# Advancing the fight: TCTS II Elevates Air Wing Fallon Training

From Naval Air Systems Command

A Tactical Combat Training System Increment II (TCTS II) on an F/A-18 Super Hornet. TCTS II provides encrypted datalink and integrated Live, Virtual, Constructive training to deliver a more secure, data-driven combat training environment for Carrier Air Wings. *Photo credit: U.S. Navy*

NAVAL AIR STATION FALLON, Nevada – The Navy achieved a major milestone at Naval Air Station Fallon when F/A-18E/F Super Hornets from Carrier Air Wing (CVW) 11 flew training sorties equipped with the new Tactical Combat Training System, Increment II (TCTS II), for the first time in January.

Developed by Naval Aviation Training Systems and Ranges (PMA-205), TCTS II provides a seamlessly integrated Live, Virtual, Constructive (LVC) training environment, enhancing security and capability by replicating combat conditions and

allowing crews to rehearse complex, distributed operations.

This advancement significantly bolsters Air Wing Fallon (AWF), the Navy’s premier pre-deployment training site at the Fallon Range Training Complex (FRTC). AWF is where carrier air wings refine tactics and develop combat readiness through intensive, data-driven scenarios.

“Fallon shapes our carrier air wings for major combat operations anywhere on the globe. TCTS II enables secure, integrated training by blending live with simulated scenarios to boost realism and readiness,” said Capt. Jonathan Schiffelbein, PMA-205 program manager.

Fielding TCTS II in time for the January training event required extraordinary coordination, Schiffelbein said, with teams urgently upgrading pods and ground equipment, including range remote units. This unified effort delivered a modernized training capability, ensuring air wings can train against threat representative environments.

“We can now capture, analyze and feedback high-fidelity training data much faster, tightening the loop between execution and improved tactics,” said Dan Carrigg, PMA-205 Live Training Environment deputy program manager.

TCTS II also supported Open Air Battle Shaping demonstrations, integrating LVC participants to simulate real-time weapon effects and force attrition. This capability turns data into actionable insight before the next sortie, accelerating the warfighting learning cycle and building decision advantage.

The successful integration of TCTS II into AWF underscores the Navy’s commitment to advancing training realism and force readiness. As carrier air wings prepare for deployment, AWF’s demanding curriculum combined with TCTS II’s enhanced capabilities ensures naval aviators are trained and ready to prevail in complex, contested environments.

# Navy, Maryland Set Up New Energetics Innovation Hub to Speed Capability to the Warfighter


The symbolic groundbreaking ceremony for the new Maryland Energetics Innovation Hub. From left: Indian Head Mayor Brandon Paulin; Will Durant, President and CEO of Energetics Technology Center; David Dowell, CEO of ACMI Properties; U.S. Rep. Steny Hoyer; Commander Robert Lusk, Executive Officer, NSA South Potomac; and Captain Stephen Duba, Commanding Officer, NSWC Indian Head Division. *Photo credit: ACMI Group*

INDIAN HEAD, Maryland – Replenishing the U.S. military's supply of weapons and speeding new systems to the field are hot topics these days, and on May 28 federal, state and local officials gathered near Naval Surface Warfare Center Indian Head to break ground on a new public-private partnership to do

all that and more.

The American Center for Manufacturing & Innovation (ACMI), an industrial development group, co-hosted the groundbreaking with NSWC Indian Head for the Maryland Energetics Innovation Hub (MEIH), a defense manufacturing and innovation hub designed to modernize the developing and testing of energetics, the technologies and components that make up propulsion systems, warheads, flares, bombs and other explosive devices.

MEIH is intended to speed production of current weapons as well as the design of new ones and will consist of multiple new buildings just outside the gates of NSWC Indian Head. It will host companies and research institutions focused on eight priority areas, including energetics for uncrewed systems, next-generation propulsion systems, manufacturing automation and other capabilities.

“The United States is at a critical juncture right now, from the rapid expenditure of munitions in the Middle East to our ongoing commitments globally,” Captain Stephen Duba, commanding officer of NSWC Indian Head Division, said at the groundbreaking event. “The demand signal from our warfighter has never been louder than it is right now … to outpace our adversaries in the research development and production of cutting-edge energetic systems, we must scale and we must go faster for our nation.”

