Nicholas E. M. Pasquini, U.S. Naval Research Laboratory Corporate Communications, April 22, 2025

WASHINGTON, D.C. — The U.S. Naval Research Laboratory (NRL) recently transferred a number of historical artifacts related to the COVID-19 pandemic to the National Museum of Health and Medicine and is scheduled to exhibit military medical innovations to the public, Apr. 26.

The Military Medical Innovation Family Event program takes place in the museum galleries where presenters from a variety of military activities conduct demonstrations and activities highlighting innovative products and research that benefit readiness, health, care, and rehabilitation of the warfighter.

In April 2020, during the early stages of the COVID pandemic, the Naval COVID Rapid Response Team (NCR2T) was established by Naval Sea Systems Command (NAVSEA) after the USS *Theodore Roosevelt* (CVN 71) became the first ship in the U.S. Fleet to fight through a COVID-19 outbreak. The chief of naval operations then charged NAVSEA with evaluating technologies and developing processes and procedures to provide tools for Fleet commanders, type commanders, and ship commanders to ensure and promote mission readiness amidst the pandemic.

NRL was tasked by NAVSEA with evaluating the efficacy of ultraviolet light sources procured by the NCR2T. The Plasma Physics Division leveraged experience across multiple disciplines to design a standardized measurement test stand, verify calibration of measurement equipment, and perform analysis of the devices.

NRL researchers evaluated commercial ultraviolet (UV) sources for viral disinfection to combat COVID-19 on land and at sea and established a dedicated UV characterization lab in five days to ensure safe introduction and effective operation of UV sources across the Fleet.

This work was done in close collaboration with the Naval Surface Warfare Center Dahlgren Division, which performed biological surrogate testing to evaluate the effectiveness of the UV sources for disinfection of COVID-19 on surfaces relevant to Navy applications. The devices range from small, hand-held UV sources to large devices meant to disinfect an

entire room.

The laboratory used an automated 3-axis motorized translation stage to measure the light emitted from ultraviolet light sources to measure both the intensity and quality of the light generated by the devices. Data was collected from this apparatus to create 2D “maps” of the light emitted from the sources to enable comparison of different technologies.

In addition, NRL’s work helped identify situations where use of UV provides sufficient viral disinfection at a particular energy level and the development of standard operating procedures to ensure safe UV operation for the Fleet.

“NRL’s commitment to performing leading-edge fundamental and applied research has enabled the Lab to be instrumental in numerous innovations that have significantly enhanced the capabilities of the U.S. Navy and nation as a whole,” said NRL Plasma Physics Division Superintendent Joe Peñano, Ph.D. “This legacy of innovation underscores NRL’s commitment to swiftly supporting Fleet operations as well as addressing emerging challenges.”

The devices transferred were critical in the development of the Navy’s response to the COVID -19 pandemic. “These devices represent hundreds of hours of research by engineers and physicists in the Plasma Physics Division at NRL to provide evaluation criteria to the Fleet for immediate use,” said Principal Investigator of the NRL NCR2T Team, Brett M. Huhman, Ph.D., P.E. from the Plasma Physics Division. “We were able to respond rapidly to NAVSEA’s call for support, with a laboratory set up and ready to evaluate the devices within a week.”

Military medical innovations are changing the way health care is delivered in the Military Health System. During this family-friendly event, visit with DOD experts as they showcase

the latest in virtual reality, medical simulation, and much more. This is a great opportunity to speak with multi-disciplinary NRL subject matter experts to also learn more about other research programs and associated technologies on display:

Buzz Off: Protection From the Small, But Deadly
This station demonstrates recently developed NRL technology that defends from some of the most dangerous animals on the planet—bugs. In this demo, we will go over the historical impact of insects on military and civilians, current strategies to protect against these tiny assailants, and future polymer-based fiber and gel technologies to repel these bugs out of everyday life.

From Sample to Sequence in the Field: A Closer Look at Bacteria and their DNA
Bacteria live in nearly every environment on earth and are important to this planet's ecosystems. Most serve a useful purpose, but some can cause disease in humans. Using strep throat as a case study, we will demonstrate some of the tools and latest technologies we use to identify and study bacteria, including uncovering the genetic sequence of these tiny organisms with a portable DNA sequencer.

