AI Likely to Be Integrated into Naval Vessels in Next Five Years, GlobalData Says

One of the manned vessels converted to unmanned for the Ghost Fleet Overlord Program. A new report from GlobalData forecasts much more artificial intelligence is coming to naval ships. *U.S. NAVY*

LONDON – Artificial intelligence (AI) has the potential to make major improvements to modern ships, including decreasing the number of crew required for operations and enabling faster and better-informed decision making in a fast-moving environment, GlobalData, a data analytics company, said in a June 16 release.

A survey by GlobalData finds that 43% of respondents believe that AI will be integrated in a significant way into naval vessels within the next five years, while 31% think this process will take place within 10 years, and only 25% believe that it will take longer than 10 years.

According to GlobalData's report, "AI in Aerospace and Defense," the development of AI presents long-term cost-cutting potential, as well as providing easy-to-understand analysis based on large datasets. While fully autonomous ships powered by AI may not become the norm within the next 10 years, it is likely that the technology will increasingly be used to aid decision-making in coming years.

"Advanced navies significantly invest in AI, computer and communication technologies in order to have larger and more capable autonomous vessels," said William Davies, Aerospace and Defense Associate analyst at GlobalData. "For instance, the U.S. Navy converted two existing commercial fast supply vessels into unmanned surface vehicles (USVs) for its Ghost

Fleet Overlord Surface program, which aims to inform and accelerate the Navy's large and medium USV programs. Furthermore, on June 7, 2021, the U.S. Department of Defense awarded a $44 million contract to Austal USA to carry out the design, procurement, production implementation, and demonstration of autonomous capability in Expeditionary Fast Transport (EPF) vessel, USNS Apalachicola (T-EPF-13).

"Outside of the U.S., there have also been significant investments in AI. For instance, the U.K. invested £4m in 2020 for warship AI development projects, which will help warships to process data and provide crews with improved situational awareness," Davies said. "Moreover, in 2017, China announced its next generation AI development plan, with a goal of becoming the world leader in the technology by 2030, and in 2020 the country unveiled a multi-purpose unmanned surface vessel, as well as reportedly developing AI-enabled submarines."

Security Officials Conduct Regional Maritime Security Intelligence and Interdiction Exercise in Miami

U.S. Coast Guard Maritime Security Response Team personnel train on a rigid-hull inflatable boat from the Cyclone-class coastal patrol ship USS Thunderbolt (PC 12) in the Gulf of Oman in 2018. Thunderbolt was deployed to the U.S. 5th Fleet area of operations in support of naval operations to ensure maritime stability and security in the Central Region,

connecting the Mediterranean and the Pacific through the western Indian Ocean and three strategic choke points. *U.S. ARMY / Specialist David Resnick*

Maritime security stakeholders from foreign governments, federal, state, local and tribal law enforcement and port agencies came together in Miami June 9 to strengthen and focus collaboration and cooperation between stakeholders to promote whole-of-government efforts to address maritime security issues.

Led by the Maritime Domain Awareness Executive Steering Committee (MDA ESC), the Regional Maritime Security Intelligence and Interdiction table-top exercise (TTX) was held as part of the Maritime Security East 2021 conference, held June 8-9. The MDA ESC is led by Rear Adm. Gene Price, director of the National Maritime Intelligence-Integration Office, who represents the intelligence community in that role.

The goal of the TTX was to build a common understanding of organizations, roles and priorities involved in improving maritime domain awareness

According to Joe Cunningham, the MDA ESC's executive director, the TTX was designed to achieve several key objectives.

"We want to build a common understanding of organizations, roles, and priorities involved in improving MDA, as well as address potential unintentional barriers to whole-of-government MDA efforts. We're presenting problems and identifying gaps and barriers, as discussing ways to share information and get around those barriers. We have to coordinate, collaborate and communicate."

During the scenario, the participants discussed the deployment of various surveillance and response assets, and communicating and sharing intelligence between agencies at all levels.