Rep. Steny Hoyer (D-Maryland), a member of the money-dispensing House Appropriations Committee, said MEIH is the result of “a team effort. It’s a team effort in the private sector, it’s a team effort at the federal, state and local levels as well,” one that includes some $16 million in appropriations funding from defense bills last year and one pending for fiscal 2027.

Captain Stephen Duba, Commanding Officer, NSWC Indian Head Division, speaks at the groundbreaking ceremony. *Photo credit: Brett Davis*

**Speed to the Field**

Setting up facilities such as MEIH rapidly is one of the goals of ACMI, which in February announced a National Security Industrial Hub in Indiana adjacent to Naval Surface Warfare Center – Crane Division and Crane Army Ammunition Activity.

MEIH is backed by an initial $50 million award from NSWC Indian Head and is expected to raise more than $200 million in additional private investment. As in the Indiana location, putting the facilities outside a military base, but not on it, is intended to make the development faster.

“We are doing all this in record time,” David Dowell, CEO of ACMI Properties, said of MEIH, as the contract from NSWC Indian Head was awarded just last month. The goal is to have the facility up and running in 18 to 24 months.

At the event, Dowell said the United States has often

developed technologies that went elsewhere for production or were never produced at all.

“That gap, between innovation and production of innovative products, has become one of the greatest risks of both our economic edge and our common security. This project, the Maryland Energetics Innovation Hub, was conceived specifically to bridge this gap in the energetics space.”

And although the focus of the effort is energetics, that covers a lot of ground, said Will Durant, president and CEO of Energetics Technology Center, one of the two newly announced inaugural tenants of MEIH, along with Applied Research Associates.

“The goal of MEIH is there are eight stated capability areas and they are not only energetics, they are energetics adjacent,” Durant said.

That includes advanced energetics, uncrewed systems, autonomous systems, high-performance computing, even robotic arms for the safe handling of energetics, Durant said.

“We want to do the energetics innovation, and then anything that helps get greater capability to the warfighter faster is what we’re doing at MEIH.”

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# Lockheed Martin Delivers First Integrated Combat System Enabled Baseline

From Lockheed Martin

MOORESTOWN, N.J., May 28, 2026 – Lockheed Martin (NYSE:LMT) has successfully delivered the first Integrated Combat System (ICS)-enabled baseline to the U.S. Navy. ICS-enabled baselines combine heritage combat system capability with modern infrastructure, driving rapid proliferation of capability through a singular development effort at scale. Working with the Navy and industry partners, this marks the start of a six-month operating cadence for updates and certifications that will be fielded across the fleet, a significant step toward the Navy's vision of fleetwide commonality.

The six-month cadence keeps the ICS adaptable and continuously refreshed with cutting edge capabilities, ensuring the surface fleet stays at the forefront of naval warfare.

"The first ICS-enabled baseline delivery highlights Lockheed Martin's commitment to and partnership with the U.S. Navy to accelerate the transition to a common, fully integrated combat architecture in a continuously evolving warfighting environment," said Chandra Marshall, vice president of Multi-Domain Combat Systems at

Lockheed Martin. “Each baseline upgrade delivered and integrated into the ICS further reinforces and expands the already proven Aegis integrated air and missile defense capability.”

**Highlights and Impact**

- The Aegis BL9.C3.0 Package: This is the first baseline compiled from the Forge development environment. It introduces the re-architected display component, Tactical PaaS (Platform as a Service), which establishes the foundation for containerized software, and a suite of new operational capabilities.

- Accelerated Capability Fielding: Each follow-on delivery will incrementally integrate new capabilities, sensors, effectors, and software. Driving towards a single ICS-enabled baseline cuts cost and ensures that every surface combatant can field the latest combat capabilities on a predictable schedule.

Delivering baseline BL9.C3.0 highlights Lockheed Martin’s partnership with the U.S. Navy, our commitment to deliver force-level capability, and accelerate the transition to a common, fully integrated combat architecture.

