UNITAS 2025 Kicks off at Naval Station Mayport

MAYPORT, Fla. (Sept. 15, 2025) Navy and Marine leaders celebrated the opening of UNITAS 2025 from onboard the San Antonio-class amphibious transport docking ship USS Arlington (LPD 24) at Naval Station Mayport September 15, 2025. (U.S. Navy photo illustration by MCSN Steven Khor)

Release From U.S. Naval Forces Southern Command/U.S. 4th Fleet Public Affairs

NAVAL STATION MAYPORT, Fla. – UNITAS 2025 officially kicked off at an opening ceremony aboard Naval Station Mayport, Sept. 15. UNITAS, Latin for unity, united, or oneness, is the longest-running annual multinational maritime exercise in the world.

UNITAS is featuring approximately 8,000 personnel from 25 allied and partner nations, including multiple ships, submarines, and aircraft (fixed wing and rotary). Forces will

conduct operations off the East Coast of the United States and ashore in the vicinity of Naval Station Mayport, Fla., Marine Corps Base Camp Lejeune, N.C., and Naval Station Norfolk, Va. through October 6.

Participating nations include Argentina, Belize, Brazil, Canada, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, France, Germany, Greece, Guatemala, Honduras, Italy, Jamaica, Japan, Mexico, Morocco, Netherlands, Panama, Paraguay, Peru, Spain, and the United States.

“It is a distinct honor to stand before you today as we commence UNITAS 2025, the 66th iteration of the world’s longest-running multinational maritime exercise, which is a testament to enduring partnerships,” said Rear Adm. Carlos Sardiello, Commander, U.S. Naval Forces Southern Command/4th Fleet. “We have a rich history that began with the 1959 Inter-American Naval Conference in Panama, and we continue to grow each year. This year’s theme, ‘UNITAS Legacy of Maritime Partnerships’ celebrates the enduring strength of alliances and the upcoming 250th anniversary of the U.S. Navy.”

UNITAS is a comprehensive multinational exercise that aims at strengthening interoperability, enhancing operational readiness, and fostering enduring partnerships among the participating nations. Through a blend of advanced warfare training, cultural exchange, and historical commemoration, the goal for the exercise is to collaboratively demonstrate the commitment to maritime security, crisis response, and the shared values that unite all participating forces in the defense of freedom and global stability.

Following the UNITAS 2025 Opening Ceremony, the in-port phase of the exercise features subject matter expert exchanges, professional symposiums, ship rider exchanges, and operations meetings. During this time, Marines and Sailors will conduct

training events in Mayport to include medical, cyber defense, and diving and salvage operations.

During the UNITAS 2025 Underway Phase, forces will participate in events testing all warfare operations, to include live-fire exercises such as a SINKEX, an amphibious ship-to-shore landing and force withdrawal in Camp Lejeune, North Carolina.

“Our combined efforts as a maritime sea service are critical to ensuring free and open seas,” explained Sardiello. “UNITAS is an extraordinary opportunity for us to unite, operate, enhance proficiency, and improve interoperability of participating forces to respond to common threats.”

Following the successful completion of UNITAS 2025, senior leaders from participating countries will join in a series of high-profile events along the East Coast, celebrating a historic milestone: the United States Navy 250th birthday. This commemoration honors a legacy of protecting American interests, deterring aggression, and promoting prosperity and security, while also showcasing the Navy’s enduring commitment to defending the American way of life.

UNITAS 2025 is just one of the major events in support of the U.S. Navy’s 250th birthday in 2025. UNITAS and other major leadership events will lead into 2026, the United States’ 250th birthday. In 2026, the Navy will again commemorate its contribution to the nation’s defense as part of a whole-of-government 250 celebration planned by the U.S. Semi quincentennial Commission. Navy-related events will include port calls and community outreach events in major U.S. cities.

U.S. Naval Forces Southern Command/U.S. 4th Fleet is the trusted maritime partner for Caribbean, Central and South America maritime forces leading to improved unity, security and stability.

