**1 . Date: 02-02-2023Cargo - MALE - Requirement - DARPA wants a heavy cargo plane that can land at seaURL: https://www.defensenews.com/air/2023/02/02/darpa-wants-a-heavy-cargo-plane-that-can-land-at-sea/**

WASHINGTON — The Defense Advanced Research Projects Agency has tapped two companies to design, and possibly build, an experimental seaplane that can transport large amounts of cargo on the water.

General Atomics and Aurora Flight Sciences, a subsidiary of Boeing, will develop their own competing designs for DARPA’s mobility seaplane program, DARPA said Wednesday. DARPA has dubbed this program the Liberty Lifter Seaplane Wing-in-Ground Effect, or Liberty Lifter for short.

DARPA wants this aircraft to be a long-range, low-cost aircraft around the same size and capacity as the C-17 Globemaster, which can carry more than 170,000 pounds of cargo, including a 69-ton M1 Abrams main battle tank, armored vehicles, trucks or trailers. The C-17 can also carry and airdrop 102 paratroopers and their gear, 34 patients on litters, or 54 ambulatory patients and their attendants.

And DARPA has set some ambitious goals for the Liberty Lifter’s sea capabilities.

The seaplane DARPA envisions would be more robust than some of the Navy’s in-water capabilities. Small boats, for example, are typically limited to so-called sea state 3 conditions, where waves are about four feet high. But the Liberty Lifter would be required to take off and land in sea state 4, which sees waves of up to about eight feet.

At sea state 5, where waves are considered rough and reach 13 feet, these planes would still be asked to sustain operations. Sea state 5 is the point at which conditions start to threaten the Navy’s ability to conduct resupply missions at sea between auxiliary ships and warships.

The Liberty Lifter also should be capable of extended flight close to the water, DARPA said.

DARPA is “looking forward to working closely with both performer teams as they mature their point of departure design concepts through Phase 1,” Christopher Kent, the agency’s program manager for the Liberty Lifter program, said in a statement. “The two teams have taken distinctly different design approaches that will enable us to explore a relatively large design space during Phase 1.”

DARPA’s interest in a cargo seaplane is the latest example of the military looking to adapt traditionally air-related capabilities to a maritime environment. The Pentagon is growing increasingly concerned about the possibility of a war with China, and a conflict in the Indo-Pacific region would require improved maritime capabilities.

In 2021, for example, the Air Force Research Laboratory tested a ship-killing GPS-guided Joint Direct Attack Munition specially modified to strike targets on the water.

Also that year, Air Force Special Operations Command announced it would develop a prototype amphibious version of special operators’ MC-130J Commando II, equipped with removable pontoons.

The two companies vying to create the Liberty Lifter took markedly different approaches, according to concept art DARPA released.

Aurora Flight Sciences, which is working with marine engineering company Gibbs & Cox and marine vessel design company ReconCraft, designed a more traditional “flying boat” aircraft, as DARPA called it. Aurora’s design has a single hull, high wings, wide horizontal stabilizers on its tail, and eight turboprops. Its wings would also angle down, though Aurora said they would not touch the water.

Aurora said its plane would be able to carry two Marine Corps amphibious combat vehicles, or six 20-foot container units.

General Atomics, along with naval engineering and design firm Maritime Applied Physics, proposed a twin-hull, mid-wing design, which DARPA said is intended to optimize its stability on water. It would have 12 turboshaft propeller engines. The art also shows stabilizers on its dual noses.

Instead of loading or unloading cargo from an aft door and ramp, as is the case for the C-17, General Atomics’ concept art shows its plane’s noses lifting up and vehicles deploying directly from the front, down the ramps to a beach.

DARPA in November awarded General Atomics an $8 million cost-plus-fixed-fee contract for the Liberty Lifter program, and General Atomics said its award has the potential to grow to up to $29 million. Aurora’s contract, which DARPA awarded Jan. 27, was for $5.7 million, and could grow to more than $25 million if all options are exercised.

These Phase 1 contract awards are for 18 months, including six months of conceptual design work and nine months of design maturation, ending in a preliminary design review. Three more months for manufacturing planning and test and demonstration planning reviews will follow.