"By shedding light on these issues, we were able to improve

multilateral and regional MDA and response efforts, identify overlapping authorities and improve maritime information and intelligence sharing," Cunningham said.

"Information is a national asset that requires a responsible balancing act between information sharing and safeguarding," Cunningham said. "It is critical to interagency governance, coordination and unification efforts across the full spectrum of partners at all levels."

The MDA ESC is comprised of senior executive-level principals designated by their respective departmental executive agents for MDA from cabinet-level departments (currently State, Commerce, Defense, Transportation and Homeland Security) and the designated maritime representative of the intelligence community. The MDA ESC coordinates MDA policies, strategies, and initiatives.

The MDA ESC provides forums, activities, and venues to engage the global maritime community of interest to promote collaboration and information sharing to enhance MDA.

"We've been a partner of the MDA ESC for many years, and a contributor to the important work they do," said Sareth Neak, the conference's organizer. "We're pleased they chose to host this TTX at MARSEC East 2021."

AeroVironment Relocates Corporate Headquarters to

Arlington, Virginia

John Ferguson, an unmanned aircraft system operator for AeroVironment, releases a Puma All Environment UAS from the deck of the Coast Guard Cutter Healy during an exercise in the Arctic Aug. 23, 2014. The Puma is a small UAS designed for land and maritime operations. *COAST GUARD / Petty Officer 1st Class Shawn Eggert*

SIMI VALLEY, Calif. – AeroVironment Inc., a global leader in intelligent, multi-domain robotic systems, announced June 15 the relocation of its corporate headquarters from Simi Valley, California, to Arlington, Virginia, effective June 15, 2021.

"The greater Washington D.C. area is where many of our key customers are located and expanding our presence in the region will further our access to decision makers, influencers and talent," said Wahid Nawabi, AeroVironment president and CEO.

"Our recent acquisition of Progeny Systems ISG and our new Artificial Intelligence Innovation Center expand our footprint near the Beltway and build on our momentum as we continue to grow our portfolio and global scope. We look forward to growing our Washington, D.C., presence and continuing to serve our customers with solutions that help them proceed with certainty."

AeroVironment will maintain its presence and existing operations in Simi Valley and other existing sites across the United States and in Germany.

18 NATO and Partner Nations Conducting Multi-Lateral Combat Training During BALTOPS 50

Standing NATO Maritime Group One (SNMG1) ships HMCS Halifax, HDMS Absalon, FS Commandant Blaison, HNoMS Storm and HNoMS Gnist participate in a PHOTOEX with RFA Mounts Bay and HMS Albion off the coast of Denmark on June 6th, 2021 during Exercise BALTOPS 50. *ROYAL CANADIAN NAVY / Sailor First Class Bryan Underwood*

The U.S., NATO allies and partner nations are participating in the 50th Baltic Operations (BALTOPS 50) exercise, currently underway through June 18 in and around the Baltic Sea.

BALTOPS 2021 features air and maritime assets from 18 NATO allies and partner nations, which will participate in live training events that include air defense, anti-submarine warfare, amphibious operations, maritime interdiction, mine countermeasure operations.

Command and control of the exercise is being led from the Naval Striking and Support Forces NATO (STRIKFORNATO) headquarters in Oeiras, Portugal. II Marine Expeditionary Brigade and Expeditionary Strike Group 2 will provide command and control of Marine forces throughout the exercise from aboard USS Mount Whitney (LCC 20), demonstrating international naval integration and power projection ashore for an amphibious demonstration in Lithuania.

“This year, we celebrate the 50th BALTOPS, an exercise that sets the foundation of interoperability across the alliance,” said U.S. Vice Adm. Gene Black, commander, Naval Striking and

Support Forces NATO and commander, U.S. 6th Fleet. “BALTOPS stands as the keystone of our exercise season, demonstrating half a century of the unwavering commitment of our partners and Allies. Lessons learned in BALTOPS enable international strike group operations, advanced missile defense capabilities and seamless surface action group missions.”