Combat Craft Medium to Gain New, Improved Sibling

A Combatant Craft Medium assigned to a West-coast based Naval Special Warfare unit maneuvers in Apra Harbor, Guam, in 2021. *Photo credit: U.S. Navy photo by Shaina O'Neal*

The United States Special Operations Command's Combat Craft Medium Mark 1 will get a new and improved next-generation sibling in the future called the Combat Craft Medium Mark 2. Currently, USSOCOM is working with Oregon-based company ReconCraft on the first completely new Naval Special Warfare boat design since 2015.

Built by Vigor Industrial, the CCM Mark 1 is a durable, stealthy, low-observable, armored double-hull aluminum boat used by Naval Special Boat Teams for infiltration and

extraction of special operations forces in medium-threat environments. It is 60 feet long with a width (beam) of 13 feet and a draft of 3.3 feet, can travel at over 52 knots and can carry .50 caliber M2 heavy machine guns, Mark 19 automatic grenade launchers and 7.62mm M240G medium machine guns on the aft deck.

It has a crew of four and can carry 19 special operators. Range is 600 nautical miles at 40 knots. Vigor Industrial built 31 CCMs, which are transportable via trucks towing trailers and C-17 military cargo aircraft.

According to SAM.gov, the United States' official federal contracting website, "The CCM Mk2 will replace the CCM Mk1 with a high-speed, aluminum-hulled craft designed to enhance USSOCOM's maritime capabilities. It incorporates advanced materials and technologies to support multi-role capabilities for maritime missions. This effort includes the design consulting, prototyping, fabrication and outfitting of a single CCM Mk2 prototype, with the potential for a follow-on production contract or agreement."

Key Specifications for the CCM Mk2

- Hull Material: High-performance aluminum.
- Engines: Twin 1,600 hp marine diesels
- Propulsors: Marine waterjets
- Dimensions:Length 68.6 feet, beam 14.2 feet, draft 3.6 feet.
- Fuel:Diesel, with a capacity of approximately 3,200 gallons.
- Mobility: Configured for road and military aircraft transport.

Thus, the CCM Mark 2 is slightly longer, wider and deeper than the CCM Mark 1.

“In August 2025, U.S. Special Operations Command awarded an Other Transaction Authority agreement to ReconCraft LLC to produce the Combatant Craft Medium Mark 2 Engineering Development Model,” Lieutenant Commander Kassie Collins of USSOCOM replied in response to a question from *Seapower*. “CCM Mk2 will replace the CCM Mk1 fleet, providing Naval Special Warfare with an enhanced capability to conduct long-range, multi-mission operations in maritime environments. CCM Mk2 incorporates integrated survivability enhancements to support irregular warfare operations in maritime environments across the globe.”

Seapower asked if the CCM Mark 2 will replace the CCM Mark 1 on a one-for-one basis and if the CCM Mark 1s will be retired.

“The CCM Mk1 fleet continues to support the demand signal around the globe. The CCM Mk2 platform is being built from the ground up to include upgrades that the CCM Mk1 has incorporated throughout its service, while providing more space, power and opportunity to adapt to future payloads or systems. When the production of the CCM Mk2 begins, the CCM Mk1 will continue to support the force and we will evaluate boats on an individual basis to determine an informed service life, balancing commander’s needs and resources,” Collins responded.

ReconCraft declined to comment on the Combat Craft Medium, Mark 2, and USSOCOM and the company have no images or photos to share since the CCM Mark 2 is an entirely new design starting from the proverbial drawing boards. Questions on CCM Mark 2 armament and sensors were not provided at this early stage of the design process.

Textron Systems Awarded Next-generation Unmanned Maritime Solution

From Textron Systems, Sept. 10, 2025

Textron Systems is excited to share that our team has been awarded the Low-Cost Unmanned Maritime Solution (Large) award through the Expeditionary Missions Consortium-Crane (EMC^2) for the development, testing, and delivery of the next- generation CUSV® craft, the multi-mission USV (MMUSV). This 5^{th} generation CUSV comes after years of development on the current CUSV craft, offering enhanced capabilities including longer range and higher endurance, while ensuring ease of maintenance and training for our sailors.