About the U.S. Naval Research Laboratory
NRL is a scientific and engineering command dedicated to research that drives innovative advances for the U.S. Navy and Marine Corps from the seafloor to space and in the information domain. NRL is located in Washington, D.C. with major field sites in Stennis Space Center, Mississippi; Key West, Florida; Monterey, California, and employs approximately 3,000 civilian scientists, engineers and support personnel

HII Hosts HD Hyundai Heavy Industries Leaders at Ingalls Shipbuilding

From HII

PASCAGOULA, Miss., April 22, 2025 (GLOBE NEWSWIRE) – HII (NYSE: HII) hosted HD Hyundai Heavy Industries leaders at the company's Ingalls Shipbuilding division Tuesday, advancing joint goals of the memorandum of understanding signed by the two companies earlier this month. The visit focused on identifying near-term opportunities and exploring the implementation of new processes that could support the acceleration of ship production.

"This visit is a continuation of the important dialogue taking place between HII and our international partners," Ingalls

Shipbuilding President Brian Blanchette said. “Today’s visit allowed us to showcase the great work our Ingalls shipbuilders do every day in support of national security and an opportunity to exchange ideas on best practices, while examining what we can begin working on right away.”

The visit included meetings with Ingalls leadership, a tour of the shipyard and a stop at the company’s new virtual welding lab, where the group experienced how this immersive, hands-on training environment is not only enhancing the skills of current and future shipbuilders, but also setting a new national benchmark for how technology can be leveraged to grow a highly proficient workforce in this essential trade.

Photos accompanying this release are available at: https://hii.com/news/hii-hosts-hd-hyundai-heavy-industries-leaders-at-ingalls-shipbuilding/.

“We appreciate the opportunity to visit our partners at HII and see how they are using technology to enhance efficiency and quality at Ingalls,” Chief Executive of the Naval & Special Ship at HHI Won-ho Joo said. “We look forward to building on the strong foundation set by our recent MOU announcement.”

HII and HHI are two of the world’s leading shipbuilders across multiple classes of ships. By working with shipbuilding allies, this strategic partnership aims to leverage the combined expertise and resources of both companies to advance technological innovation, maximize production efficiency, and strengthen the global defense industry.

Coast Guard Cutter Seneca returns home after 54-day maritime border security patrol in the Windward Passage

Coast Guard Cutter Seneca (WMEC 906) patrols off coastal Haiti, March 1, 2025. The crew of Seneca conducted a 54-day maritime border security patrol in the Windward Passage. (U.S. Coast Guard photo by Seaman Solana Laughlin)

From U.S. Coast Guard Atlantic Area, April 22, 2025

PORTSMOUTH, VA – The crew of Coast Guard Cutter Seneca (WMEC 906) returned to their home port in Portsmouth, April 11, following a 54-day maritime border security patrol in the Windward Passage.

Seneca deployed in support of Homeland Security Task Force – Southeast (HSTF-SE) and Operation Vigilant Sentry (OVS) while underway in the Seventh Coast Guard District's area of responsibility. Crew members directly contributed to safeguarding America by patrolling U.S. maritime borders and conducting alien interdiction operations.

While underway in the Windward Passage, Seneca's crew interdicted an unsafe and illegal voyage with 99 aliens on board. A U.S. Customs and Border Protection – Air and Marine Operations aircrew initially detected the vessel. Seneca crew members launched a small boat, interdicting the voyage and transferring the aliens aboard Seneca before their repatriation to Haiti.

During the deployment, Seneca's crew worked with many partners to include Coast Guard Cutters James (WMSL 754), Vigilant (WMEC 617), Valiant (WMEC 621), Tampa (WMEC 902), the Coast Guard Helicopter Interdiction Tactical Squadron and the Royal Netherlands Navy. Their joint efforts included counter-drug operations and advanced shipborne helicopter training, increasing joint interoperability between interagency and international partners.

"The integrity of our maritime borders is vital to national security, and I am proud of our crew's hard work and determination throughout this deployment. Their dedicated commitment to deterrence of alien maritime migration saved lives from dangerous ventures at sea while safeguarding our borders," said Cmdr. Lee Jones, commanding officer of Seneca. "Together with our partner agencies, we were able to effectively enforce United States customs and immigration laws against illegal entry."