According to a statement from NATO, BALTOPS 50 consists of two at-sea training phases: the combat enhancement training (CET) and force integration training (FIT) portion and the final tactical phase of the exercise (TACEX).

“During the first six days (the CET/FIT phase), ships and aircraft will transit through the Danish Straits, focusing on maritime operations in critical chokepoints, ensuring access and freedom of navigation in the Baltic Sea. The exercise will continue to move east during its two phases, operating in accordance with international law and supported by participating allies and partners. The exercise will culminate with the TACEX phase, where the exercise paradigm will shift into a ‘free-play’ portion, and commanders are given more freedom to run their own tactical programs,” the statement said. “The TACEX phase is designed to better represent operating in real-world situations.”

This year’s exercise incorporates defensive cyber warfare tactics, techniques and procedures to help forces adapt and train to ensure an asymmetric advantage in the era of modern warfare.

BALTOPS 50 involves participation from 16 NATO countries – Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Lithuania, the Netherlands, Norway, Poland, Spain, Sweden, Turkey, the U.K., and the U.S. – and two partner nations, Sweden and Finland. Together, the nations are providing 40 maritime units, 60 aircraft, and 4,000 personnel to the exercise.

Addressing reporters from his headquarters in Naples, Italy, Black said BALTOPS is an exercise that spans the full range of maritime missions and sets the foundation of interoperability across the alliance.

“BALTOPS represents half a century of unwavering commitment to maritime security by our partners and allies,” said Black. “Lessons learned during BALTOPS enable international strike group operations, advanced missile defense capabilities, seamless surface action group missions, amphibious operations, and mine warfare.”

Speaking from Portugal, Deputy Commander of Naval Striking and Support Forces NATO Rear Adm. James Morley, Royal Navy, said BALTOPS forms a key element of NATO’s exercise program and NATO’s deterrence and defense, as well as demonstrates and develops alliance capability and readiness. “It serves a number of purposes, but principally it’s an opportunity to demonstrate alliance cohesion, a chance to demonstrate and to develop and to test alliance capability, and it’s all done with an emphasis on transparency. And I might just touch on each of those points in turn.”

Morley said BALTOPS provides the opportunity for allies to operate alongside each other, “Just as they would fight together, training across the entire spectrums of naval warfare against conventional threats from aircraft, ships, and submarines, including this year against a highly capable Swedish submarine, and in mine warfare, in amphibious operations, and in maritime interdiction operations.”

BALTOPS 2021 began with a training and integration period to improve unit readiness using a pre-planned serialized program. The exercise then moves to a tactical or free-play phase. “Units won’t know what the enemy will do next and will be expected to react as they would for real to a series of multi-threat challenges,” Morley said.

This year’s exercise will also add defensive cyberwarfare tactics, techniques, and procedures into the scenario. “It’s something we contend with and do every day, but it’ll give both commanders and operators something else to contend with,” Morley said. “We’ll also be experimenting with unmanned and autonomous systems, particularly in mine warfare.”

Morley said the forces will be using a range of both conventional and autonomous systems that various nations are trialing in the exercise to give them some real-world context and to test them alongside conventional capability.

The officials emphasized transparency. “BALTOPS is a long-planned and publicly announced exercise conducted in compliance with international law, with a strong focus on real-world safety,” said Morley.

“BALTOPS is regularly scheduled and announced, and always there is a slight uptick in Russian activity as we bring forces into and operate in the Baltic,” Black said.

Commission Examines Assets that Honor the Confederacy, Will Suggest Name Changes

A Pathfinder-class oceanographic survey ship, USNS Maury (T-AGS-66) in 2020. Maury is named after Commander Matthew Fontaine Maury, the “father of modern oceanography.” He served in the U.S. Navy but was also a Confederate naval officer. *U.S. NAVY / LaShawn Sykes*

The Department of Defense’s Naming Commission – technically

the Commission on the Naming of Items of the Department of Defense that Commemorate the Confederate States of America or Any Person Who Served Voluntarily with the Confederate States of America – has begun its work to examine bases and ships with names tied to the Confederacy and make recommendations for renaming them.