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# Two Decades of Cooperation in the Indo-Pacific: Pacific

# Partnership 2026 Mission Begins

NAVAL AIR STATION NORTH ISLAND, Calif. (May 26, 2026) – U.S. Navy Capt. Robert Reyes (left), mission commander of Pacific Partnership 2026 (PP26), Royal Canadian Armed Forces Col. Alain Lafrenière (right), deputy mission commander of PP26, and Sailors pose for a photo commemorating the start of the mission on Naval Air Station North Island, May 26, 2026. (U.S. Navy Photo by Mass Communication Specialist 1st Class Justin E. Yarborough)

From Courtesy Story, May 28, 2026

SAN DIEGO – Pacific Partnership, the U.S. Navy's largest annual maritime humanitarian and civic assistance effort conducted in the Indo-Pacific, officially began with the departure of U.S. personnel from San Diego to the mission coordinating hub in the Philippines, May 27, 2026.

The Pacific Partnership 2026 (PP26) team, led by U.S. Navy

Capt. Robert C. Reyes, mission commander, and Canadian Armed Forces Col. Alain Lafrenière, deputy mission commander, will conduct mission stops in Indonesia, Malaysia, the Philippines, Timor-Leste, and Vietnam.

“This year marks the 20th anniversary of Pacific Partnership, and the 22nd time embarking on this critical mission alongside our allies and partners,” said Reyes. “With our unified commitment to a free and open Indo-Pacific, we strengthen regional security by building host nation capacity to prepare for and overcome crises, deepen cooperation, and deliver an enduring impact across the region.”

U.S. personnel will work alongside personnel from participating nations including Australia, Canada, Germany, Japan, New Zealand, Republic of Korea, Singapore, and the United Kingdom to bolster host nation capacity to administer critical humanitarian services and support efforts to prepare and respond to disaster emergencies in the region.

“Our team has worked hard to plan this mission and we are excited to visit new countries, experience new cultures, and integrate with our allies and partners to see first-hand, the positive impact we can have together, said Master Chief Air Traffic Controller Eric Zimmerman, senior enlisted leader for PP26.

During the deployment, the PP26 mission team will work alongside host nation partners to conduct medical exchanges, engineering projects, community outreach, and disaster preparedness engagements. The first stop is scheduled to take place in Vietnam in mid-June.

PP26 will focus on enhancing multilateral cooperation, strengthening national capacities for disaster and emergency response, and deepening strategic partnerships throughout the region.

The U.S. Pacific Fleet, along with its allies and

partners, remains steadfast in advancing the shared vision of a free, open, and secure Indo-Pacific.

Pacific Partnership works collaboratively with host and partner nations to enhance regional interoperability and disaster response capabilities, increase security in the region, and foster new and enduring friendships in the Indo-Pacific.

For updates and multimedia from Pacific Partnership 2026, follow #PacificPartnership, #PP26, and #PacificPartnership26 on social media or visit: Pacific Partnership

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# U.S. 4th Fleet Commander Strengthens Maritime Partnership During Argentina Visit

Rear Adm. Carlos Sardiello, commander of U.S. Naval Forces Southern Command/U.S. 4th Fleet, addresses Argentine Sailors aboard MEKO 360H2-class destroyer ARA La Argentina (D 11) during a ship tour at Puerto Belgrano Naval Base, Argentina, May 18, 2026. (U.S. Navy photo by Chief Mass Communication Specialist Margie Vinson)

By Chief Petty Officer Margie Vinson, May 27, 2026

PUERTO BELGRANO NAVAL BASE, Argentina — The U.S. delegation, led by Rear Adm. Carlos Sardiello, commander of U.S. Naval Forces Southern Command/U.S. 4th Fleet, was hosted by Rear Adm. José Alberto Martí Garro of the Argentine Navy. The U.S. contingent also included Col. Jeffrey Hammond, Operations Officer for U.S. Marine Corps Forces, South, along with representatives from Joint Interagency Task Force South and Special Operations Command South.