The Coast Guard, along with its HSTF-SE partners, maintains a continual presence with air, land, and sea assets in the Florida Straits, the Windward Passage, the Mona Passage, and the Caribbean Sea in support of OVS. The HSTF-SE combined,

multi-layered approach is designed to protect the safety of life at sea while preventing unlawful maritime entry to the United States and its territories.

Seneca is a 270-foot, Famous-class medium-endurance cutter. The cutter’s primary missions are alien interdiction, counter-drug operations, enforcement of federal fishery laws, and search and rescue in support of U.S. Coast Guard operations throughout the Western Hemisphere.

Shipboard Wi-Fi is coming to Military Sealift Command’s Fleet of Government Owned, Government Operated Ships

Norfolk, Va. (April 16, 2025) – Miles Farver, Chief Mate, USNS Joshua Humphreys (T-AO 188), sends emails wirelessly from his

personal phone thanks to the Starshield system installed aboard the ship, which provides 5G connectivity, April 16, 2025. (U.S. Navy photo by Ryan Carter)
by Bill Mesta, USN Military Sealift Command, April 21, 2025

NORFOLK, VA – The Civil Service Mariners (CIVMAR) who crew Military Sealift Command's 56 government owned/government operated (GO/GO) ships will soon be able to use a shipboard Wi-Fi for internet access to conduct both professional and personal tasks while aboard their assigned vessel, via the Civilian Mariner Wireless Network (CivMar WiN).

The CivMar WiN project is a multi-year implementation effort to provide secure internet access for CIVMARs' approved personal electronic devices such as mobile phones and computers.

"Wi-Fi is a wireless technology that allows devices to connect to the internet using radio waves," according to Eliot J. Skinner, Military Sealift Command, Deputy Director, C4 Systems (N6A). "Once installed, CIVMARs aboard MSC's GO/GO ships will be able to register their approved personal electronic devices to the wireless network for seamless internet access."

"Providing internet access to support CIVMAR education, training, and quality of life is the goal of the CivMar WiN project," Skinner added.

The first installation of the CivMar WiN was completed aboard the fleet replenishment oiler USNS Harvey Milk (T-AO 206), Feb. 21. The second installation took place aboard the fleet replenishment oiler USNS Joshua Humphreys (T-AO 188) and was completed, April 16. With both ships having reported successful installation and verification, the rest of MSC's GO/GO fleet will now begin to receive the Wi-Fi capability.

"Once successfully installed [across MSC's GO/GO fleet], all

CIVMARs, licensed and unlicensed, will be provided accounts that allow them access to the CivMar WiN from their personal devices," Skinner stated. "The intention of the CivMar WiN is to provide internet access for CIVMARs' personal devices, while on ship and underway, in support of access to human resources, training, education and virtual pool capabilities such as Defense Travel System (DTS) and myPay, in addition to personal email, banking, insurance, e-commerce and more."

CivMar WiN will have some built in cybersecurity measures, but CIVMARs will be responsible for the protection of their personal devices, e.g. installation of antivirus software. Additionally, network activity will be monitored for operational security, cybersecurity, and legal purposes.

"All legal internet activity will be allowed on the CivMar WiN," Skinner added. "There will be activity tracking in place to provide a by-device and by-user record of activity on the network to deter illegal activity being conducted by an individual."

"Additionally, CivMar WiN will be subject to the same operational security (OPSEC) and emission control (EMCON) policies as the operational network as it can and will be shut down during periods of increased levels of OPSEC and EMCON," Skinner said.

Feedback from MSC's CIVMARs has indicated that at-sea Wi-Fi access will improve crew morale and retention.

"The crew [of USNS Joshua Humphreys] is ecstatic with the thought of Wi-Fi aboard ship," Capt. P. Todd Christian, USNS Joshua Humphry's Ship's Master. "Parts' research in support of repairs will now be much easier, computer-based training requirements will also be much easier to accomplish. This in addition to social media access opportunities and staying in touch with family and friends."

USNS Joshua Humphreys is crewed by 87 CIVMARs who will use the new shipboard Wi-Fi system.