Textron Systems is the originator of the CUSV®, the Mine Countermeasure (MCM) USV for the U.S. Navy Unmanned Influence Sweep System (UISS) program of record. The business continues to support the Navy’s Littoral Combat Ship (LCS) Mine Countermeasures Mission Package efforts through

(1) multi-year support contracts, including fleet support and sustainment, engineering services and depot maintenance,

(2) a multi-year production contract for delivery of Mine Sweep Payload Delivery Systems (PDS), and

(3) a multi-year development and integration contract for a next generation Minesweeping payload called Magnetic and Acoustic Generation Next Unmanned Superconducting Sweep (MAGNUSS).

The team continues to support the US Navy's advancements, providing innovative technology to keep our nation's sailors safe, no matter the mission set. To learn more about the CUSV craft and the capabilities it brings to the Fleet please visit: **https://www.textronsystems.com/products/cusv**.

Serco Wins $97 M Contract to Continue Support for US Naval Submarines

From Serco, Sept. 10, 2025

Serco, the international provider of critical services to governments, has won a new indefinite-delivery/indefinite-quantity (IDIQ) contract to continue supporting the US Navy's Submarine High Data Rate (SubHDR) antenna systems.

Under the single-award contract vehicle, with a ceiling value of $97 million (£72 million), Serco will provide maintenance, repair and upgrade services for the SubHDR Antenna Pedestal Group, a mission-critical system which enables the US naval fleet to send and receive information, such as secure wide-

band communications, voice and data traffic, imagery and video conferencing.

Serco has supported the SubHDR programme for over 20 years, and the new contract extends this support by 10 years. Work will primarily take place at Serco's production and repair facility in Ludlow, Massachusetts, with support services also taking place in Newport, Rhode Island.

Anthony Kirby, Serco Group Chief Executive, said: "We are delighted to continue our support for the US Navy's SubHDR systems, which provide a critical communications capability to the US fleet. This recompete reflects Serco's extensive capabilities in the maritime sector, and we are honoured to have been selected to help the US Navy maintain its competitive edge over the next decade.

"With defence and national security an increasing priority for many governments, I am proud of the role Serco plays in supporting the defence of nations and citizens, for the US Armed Forces and for other governments and militaries around the world."

The award of this contract continues the recent strong momentum Serco has seen in defence, with the sector comprising over 80% of our order intake in the first half of 2025. Other successes in defense this year include:

Three contracts with a combined value of over £1bn to provide Maritime Services to the Royal Navy

A ten-year contract worth up to £1.5bn if all options are exercised, to run the Armed Forces Recruitment Service for all UK military personnel

A $96 million contract to provide technical services to modernise the US Navy's guided missile frigates and ship systems

A $247 million to support soldier readiness and performance within the US Army’s Holistic Health and Fitness System

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HII Completes 750th REMUS Unmanned Undersea Vehicle for German Navy

From HII

DSEI EXPO, LONDON (Sept. 10, 2025) – HII (NYSE: HII), America’s largest military shipbuilder, and a leader in advanced unmanned autonomous technology solutions, today announced the completion of production of the 750th REMUS unmanned undersea vehicle (UUV) for a customer.

The German navy will receive the 750th REMUS, a REMUS 300, produced at the HII unmanned facility in Pocasset,

Massachusetts.

This marks the continued global adoption of REMUS systems to support national security and maritime operations.

The REMUS line of UUVs is fielded in more than 30 countries, including 14 NATO members. Known for modularity, endurance, and proven performance, REMUS vehicles are deployed across defense, commercial, and research sectors for critical missions including mine countermeasures, hydrographic survey, intelligence gathering, and environmental monitoring.

Over 90% of REMUS units delivered in the past 23 years remain in service, demonstrating platform durability and lifecycle value both critical in defense acquisition decision-making.

The REMUS open-architecture design allows rapid payload integration, enabling mission-specific configurations and future tech insertions, key factors in maintaining operational relevance and cost efficiency over time.