The talks focused on enhancing interoperability, deepening maritime domain awareness, and advancing cybersecurity cooperation to address shared security interests. Key areas of

discussion included leveraging upcoming multinational exercises such as UNITAS and Southern Seas to ensure seamless integration and teamwork between the two naval forces.

“Argentina has had a longstanding relationship of cooperation with the U.S.,” said Sardiello. “The foundation of that is interoperability, trust and security. This helps ensure international norms and maritime domain are enforced so that we may respond to any crisis.”

As part of the visit, the U.S. delegation participated in celebrations for the 212th Argentine Navy Day and observed a Joint Combined Exchange Training (JCET) demonstration. The exercise featured the U.S. Army’s 7th Special Forces Group and Argentine Marine Special Operations Forces (Comandos Anfibios), observed alongside U.S. Ambassador Marc Stanley at the Baterias training area. The agenda also included a visit to the destroyer ARA Sarandi (D13) and the presentation of the Legion of Merit to former Naval Attaché Rear Adm. Calafel at the Argentine Navy Headquarters in Buenos Aires.

The event concluded with the signing of minutes by Rear Adm. Sardiello and Rear Adm. Martí Garro, formally documenting the key agreements reached and solidifying a collaborative path forward. Both leaders reiterated their shared commitment to a robust and lasting defense partnership between the United States and Argentina.

A U.S. Naval Forces Southern Command/U.S. 4th Fleet serves as a trusted maritime partner for Caribbean, Central, and South American maritime forces, working to promote unity, security, and stability throughout the region.

# Austal USA Names Gene Miller as President

*Board concludes search by confirming interim leader as*

*permanent selection*

From Austal USA, May 27, 2026

MOBILE, Ala. – Austal USA today announced that Gene Miller has been chosen as the company's president, effective immediately. Miller has served as interim president since February 16, 2026, following the planned retirement of former president Michelle Kruger. His selection follows a comprehensive three-month search conducted by the company's Board of Managers.

Miller's career spans more than three decades in naval architecture and shipbuilding. Prior to joining Austal USA as chief operating officer in 2024, he held senior leadership roles across the industry. At Ingalls Shipbuilding, he served as director for amphibious ship programs. Before that, Miller spent more than 20 years at General Dynamics Bath Iron Works, serving in a variety of engineering, operational and program management leadership roles before rising to vice president of programs and planning. Miller is a graduate of Webb Institute and MIT.

"Gene's selection reflects our confidence in the leadership team we have built and the direction Austal is moving toward," said Austal USA Chairman of the Board of Managers Chris Chadwick. "Since stepping into the interim role in February, he has demonstrated the qualities we have been looking for: operational discipline, a commitment to the workforce and the ability to deliver results. He has the relationships and strategic clarity to carry Austal USA's momentum forward at a critical moment for our industry and for national defense. We are in a strong position for what comes next, and Gene is the right leader to take us there."

As president, Miller will lead a team of more than 3,500 shipbuilding professionals across Austal USA's operations in Mobile, Washington D.C., San Diego and various Virginia locations. He will oversee all aspects of the company's ship

and submarine module manufacturing and development of autonomous sea-ready technologies. He inherits a program portfolio that has grown significantly in recent years and a next-generation shipyard well-positioned for the work ahead.

“I am honored by the Board’s confidence and energized by what this team has built together,” said Miller. “Austal USA’s greatest strength is its workforce, and everything we do as a leadership team is in service to the men and women who show up every day to build ships that defend this nation. I am committed to growing this company, investing in our people and delivering on the promise of what Austal USA is capable of.”

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# UTIC Expands Undersea Workforce Development Through Sonar Training Partnership

MIDDLETOWN, R.I. – More than 100 Undersea Technology Innovation Consortium (UTIC) member company employees recently completed a successful sonar training course through a partnership with the University of Rhode Island (URI) and RTX. The partnership, aimed at strengthening the defense technology workforce, allowed UTIC members to take the Principles of Sonar, Underwater Sound, and Undersea Systems Course on a non-credit basis during the Spring 2026 semester. URI graduate students also completed the course for credit. The course was offered virtually and in person.

This is the third time the course has been offered and since

its inception, over 500 UTIC member employees have gained critical undersea tech skills.  The initiative comes as demand is growing for specialized technical talent across the undersea and maritime defense sectors.