The eight commissioners, chaired by retired Navy Adm. Michelle Howard, were sworn in on March 2 and have begun biweekly meetings. Howard told the press the commission has developed an initial charter to guide the process and is developing renaming procedures and criteria.

The Naming Commission was mandated by Congress under Section 370 of the 2021 National Defense Authorization Act and charged with assigning, modifying or removing anything that commemorates the Confederate States of America or any person who served voluntarily with the Confederacy.

The military services were already contemplating the appropriateness of the eight bases named for Confederate generals who voluntarily fought against the United States – Fort A.P. Hill, Fort Bragg, Fort Lee, Fort Rucker, Fort Benning, Fort Gordon, Fort Hood, Fort Polk and Fort Pickett. A ninth base, Fort Belvoir, was previously named Camp A. A. Humphreys after Civil War Union Army Gen. Andrew A. Humphreys. It was later named for the plantation that existed at that location, which was operated with enslaved people. The commission will investigate if the renaming of that installation was done to possibly commemorate the Confederacy.

Howard said the commission will be visiting the bases throughout the summer and fall and meeting with local stakeholders to gain perspectives and local opinions in regards to renaming assets.

Congress required a commission be appointed, with four of the

commissioners to be appointed by the secretary of defense and four by the chairs and ranking members of the House and Senate Armed Services committees.

In his last days in office, then-Acting Defense Secretary Chris Miller announced his picks, but shortly after taking office Defense Secretary Lloyd Austin III replaced Miller's appointees with his own. In addition to Howard, Austin appointed retired Marine Corps Gen. Bob Neller, Dr. Kori Schake, director of Foreign & Defense Policy Studies at the American Enterprise Institute, and retired Army Brig. Gen. Ty Seidule, emeritus professor of history, U.S. Military Academy.

Beyond the Army bases, there are Navy ships named for Confederate leaders or victories, including the oceanographic ship USNS Maury (T-AGS 66) and guided missile cruiser USS Chancellorsville (CG 62), named for the 1863 battle led by Gen. Robert E. Lee and Gen. Stonewall Jackson. Both those generals were honored by the Navy with the naming of now-decommissioned ballistic missile submarines – USS Robert E. Lee (SSBN 601) and USS Stonewall Jackson (SSBN 634).

Other Navy ships have honored Confederate officers in the past, including guided missile destroyers USS Tattnall (DDG 18), USS Semmes (DDG 18) USS Buchanan (DDG 14) and USS Waddell (DDG 24); guided missile frigate USS Richard L. Page (FFG 5); and submarine tenders USS Dixon (AS 37) and USS Hunley (AS 31).

Matthew Fontaine Maury, for which USNS Maury is named, is less known for his Confederate service than he was for his work before the Civil War as a student of the environment and its impact on navigation. He published "The Physical Geography of the Sea" in 1855; was superintendent of the United States Naval Observatory; headed the Navy's Depot of Charts and Instruments; and wrote the Wind and Current Chart of the North Atlantic. His method and format of collecting oceanographic observations became a global standard.

According to Howard, the commission's mandate is limited to defense assets with names tied to the Confederacy. That means that bases, ships or facilities honoring officials who owned slaves or were segregationists would not fall under the purview of the commission. USS Carl Vinson, for example, is named for a lawmaker who was a staunch support of the Navy, but also a segregationist. USS Lyndon B. Johnson (DDG 1002) is named for a former president and naval officer who initially supported segregation but later championed the Civil Rights Act of 1964.

In addition to bases, the legislation calls for comprehensive inventory of military assets, such as buildings, street names, parks, ships, aircraft and equipment that in some way commemorate the Confederacy. Grave markers, museums or artifacts within museums are not part of the commission's mandate, but it may examine displays that may glorify the CSA.

The commission will brief the secretary of defense on its progress and recommendations, and is required to brief the House and Senate Armed Services Committees on its progress by Oct. 1. The commission's final report is due Oct. 1, 2022.