“The 750th REMUS order is an achievement that reflects both the trust of our international partners and the innovation of our teams,” said Duane Fotheringham, president of the Unmanned Systems business group in HII’s Mission Technologies division. “We are proud to support Germany as it strengthens its undersea capabilities and look forward to continuing to advance unmanned solutions that enhance security and operational readiness worldwide.”

The German navy selection of REMUS underscores HII’s role as a key partner in NATO’s collective defense efforts, providing allies with reliable and mission-proven technology for evolving undersea challenges.

The REMUS UUV family delivers critical advantages across modern naval operations and the autonomous systems have been proven to operate independently or in conjunction with crewed platforms. This includes the recent successful demonstration

of the launch and recover of REMUS autonomous undersea vehicles from the torpedo tubes of *Virginia*-class nuclear submarines. This capability will significantly extend mission range, reduce detection risk, and limit personnel exposure.

HII, Babcock to Integrate UUVs with Submarine Weapon Handling and Launch Systems

Release From HII

LONDON, Sept. 11, 2025 (GLOBE NEWSWIRE) — Today, Babcock International Group (Babcock) and HII (NYSE: HII), signed a memorandum of understanding to bring together HII's REMUS unmanned underwater vehicles (UUVs) and Babcock's world-leading submarine Weapon Handling and Launch Systems (WHLS). The goal of the collaboration is to deliver autonomous launch

and recovery of UUVs via submarine torpedo tubes, strengthening the undersea advantage of allied navies. This is the first program of its kind within the Babcock Mission Systems business.

As UUVs become increasingly vital to future undersea operations, HII and Babcock seek to work together to jointly pursue future opportunities within the unmanned space. This joint initiative builds on Babcock and HII's strategic partnership started in 2023, and the U.S. Navy's first successful forward-deployed UUV launch and recovery via torpedo tube, using an HII REMUS. Babcock's WHLS are currently in service with the submarine fleets of the United Kingdom, Canada, Australia, Spain and South Korea.

Chris Kastner, HII, president and chief executive officer, said: "This partnership demonstrates the promise of pairing Babcock's handling and launch system technology with the capabilities of HII's REMUS UUVs to strengthen the undersea advantage of our allies. I am proud of HII's leadership in advancing autonomous maritime manned-unmanned teaming operations and excited about the opportunities this collaboration will unlock."

Sir Nick Hine, Babcock, chief executive marine, said: "Partnering with HII, we're combining over a century of expertise in surface and sub-surface systems to further explore marine technologies and strengthen defense capabilities – this is just the beginning of future collaborations across marine programs."

Babcock has been responsible for the design, manufacture and support of submarine WHLS for the United Kingdom's Royal Navy and overseas customers for more than 50 years. Together with HII's autonomous REMUS, Babcock and HII can offer customers more capability through the integration of the latest UUV technology into existing and new build platforms.

The U.S. Navy's milestone operation underscores a broader transformation in undersea warfare: the growing demand for integrated manned-autonomous operations that extend reach, enhance stealth, and reduce operational risk. HII and Babcock's collaboration positions both companies, and their allied navy customers, to lead this transformation.

To date, HII has sold more than 700 REMUS vehicles to over 30 countries, including 14 NATO members. Notably, more than 90% of REMUS units delivered in the past 23 years remain in service, demonstrating platform durability and lifecycle value – critical in defense acquisition decision-making.

Photos accompanying this release are available at: http://hii.com/news/hii-and-babcock-join-forces-to-integrate-unmanned-underwater-vehicles-with-submarine-weapon-handling-and-launch-systems/.

Eureka Naval Craft Strikes New Shipbuilding Agreement with Bordelon Marine Shipbuilders

Partnership targets US Navy Modular Attack Surface Craft program and counter narco-terrorism operations

From Eureka Naval Craft, Sept. 10, 2025

U.S. defense company Eureka Naval Craft is announcing a landmark agreement with Louisiana-based Bordelon Marine Shipbuilders to construct its state-of-the-art warships.