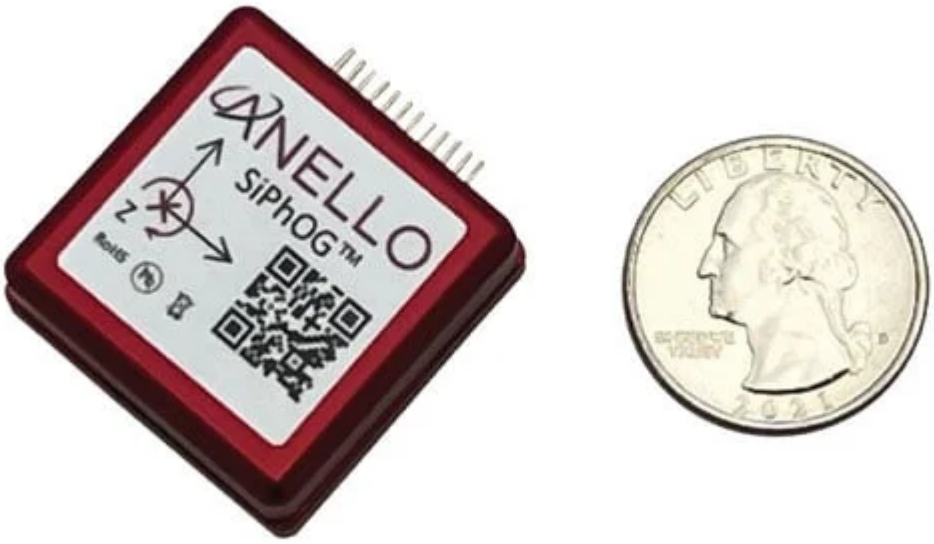
“As undersea technology continues to rapidly evolve, expanding access to specialized education and technical training is essential to building a skilled, future-ready workforce,” said UTIC Chief Executive Officer Molly Donohue Magee. “Partnerships like this one with URI and RTX help ensure our member organizations have the knowledge, capabilities, and talent needed to support innovation, strengthen competitiveness, and advance the nation’s undersea mission.”

Led by Dr. John Short – a nationally recognized expert in sonar and undersea systems – the program provided valuable insights and knowledge transfer to both emerging professionals and longtime engineers. Dr. Short emphasized the importance of initiatives like this in sharing and advancing expertise across generations.

“This course represents more than professional development—it is an investment in the future of the undersea technology industry,” said Dr. John Short. “By combining fundamental principles with practical application, the program helps professionals strengthen technical expertise, apply new knowledge to real-world challenges, and build on both existing and emerging innovations.”

Principles of Sonar, Underwater Sound, and Undersea Systems is a graduate-level course focused on the fundamentals of sonar technology, underwater acoustics, and undersea systems engineering. The curriculum covers active and passive sonar design, acoustic modeling, ocean environment fundamentals, and practical applications such as performance estimation, system tradeoffs, and in-water testing. The course is expected to be offered again in Spring 2027.

# ANELLO Photonics Miniaturizes Navigation Systems for Unmanned Systems




ARLINGTON, Va. – A Silicon Valley-based technology company is finding success in developing and producing small, silicon chip-based navigation systems ideal for unmanned systems operating in GPS-denied environments across land, air and sea.

ANELLO Photonics, headquartered in Santa Clara, California, develops advanced navigation systems based on silicon photonics technology. The company integrates optical sensing and inertial navigation capabilities onto compact silicon chips to deliver high-performance positioning and guidance solutions.

Its core product, the SiPhOG (Silicon Photonic Optical Gyroscope), is a photonic integrated circuit that provides the functionality of a traditional fiber-optic inertial navigation system used in aircraft, ships, and submarines, while significantly reducing size, weight, power consumption, and system complexity.

“Fiber-optic gyros are high-end, navigation-grade sensors usually used for ICBMs, fighter jets, [and] submarines. They’re the gold standard, [and] often can navigate for weeks or months at a time,” said Dr. Kirstin Schauble, Vice President for Systems Engineering at ANELLO, in an interview with Seapower. “They’re fantastic sensors; the problem with them is that they are big, bulky, power hungry, and extremely expensive.”