DoD Announces Establishment of Arctic Regional Center

KOTZEBUE, Alaska – The sun sets over a remote part of The Last Frontier in Kotzebue, Alaska. *U.S. COAST GUARD / Joel Casto, D17*

ARLINGTON, Va. – Secretary of Defense Lloyd J. Austin III announced on June 9 the establishment of a new Department of Defense Regional Center, the Ted Stevens Center for Arctic

Security Studies. The center will bring increased cooperation on the unique challenges and security concerns related to the Arctic region.

Defense Department Regional Centers are international academic venues for bilateral and multilateral research, communication, and training with the goal of building strong, sustainable international networks of security leaders. The Ted Stevens Center for Arctic Security Studies will develop collaborative insights with allies and partners.

“The center will support the U.S. Interim National Security Strategic Guidance direction to work with like-minded partners and across the interagency to pool our collective strength and advance shared interests,” Secretary Austin said. “It will address the need for U.S. engagement and international cooperation to strengthen the rules-based order in the region and tackle shared challenges such as climate change.”

The Ted Stevens Center will provide a new venue to collaborate with our allies and partners to advance shared interests for a peaceful and prosperous Arctic. The Department is currently determining the appropriate location for the center.

HII Wins Navy Planning Yard Contract Worth a Potential $724 Million

The amphibious transport dock ship USS San Antonio (LPD 17) transits the Atlantic Ocean during a photo exercise, May 17, 2021. *U.S. NAVY / Mass Communication Specialist Seaman Jacob*

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PASCAGOULA, Miss. – Huntington Ingalls Industries' Ingalls Shipbuilding division has been awarded a contract with a potential total value of $724 million for planning yard services in support of in-service amphibious ships, the company announced June 8.

"Ingalls has a 40-year history of providing planning yard services to ships in active service," Ingalls Shipbuilding President Kari Wilkinson said. "We consider this a core competency and a critical part of our mission to support the Navy in meeting fleet commitments around the world."

Planning yard services provided will be in support of amphibious transport dock (LPD 17), assault (LHD 1 and LHA 6), command (LCC 19), and dock landing (LSD 41/49) classes of ships. The contract includes options over a seven-year period and covers fleet modernization availability planning; engineering, design and logistics support; material procurement; program and configuration data management; and on-site technical support through established homeport and planning yard offices and resources.

Navy Awards Austal USA $44M to Develop Autonomous Capability in EPF 13

USNS YUMA (T-EPF 8) moors pierside Durres, Albania to assist JLOTS-21 in intra-theater lift capabilities. Austal USA has been awarded $44 million to build T-EPF 13, the future USNS Apalachicola. *U.S. MILITARY SEALIFT COMMAND*

HENDERSON, Western Australia – Austal Ltd. announced June 8 that Austal USA has been awarded a $44 million fixed-price, undefinitized contract modification for the design, procurement, production implementation and demonstration of autonomous capability on Expeditionary Fast Transport (EPF) 13, USNS Apalachicola.

Austal USA is constructing 15 Spearhead-class EPF vessels for the U.S. Navy and has delivered twelve EPFs since December 2012. EPF 13 is currently under construction at Austal USA's Mobile, Alabama shipyard.

Austal Limited Chief Executive Officer Paddy Gregg said the highly anticipated contract was another significant, strategic step towards greater autonomous vessel capability.

"Austal noted in our half year results presentation that the funding for an autonomous EPF conversion contract had been appropriated in the USA government 2021 budget, so we are pleased that it has now been converted into a formal contract," Gregg said. "Winning a $44 million contract is welcome from a revenue perspective, but strategically this contract award is even more significant for Austal.

"Autonomous vessel capability has been identified as an area of strategic importance by the U.S. Navy, so it is promising for Austal that the U.S. Navy has awarded Austal USA a contract for the design, procurement, production implementation and demonstration of autonomous capability of one of our vessels, the Expeditionary Fast Transport (EPF) 13, the future USNS Apalachicola," he said.