Both companies said the partnership is designed to support the administration's shipbuilding agenda, significantly strengthening the nation's military industrial base while aiming to create and safeguard thousands of highly skilled jobs. It directly supports the U.S Navy's call, in July this year, for industry develop ideas for its Modular Attack Surface Craft (MASC) Program to adapt to evolving geopolitical and technological challenges (see notes to editors 1).

The memorandum of understanding will provide the production-ready AIRCAT Bengal-MC modular attack surface craft (MASC see notes to editors 2) and Jaguar landing craft to meet the requirements of the U.S. Navy, U.S. Army and U.S. Marine

Corps. In addition, the vessel can be adapted to combat narco-terrorism for the Department of Homeland Security (DHS) and the Drug Enforcement Administration (DEA).

“The Bengal-MC is at the forefront of maritime technology, engineered for unmatched speed, extended range, exceptional payload capacity, and versatile modularity,” said Bo Jardine, CEO of Houston based Eureka Naval Craft. “As the US Navy has requested it is strategically designed to reinforce our defenses against China in the Indo-Pacific and counter Russian advances in the Baltic. Moreover the BengalMC’s speed, range, and payload capacity make it ideal for counter-narcotics operations. With the ability to chase down drug smuggling craft at 50 knots and carry boarding teams, vehicles, or relief supplies. The platform serves as a versatile homeland mission asset for the United States Southern Command (SOUTHCOM), DEA and DHS.”

Wes Bordelon, CEO of Bordelon Marine Shipbuilders, said: “This partnership brings a range of advantages to our country in line with the US Navy’s request for innovative ideas. This MoU can provide the rapid deployment and cost-effectiveness the Navy requires by using proven commercial technology Eureka has developed in the offshore market, with the AIRCAT vessels operating in West Africa. And we can do it right from our shipyard in Louisiana harnessing US suppliers nationwide ploughing investment back into the US economy.”

The 36-metre Bengal-MC’s versatile air-cushion catamaran design aligns directly with the U.S. Navy and Marine Corps’ MASC requirements. With a cruise speed of 38 knots and a sprint capability of up to 50 knots, it can carry heavy loads of troops, vehicles, and defense systems rapidly across long operational distances.

Jardine emphasized the importance of the vessel’s adaptable design, combined with SH Defence’s Cube modular mission deck system which allows operators to reconfigure the same hull

within hours for anti-surface warfare, counterUAV, mine countermeasures, amphibious lift, humanitarian support, or counternarcotics patrols.

In addition, Jardine said the AIRCAT Bengal-MC has one of the most advanced autonomous navigation systems thanks to deploying technology developed with Australian defense company Greenroom Robotics. Greenroom has spent years developing its Advanced Maritime Autonomy (GAMA) Software system notably on a 57m decommissioned Armidale-class patrol boat, *Sentinel,* known as the Patrol Boat Autonomy Trial (PBAT) ensuring it is Unmanned Maritime Autonomy Architecture (UMAA) compliant.

“The Bengal-MC with its modular payload system, large aft deck, range and speed is ready to adapt to ever-evolving mission requirements to counter global threats. And it comes without the crippling costs and complex design requirements that have dogged naval shipbuilding programs for years,” said Mr. Jardine. “Unlike conceptual designs, these ships are mission-ready and production-ready now. They offer the services a proven and affordable path to fielding a MASC fleet. They will be built for America in America.”

The MoU with Bordelon Marine comes shortly after Eureka signed a similar deal with Singapore shipbuilder Strategic Marine (S) Pte Ltd to ramp up production of its AIRCAT Bengal-MC warship in Asia.

17th MCPON John Perryman Releases His Priorities

From the Navy Office of Information, Sept. 9, 2025

WASHINGTON – The 17th Master Chief Petty Officer of the Navy (MCPON), John Perryman, released his priorities to the Fleet following the Change of Office ceremony Sept. 8, 2025.

Aligning with Chief of Naval Operations Adm. Caudle's priorities of keeping the Foundry, the Fleet, and the Fight, MCPON Perryman emphasized a vision rooted in a simple principle: Build Competence. Live Character. Be Confident. His key priorities center on **Sailors and Families First, Technical Mastery, and Continuous Development and Talent Management.**

"I am committed to removing distractions that don't matter, delivering training that does, and spotlighting excellence

wherever it’s found,” said Perryman.