As such, fiber-optic gyros are impractical for small unmanned systems, particularly attritable systems.

“We’ve taken the core physics behind traditional fiber-optic gyroscopes – systems that conventionally rely on numerous discrete optical components – and integrated them onto a compact silicon photonics chip,” said Schauble. “By integrating active and passive photonic elements onto a two by five millimeter chip , we’ve dramatically reduced the size and complexity of high-performance inertial navigation technology. The SiPhOG is also mass producible and highly robust, while still delivering the precision expected from traditional fiber-optic gyroscopes due to the significant innovations we’ve achieved in silicon photonics.”

Because the SiPhOG is relatively inexpensive, small, lightweight, and consumes little electric power, it is ideal for equipping swarms of autonomous systems such as unmanned aerial vehicles (UAVs), unmanned surface vessels (USVs) and unmanned underwater vehicles (UUVs).

Schauble said the SiPhOG is ideal for Group 2/3 fixed

wing drones, USVs, and 10-foot-to-200-foot vessels.

“We’re able to bring high precision capability to lower-cost, lower size-weight-power form factors for smaller vessels that previously couldn’t afford FOG-level performance,” she said.

The company’s Maritime Inertial Navigation System (INS) delivers precise and reliable navigation in GPS-denied or contested environments, enabling continuous positioning, heading, and motion tracking for autonomous maritime platforms.

ANELLO’s X3 IMU (Inertial Measurement Unit) integrates seamlessly into existing systems and can operate either independently or as part of a larger navigation architecture, according to Schauble. Designed with an open interface and modular architecture, the X3 supports flexible plug-and-play integration across a wide range of aerial autonomous applications.

According to a company press release, ANELLO was selected in January by the Department of War (DoW) for a $20 million award under the Accelerate the Procurement and Fielding of Innovative Technologies (APFIT) program to fast-track the procurement, production, and scaling of ANELLO’s GPS-denied navigation technology.

ANELLO’s SiPhOG-based Maritime INS is integrated on several autonomous systems, including HavocAI’s USVs and BlackSea Technologies’ Chaser USV.

Schauble said ANELLO’s workforce is expanding from its current 35-to-40 personnel.

“We can’t build these things fast enough,” she said commenting on the flood of orders.

# Pilots Eject from T-45C Goshawk in May 26 Mishap


ATLANTIC OCEAN (Sept. 20, 2025) A T-45C Goshawk, attached to Training Airwing (TW) 1, prepares for launch on the flight deck of the Nimitz-class aircraft carrier USS Harry S. Truman (CVN 75). (U.S. Navy photo by Mass Communication Specialist Seaman Michael Gomez)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. — A U.S. Navy T-45C Goshawk jet training aircraft crashed May 26, 2026, in Mississippi. The two aviators in the crew ejected successfully.

The T-45C crashed near Shuqualak, Mississippi, according to a post by television station WTOK.

The T-45C was assigned to Training Air Wing One, based at Naval Air Station Meridian, Mississippi.

According to an aviation expert, the aircraft was the 35th T-45 to be lost in mishaps since the aircraft began service in 1991.

The Navy is in the process of selecting a new training aircraft to replace the T-45.

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# Hyperion Systems to Build First 3D Printed Uncrewed Surface Vessel in the Southern Hemisphere

*Image caption: Hyperion CEO Joshua Wigley and Greenroom COO Harry Hubbert with ASTRA 3D printed vessel*
From Hyperion Systems, May 25, 2026

Hyperion Systems has unveiled the southern hemisphere's first 3D printed Uncrewed Surface Vessel (USV), marking a major milestone for advanced manufacturing and autonomous maritime capability in Western Australia (WA).

Designed by WA marine architect Versatile Marine and powered by Greenroom Robotics' AI and autonomy software, the ASTRA 460 will be manufactured in Henderson Western Australia by Hyperion Systems, demonstrating how next-generation vessels can be built faster, more affordably and with sovereign Australian capability.