The Spearhead-class EPF is a 103-meter high-speed aluminum catamaran with a large, 1,800 square meter cargo deck, medium-lift helicopter deck and seating for more than 300 embarked troops; providing a fast, high-payload transport capability to combatant commanders around the world.

The Austal-designed and built EPFs support a wide range of

missions, from maritime security operations to humanitarian aid and disaster relief.

Two EPF's are currently under construction at Austal USA's shipyard, the USNS Apalachicola (EPF 13) and the USNS Cody (EPF 14).

In addition to the EPF program, Austal USA is contracted to deliver 19 Independence-class littoral combat ships (LCS) for the Navy, of which 13 have been delivered since 2010. The 15th Independence-class LCS, the future USS Canberra, was christened at Austal USA on June 5.

Curtiss-Wright to Upgrade Navy Helicopter Mission and Flight Management Computers to Meet New Threats

An MH-60R Seahawk helicopter assigned to the Swamp Foxes of Helicopter Maritime Strike Squadron (HSM) 74 flies in front of the guided-missile cruiser USS San Jacinto (CG 56). Curtiss-Wright's Defense Solutions has been awarded a contract to upgrade MH-60R/S Seahawk mission computers and flight management computers *U.S. NAVY / French navy / Chief Petty Officer Bruno Gaudry*

ASHBURN, Va. – Curtiss-Wright's Defense Solutions division announced June 7 it was awarded a contract by Lockheed Martin to provide its Modular Open-Systems Approach (MOSA) computers and video processing modules to upgrade the Mission Computer and Flight Management Computer

(MC/FMC) on the U.S. Navy’s fleet of Sikorsky MH-60R/S Seahawk helicopters.

The use of commercial off-the-shelf (COTS)-based MOSA solutions and commercial best practices will deliver cost-effective new capabilities and support more economical and timely upgrades of the helicopter’s avionics systems. Curtiss-Wright’s selection on this upgrade program is representative of its ability to rapidly and cost-effectively modernize legacy military platforms with open-standards solutions, the company said.

The initial contract is valued at $24 million. The estimated lifetime value of the contract is $70 million. Under the multi-year contract, shipments began in December 2020.

“We are very pleased that Lockheed Martin selected us to provide our defense-focused open standards-based COTS single board computer and video processing solutions to support the upgrade of the mission computer and flight management computer on the U.S. Navy’s MH-60R/S helicopter fleet,” said Chris Wiltsey, senior vice president and general manager, Curtiss-Wright Defense Solutions. “This agreement, which further strengthens the long and successful relationship we have with Lockheed Martin, highlights Curtiss-Wright’s ability to enhance interoperability and improve cost efficiencies with electronics systems that adhere to the DoD’s mandate for a modular open architecture approach.”

The MH-60R/S MC/FMC upgrade will bring advanced display graphics capabilities to this important helicopter platform, providing compatibility with existing imaging and display systems and offering enhanced capabilities for future imaging sensors and high-resolution displays. The COTS modules also enable integration of Curtiss-Wright’s enhanced Trusted and Secure Computing features to ensure system resiliency and secure operation in response to cyber attacks.

MQ-25 UAV Makes History with First Unmanned Aerial Refueling

The MQ-25 T1 test asset refuels the Navy F/A-18 during a flight June 4 at MidAmerica Airport in Illinois. This test marked the first aerial refueling operation between a manned aircraft and unmanned tanker. *BOEING*

ARLINGTON, Va. – An unmanned aerial vehicle (UAV) made aviation history on June 4 with a successful air-to-air refueling of another aircraft. Boeing's MQ-25 Demonstrator, T1, refueled a U.S. Navy F/A-18F Super Hornet strike fighter, a major step in the MQ-25A Stingray's journey to become the Navy's carrier-based aerial refueler.

Boeing's T1 and the F/A-18F, flown by a crew from Air Test and Evaluation Squadron 23, joined up and the MQ-25 passed a total of 325 gallons of fuel to the Super Hornet in two separate refueling events.