Supply Utilityman Brooklyn Hunter, a CIVMAR aboard USNS Joshua Humphreys added, “I now have the ability to finish my daily work aboard ship and complete online college courses during my off time.”
Christian offered some advice for MSC ships who will receive the new shipboard Wi-Fi in the future.

“Please remember the CivMar WiN system will be very good for CIVMARs, but OPSEC must be maintained, so be responsible,” Christian stated. “Also leave your cell phone in your stateroom during working hours. Having Wi-Fi in our stateroom means there is no longer a need to search for a signal throughout the ship.”

MSC plans to install the CivMar WiN on 56 GO/GO MSC ships over the course of 24 months with completion anticipated in the first quarter of fiscal year 2027, pending ship availability.

USS Minneapolis-Saint Paul Makes Multiple Drug Busts

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NAVAL STATION MAYPORT, Fla. (Mar. 26, 2025) – The Freedom-class littoral combat ship USS Minneapolis-Saint Paul (LCS 21) departs Naval Station Mayport for her maiden deployment, Mar. 26, 2025. LCS 21 is deploying to the U.S. 4th Fleet area of operations is support of counter-illicit drug trafficking operations. (U.S. Navy photo by Mass Communication Specialist 1st Class Brandon J. Vinson)

From USNAVSOUTH/4th Fleet Public Affairs, April 17, 2025

CARIBBEAN SEA – The Freedom-variant littoral combat ship USS Minneapolis Saint-Paul (LCS 21), in coordination with joint partners, stopped two alleged drug smuggling operations in the Caribbean Sea within a 72-hour span.

Minneapolis-Saint Paul, with an embarked U.S. Coast Guard (USCG) Law Enforcement Detachment (LEDET) and Helicopter Maritime Strike Squadron (HSM) 50, Detachment Three, made the two busts in the Caribbean, taking out vessels through a combination of air and surface operations.

The busts resulted in the confiscation of 580 kilograms (1,278.9 lbs; $9,463,860) of cocaine and 2,480 pounds of

marijuana. ($2,807,360). “The USS Minneapolis-Saint Paul executed their duties seamlessly in the combined effort to protect the homeland from illicit maritime trafficking.” said Rear Adm. Carlos Sardiello, commander of U.S. Naval Forces Southern Command/U.S. 4th Fleet. “Working in coordination with the Coast Guard and our joint partners, we look forward to seeing continued measurable impact delivered by the professional and talented crew of the USS Minneapolis-Saint Paul across the region.”

“We train diligently and stand ready to execute interdiction missions at moment’s notice, saidMinneapolis-Saint Paul commanding officer Cmdr. Steven Fresse, “To be able to make an immediate impact so early on during our maiden deployment is a testament to the hard work and skills of the ship’s crew.”

USS Minneapolis-Saint Paul is currently assigned to Commander, Task Force 45 (CTF 45). CTF-45 is the 4th Fleet surface task force charged with executing combined naval operations, building and strengthening Latin American, south of Mexico, and Caribbean maritime partnerships, and acting as a DoD ready service provider to Joint Interagency Task Force – South in support of counter illicit-drug trafficking operations in the Central and South American waters.

The U.S. Coast Guard is simultaneously a military service and the United States’ lead federal maritime law enforcement agency with authority to enforce national and international laws on the high seas and waters within U.S. jurisdiction. Coast Guard LEDETs regularly deploy aboard U.S. Navy and foreign allied navy ships, and during these deployments the LEDETs, under U.S. law, board vessels, seize illegal drugs and apprehend suspects. These forces also work closely with other regional partner nation coast guards and naval forces to provide support to visit, board, search and seizure operations within partner nation territorial waters. Once an interdiction becomes imminent, the law enforcement phase of the operation

begins, and control of the operation shifts to the U.S. Coast Guard for the interdiction and apprehension phases. Interdictions in the Caribbean Sea are performed by members of the U.S. Coast Guard under the authority and control of the Seventh Coast Guard District, headquartered in Miami.

U.S. Naval Forces Southern Command/U.S. 4th Fleet supports U.S. Southern Command’s joint and combined military operations by employing maritime forces in cooperative maritime security operations to maintain access, enhance interoperability, and build enduring partnerships in order to enhance regional security and promote peace, stability and prosperity in the Caribbean, Central and South American region.