In today’s world of rising tensions, the maritime domain remains critical to national defense. MCPON Perryman underscored that while ships, submarines, and aircraft are impressive, it is Sailors—and the families who support them—who bring them to life.

“Our Navy must be manned by world-class Sailors, led by the best warfighters at every level,” Perryman said. “You have my word—I will always fight for you, and for the families who stand beside you.”

MCPON Perryman expanded on his priorities in a video message released following the ceremony. An accompanied priority graphic is available on navy.mil and his official social media platforms.

HII Unveils AI-Enabled ROMULUS Family of USVs Powered by Odyssey to Strengthen the Fleet

Release From HII

NEWPORT NEWS, Va., Sept. 09, 2025 (GLOBE NEWSWIRE) – HII (NYSE: HII), America's largest military shipbuilder and a global leader in autonomous maritime systems, today introduced ROMULUS, a modular, AI-enabled family of unmanned surface vessels (USVs) powered by HII's Odyssey Autonomous Control System (ACS) software suite.

ROMULUS 190, the flagship of the ROMULUS family, is currently under construction. Built on a commercial-standard hull, it is engineered for rapid, repeatable production and immediate mission readiness. Designed for speeds exceeding 25 knots, the 190-foot vessel is capable of a minimum range of 2,500 nautical miles (nmi) carrying 4 x 40 foot ISO intermodal containers on the payload deck. ROMULUS 190 is being developed in partnership with Breaux Brothers, Beier Integrated Systems, and Incat Crowther.

ROMULUS is designed to meet the current and emerging requirements of the U.S. Navy, U.S. Marine Corps, joint forces, and allies. It delivers high-endurance, sustained open-ocean autonomy with a focus on lethality, cost

efficiency, and scalability.

“The future fight demands speed, agility, and resilience, all embedded in the Odyssey-powered ROMULUS family,” said Chris Kastner, HII president and CEO. “By matching world-class shipbuilding with decades of unmanned systems expertise, we are delivering a mission-ready, swarm USV capability built for the next generation of operations.”

An image accompanying this release is available at: https://hii.com/news/hii-unveils-ai-enabled-romulus-family-of-unmanned-surface-vessels-powered-by-odyssey-to-strengthen-the-fleet/.

Odyssey: Proven, Open, and Evolving
Odyssey ACS software suite has demonstrated performance on more than 35 USV platforms with over 6,000 operational hours in U.S. Navy, U.S. Marine Corps, U.S. Coast Guard, and international allied programs. Odyssey’s intuitive interface and enhanced, customizable features generate the required mission behaviors for greater lethality and survivability with simplified control of unmanned swarms across domains, making it a force multiplier for the modern fleet.

The software suite’s open-access, government-aligned architecture enables rapid integration of new sensors, payloads, and third-party autonomy technologies. It allows industry, government, and academia to test and refine capabilities, ensuring ROMULUS evolves in step with emerging naval concepts of operations.

ROMULUS integrates technologies from Shield AI, Applied Intuition, and C3 AI with HII’s Odyssey for enhanced autonomy, object classification, and lifecycle sustainment.

Multi-Mission, Multi-Domain Flexibility
ROMULUS’s reconfigurable design supports teaming across surface, subsurface, and air domains for missions including counter-unmanned air systems (C-UAS), intelligence,

surveillance and reconnaissance (ISR), strike operations, and the launch and recover of unmanned undersea vehicles (UUV) and unmanned aerial vehicles (UAV).

Enhanced-Domain Advantage with HII's REMUS UUV
Paired with HII's proven REMUS UUVs, ROMULUS significantly extends undersea reach, closing anti-submarine warfare sensing gaps and keeping manned platforms at a safer standoff distance. REMUS's decades-long track record in mine counter-measures (MCM) missions accelerates clearance operations and reduces fleet risk. Together, ROMULUS and REMUS deliver a scalable dual-domain solution across surface and subsurface missions.