The MQ-25 carried a Cobham-built refueling store with a drogue refueling hose, the same type currently used in the fleet by Super Hornets. The Navy plans to use the MQ-25 in the refueling role to free more Super Hornets for combat operations, for which it was designed.

During a June 7 media roundtable, Boeing's MQ-25 program manager, Dave Bujold, described the sequence of events for the historic flight (a video summary is here). The F/A-18 flew in formation to observe the dynamic characteristics – particularly the stability – of the MQ-25. With the safety evaluation completed, the F/A-18 closed and T1's ground

controller streamed the drogue. For about 30 seconds, the F/A-18 crew conducted a wake survey and noted the wake to be very stable and benign. While the chase plane filmed, telemetry was collected, and the F/A-18 made a “dry” connect without the transfer of fuel.

The F/A-18 backed away and then reconnected for a transfer from 300 pounds of fuel in the refueling pod. (T1 is not plumbed for transfer of fuel from the airframe, which will be a capability of the production MQ-25.) The two aircraft made another dry connect at 15,000 feet and then joined for another successful transfer of 25 pounds fuel. The fuel transfer rate was 220 gallons per minute during the 4.5-hour flight.

Bujold noted that the F/A-18 crew commented on the quietness of the rendezvous, which with two F/A-18s is very noisy.

“The test flight will provide important early data on airwake interactions, as well as guidance and control, Reed said in a Navy release. “The team will analyze that data to determine if any adjustments are needed and make software updates early, with no impact to the program’s test schedule.”

“The milestone comes after 25 T1 flights, testing both aircraft and ARS aerodynamics across the flight envelope, as well as extensive simulations of aerial refueling using MQ-25 digital models,” Boeing said in a release. “MQ-25 T1 will continue flight testing prior to being shipped to Norfolk, Virginia, for deck handling trials aboard a U.S. Navy carrier later this year.”

Capt. Chad Reed, the Navy’s MQ-25 program manager, said those deck handling tests for T1 are slated for December, depending on availability of a carrier. Without a tailhook, T1 cannot conduct landings on a carrier.”

The seven test MQ-25s being built by Boeing will be used for multiple tests by the Navy in beginning with ground testing in

the fall of 2022, including field catapult launches and arrested landings prior to flights from an aircraft carrier. Reed said testing is likely to include refueling an E-2 Hawkeye battle management aircraft in the future, including manned/unmanned teaming.

“This is our mission, an unmanned aircraft that frees our strike fighters from the tanker role, and provides the Carrier Air Wing with greater range, flexibility and capability,” Reed said. “Seeing the MQ-25 fulfilling its primary tasking today, fueling an F/A-18, is a significant and exciting moment for the Navy and shows concrete progress toward realizing MQ-25’s capabilities for the fleet.”

“This history-making event is a credit to our joint Boeing and Navy team that is all-in on delivering MQ-25’s critical aerial refueling capability to the fleet as soon as possible,” said Leanne Caret, president and CEO of Boeing Defense, Space & Security, in the Boeing release. “Their work is the driving force behind the safe and secure integration of unmanned systems in the immediate future of defense operations.”

“This flight lays the foundation for integration into the carrier environment, allowing for greater capability toward manned-unmanned teaming concepts,” said Rear Adm. Brian Corey, program executive officer for Unmanned Aviation and Strike Weapons. “MQ-25 will greatly increase the range and endurance of the future carrier air wing – equipping our aircraft carriers with additional assets well into the future.”

The Navy has switched plans to a Lockheed Martin-built ground control station for the MQ-25, not just for cyber protection but to have the architecture for the Joint All-Domain Command and Control concept.

The Navy will rely on multiple communications links to control and execute missions for the MQ-25, Reed said. The list includes the Lockheed Martin Mobile User Objective Satellite

for over-the-horizon control.

Currently under production by Boeing are the first test MQ-25A and the first static test airframe. Initial operational capability for the MQ-25A is slated for 2025.