The project was officially unveiled today at the Indian Ocean Defence and Security conference (IODS) by WA Defence Minister Paul Papalia alongside the first public viewing of Hyperion's deployable "factory in a

box” TitanCell.

The 4.6m ASTRA hulls will be 3D printed using Large Format Additive Manufacturing (LFAM) and recycled polymer waste by a consortium led by Hyperion Systems with integration support from key Australian stakeholders.

The autonomous navigation and control system will be delivered by Greenroom Robotics’ GAMA platform, providing a proven solution that is flexible and readily scalable to varying USV configurations.

Hyperion CEO Joshua Wigley said the vessel hull will be manufactured in approximately 40 hours using LFAM 3D printing, compared to at least 4-6 weeks using traditional boat-building methods.

“This dramatic reduction in production time highlights the transformative potential of additive manufacturing for rapid maritime capability and sovereign industrial resilience,” Mr Wigley said.

Greenroom Robotics co-founder and COO, Harry Hubbert said that Greenroom’s autonomy stack is ideally suited to Hyperion’s rapidly reconfigurable 3D printed USV platforms.

“In contested environments, the ability to quickly adapt a vessel to meet evolving mission requirements delivers a significant asymmetric advantage,” Mr Hubbert said. “Hyperion’s 3D printed USVs can deliver almost real-time customisation to suit the specific operating context.”

“In a matter of days, a vessel can be printed, autonomy enabled and on the water. This opens up endless possibilities for rapid, scalable and distributed maritime defence.”

The ASTRA 460 will be among the world’s first LFAM 3D-printed USVs and a larger 8m initial prototype is planned to be supplied to a European navy for use at a major naval

exercise later in 2026.

Subject to successfully completing a series of rigorous sea trials which will start later this month, the fully autonomous vessel will feature:

· Top speed approximately 40 knots

· Cruising speed between 20-30 knots

· Range of up to 180-200 kilometres

· Multi-mission capability, including covert movement of small teams

· Operation across a range of sea states

· Modular payload flexibility for surveillance, security and defence roles.

Mr Wigley said combining Hyperion's AI development toolkit with variable scale LFAM printing capacity will mean the ASTRA will be the first of a series of USVs which will be produced in many sizes and capability configurations that can be printed either in Henderson of deployed and printed using Hyperion's "Titan Cell".

"We are immediately provisioning to build 10 units a month and can scale to over 100 as needed," he said.

**Uncrewed Surface Vessels have rapidly become a critical component of modern defence capability**

ASTRA Project Manager Jacob Kleinman said recent conflicts have demonstrated the effectiveness of USVs as cost-efficient, low-risk platforms that enhance maritime surveillance, reconnaissance and operational reach while reducing risk to personnel.

"USVs provide strong force-multiplication advantages. They are significantly cheaper to build and operate than traditional

crewed vessels, enable persistent maritime presence, and act as force multipliers for manned fleets," he said.

"We see the ASTRA playing a key role supporting missions including intelligence, surveillance and reconnaissance, border protection and security operations. Its modular payload capability also allows rapid reconfiguration for mission-specific roles."

The ASTRA project brings together leading defence industry players to position Western Australia at the forefront of advanced maritime manufacturing, while strengthening Australia's sovereign capability in autonomous maritime systems.

**TitanCell also on display**

Mr Wigley said the IODS conference also provided a unique opportunity to publicly show for the first time the deployable anywhere TitanCell which can be used to manufacture USVs and a range of other products.

Designed as a deployable "factory-in-a-box", the TitanCell combines advanced robotics, 3D printing and in-house recycled polymer technology to manufacture products such as marine infrastructure, modular housing components, culverts, pontoons and autonomous vessel hulls.

By using difficult-to-recycle plastics, including material recovered from decommissioned resources industry infrastructure, the TitanCell supports sovereign manufacturing capability, reduces waste and carbon emissions and allows advanced manufacturing to be deployed directly to remote, regional or disaster-affected areas where traditional supply chains are limited.

The commercialisation of the TitanCell was accelerated via a $385,000 matched funding grant provided under the Australian Government's Industry Growth Program.