Reinforcing HII's Leadership
With ROMULUS, HII reinforces its position as the global leader in durable, autonomous unmanned systems. Developed with support from HII's Dark Sea Labs Advanced Technology Group, ROMULUS takes its place alongside the proven REMUS UUV line, of which more than 700 have been delivered to over 30 nations and more than 90% are still operational after more than two decades. Together, ROMULUS and REMUS, powered by HII's Odyssey autonomy, form a dual-domain family of unmanned platforms that expands operational reach, maximizes mission flexibility, and ensures dependable performance across the full maritime spectrum.

Key ROMULUS Capabilities:

Modular, Open Architecture: Built on open standards, including Unmanned Maritime Autonomy Architecture (UMAA), Robot Operating System (ROS), and Data Distribution Service (DDS), Odyssey ensures compatibility with U.S. Navy autonomy requirements and control stations now and into the future. Odyssey's modular architecture also allows for rapid reconfiguration and integration with modular payloads, new sensors and systems.

Multi-Agent Autonomy: Odyssey enables control of either individual assets or swarms, a key capability for enabling the future fight. Odyssey's mission library delivers high-level autonomy with ease in executing rapid single-agent tasks or complex, multi-agent scenarios in coordination with crewed and unmanned platforms. Secure data management enables instant analytics or detailed post-mission review, while its modular design supports seamless integration of customer or third-party sensors, payloads, algorithms, and interfaces.

Intelligent Operations: Autonomous health monitoring, sensor fusion, and perception deliver intuitive mission planning, real-time situational awareness, and diagnostics. Navigation is compliant with the International Regulations for Preventing Collisions at Sea (COLREGS), ensuring operational reliability in all conditions.

Fleet Integration: Designed to align with future fleet Concepts of Operations (CONOPS), supporting unmanned and optionally manned missions and integrated operations with aircraft carrier strike groups and surface action groups.

Remote Maintenance System Kits on Track to Fleet Deployment

Raquel Parker, a logistics management specialist with Naval Surface Warfare Center, Port Hueneme Division's logistics outfitting branch, packs Augmented Reality Maintenance System (ARMS) kits for shipment to the U.S. Navy's Aegis Ashore Missile Defense sites in Poland and Romania, Aug. 14. Though not part of her regular tasking, Parker was asked to assist with procuring and assembling the kit items, as well as shipping them to all forward-deployed naval forces before the end of the fiscal year.

Story by Teri Carnicelli, Sept. 9, 2025

OXNARD, Calif. – Naval Surface Warfare Center, Port Hueneme Division's (NSWC PHD) Augmented Reality Maintenance System (ARMS) team sent out more than 20 ARMS kits to the fleet in August, putting it closer to meeting command leadership's goal of ARMS on every deployed ship.

"Our highest priority, based on feedback from (Commanding Officer) Capt. (Tony) Holmes, is to make sure that every

deploying ship in the fleet pulls away from the pier with ARMS capability," said Matt Cole, NSWC PHD ARMS project lead. "So far, we have been accomplishing that by targeting deploying carrier strike groups like the USS Nimitz (CVN 68) and USS Gerald R. Ford (CVN 78) groups. But our current round of fielding is rolling out capability to all our forward-deployed naval forces (FDNF) ships in places like Rota, Spain, and Yokosuka, Japan."

The ARMS kits left the command in mid-August, heading to more than a dozen FDNF ships in the 6th and 7th Fleets. Additional kits were sent to the Navy's Aegis Ashore Missile Defense sites in Poland and Romania for installation before the end of the calendar year.

According to Chris Black, NSWC PHD rapid prototyping experimentation and demonstration lead, the command also sent kits to the Iwo Jima Amphibious Ready Group and its lead ship USS Iwo Jima (LHD 7).

Using the ARMS kit, shipboard maintainers can contact a shore-based subject matter expert (SME) in real time with audio, video and text chat so the remote expert can see and hear what the Sailor is experiencing.

"We anticipate funding from Commander, Naval Air Force, U.S. Pacific Fleet (CNAP) and Commander, Naval Surface Force, U.S. Pacific Fleet (SURFPAC), and we will meet the end-of-month deadline to have ARMS on all FDNF ships," said Black, who is overseeing the deployment of the ARMS kits.

"The ARMS team is actively working toward getting program sponsorship, but while the program is still in the development phase, we are receiving funding from the various type commanders like CNAP and SURFPAC that eagerly want this technology aboard their ships," he added.

Cole said that the ARMS team's intent is to reach 100% of those set to deploy, or already deployed by the first quarter of next fiscal year.

"We also want to push our installations on ships a little earlier in the deployment cycle so Sailors can train with ARMS before they deploy," Cole said.

Collaborative efforts

ARMS team members also continue to collaborate with other systems commands (SYSCOMs) involved in developing and deploying ARMS, including Naval Air Systems Command (NAVAIR) and Naval Information Warfare Systems Command (NAVWAR). NAVAIR developed the software that NSWC PHD combined with commercial off-the-shelf hardware to create and ultimately field ARMS.

Representatives of both SYSCOMs attended a three-day meeting in July that the command hosted to discuss the overall ARMS fielding strategy, network integration requirements, metrics capturing, sponsorship options and more.

"The metrics that we are getting from Sailors and SMEs are going back to us as well as the NAVAIR software developers to improve the hardware and total kit," said computer scientist Nick Bernstein, ARMS engineering lead.

So far, metrics from nine ARMS-assisted shipboard maintenance events have been collected, showing a 92% reduction in SME time by using ARMS and a 94% cost avoidance, versus traditional shipboard support.

"Part of the discussion was focused on programmatics – how are we capturing metrics to tell the story of ARMS' impact, and how we can improve what we're capturing," Bernstein said.

Those metrics and feedback also fed into the development of

the next version of the ARMS kit, he said.

“We dug into requirements and use cases that each SYSCOM would like to prioritize as capabilities in the next version of the kit,” Bernstein said.

Using the feedback received, the ARMS team ranked priorities for software and hardware development over the next six months.

During the meeting, members of the command’s waterfront logistics division briefed the group on the logistical aspects of procuring, assembling and deploying the kits.

“Big picture, the goal of this meeting was to unite all the stakeholders on the requirements of the system and resources for the short-term and long-term plans for this program,” Bernstein said.

“Building these cross-organizational relationships will be key to help the program succeed as we all communicate a bit better and have a more common understanding,” he added.

Long-term sustainment

All three SYSCOMs, including Naval Sea Systems Command, have also been working toward developing an estimated program cost, with a range between barebones support and full-court press to field across the fleet over the next few years, until a formal Program Objective Memorandum dedicates program funding to ARMS, Bernstein said.

“We discussed who our potential sponsors are and which SYSCOM makes the most sense as the primary ARMS home,” he said. “There are still some open questions from this portion of the meeting, but we captured the plans for what’s next.”

Finding a permanent sponsor is just one goal of the long-term sustainment plan for ARMS, according to Cole. What started as a Naval Innovation Science and Engineering-funded research project under NSWC PHD's Office of Technology has now grown into a full-blown program with several areas of command support.

"We have been building out the team into multiple technical swim lanes, with different departments leading the development of ARMS and overseeing fielding and product support," Cole said.

In addition to the departments, Cole said the ARMS team has worked closely with the command's Office of Engineering and the Fleet Readiness Office to set up an operations team to respond to day-to-day fleet support demands for ARMS.

"Every one of these teams also includes important contributions from our partners in NAVAIR and NAVWAR," Cole said. "These improvements to our team structure and bench strength will be key as we take ARMS from a success story in rapid technology transition to a success story in long-term fleet capability."

Looking ahead, the team is already developing the next versions of the ARMS kit, due in large part to fleet and SYSCOM feedback.

"This major version upgrade will bring important software fixes and hardware improvements, as well as several highly requested features like multi-way calling and greater portability," Cole said.

"Our goal is to have these improvements out in the early part of next calendar year," he said. "We're tremendously grateful to the many dozens of people across NSWC PHD and external commands who have pulled out all the stops to help us

accelerate (ARMS') capability to the fleet."