During the program’s first phase, DARPA said it will work with the companies’ teams and other Defense Department organizations to refine the two designs, particularly to meet the military’s operational needs and operating concepts.

DARPA plans to start Phase 2 mid-2024, as more work to flesh out the design of the Liberty Lifter continues, as well as manufacturing and demonstration of a full-scale X-plane. DARPA expects to team up with at least one military service, as well as international partners, on Phase 2 as it works to further develop the concept into an operational vehicle.

DARPA last month announced it had selected Aurora to start designing another experimental airplane, that would use short bursts of air to maneuver instead of traditional ailerons or other mechanical devices, as part of the Control of Revolutionary Aircraft with Novel Effectors, or CRANE, program.

**2 . Date: 13-02-2023Armed ISR / ISTAR - HALE - Requirement - Air Force mulls remote control of drone wingmenURL: https://www.defensenews.com/air/2023/02/13/air-force-mulls-remote-control-of-drone-wingmen/**

WASHINGTON — The Air Force is studying whether drone wingmen flying alongside piloted fighter aircraft could be controlled by operators in nearby battle management aircraft or refueling tankers, according to Chief of Staff Gen. CQ Brown.

The future fleet of collaborative combat aircraft, or CCA, as the service calls the concept, could involve them being partially guided from nearby aircraft such as the KC-46 Pegasus or E-7 Wedgetail, Brown said in a discussion at the Brookings Institution on Monday.

The Air Force wants these autonomous CCAs to accompany its future Next Generation Air Dominance fighter, and perhaps also the F-35. Their missions could include striking targets, conducting intelligence, surveillance and reconnaissance missions, or electronic warfare operations such as jamming enemy signals, said Brown.

There are a lot of finer points that have to be worked out relating to the way CCAs are guided, he said, whether from the cockpit of the fighters they are accompanying or from other aircraft in the area.

“How does it team with a crewed aircraft?” Brown said. “And could you operate it from the back of a KC-46? We’ll have E-7s eventually, could you operate it from the back of an E-7? Could you operate it from a fighter cockpit? We’re thinking through those aspects.”

His comments echoed suggestions made by the Mitchell Institute for Aerospace Studies in an October 2022 paper on drone wingmen. The Mitchell Institute urged the Air Force to focus as soon as possible on refining how humans will interact with these drone aircraft, and one model floated by Mitchell envisioned a swarm of drones being directed by an air battle manager operating from a nearby Wedgetail.

Brown said that as the Air Force lays out future budgets for CCAs, it’s also considering what the aircraft itself — and the autonomous capability that will allow them to fly primarily on their own — will look like.

And the Air Force is also figuring out how it will build the organizations that are needed to operate and maintain these aircraft, and how it will train and equip the airmen who will operate and rely on them, he said.

Keeping costs down will be crucial if this concept will work, Brown said. One of the intended benefits of CCAs is they would be less expensive than traditional aircraft, and would not require an aircrew, he said.

“We’re really headed down that path,” Brown said. “I think you’ll see, as we start looking at our future budgets and the analysis we’re doing … we are committed to more uncrewed capability.”

Brown said the Air Force envisions a CCA fleet that would include a variety of drones, covering a wide range of sizes, capabilities, and different levels of how expendable they might be.

Air Force Sec. Frank Kendall has said CCA aircraft must be at least “attritable,” a term the service uses to mean they could be reused, but inexpensive enough that they could be lost in combat. And some CCAs could even be completely expendable, designed to be cheap enough that they could go on risky missions with the expectation they would be destroyed in the process.

Kendall also said in September 2022 that a competition for CCAs would likely be held in 2024, although he cautioned details would not be included in the fiscal 2024 budget proposal that is soon to be released.

The Air Force will have to be selective and “pragmatic” about what it puts on these drones, Brown said.

“If you look at cost, at what point do you say, ‘This is no longer attritable,’ because you’re putting so much capability into it, you’re spending so much money?’” Brown said. “You don’t try to put everything on a collaborative combat aircraft. [If the Air Force did] then now it becomes almost as expensive as a crewed aircraft. So there’s a bit of balance about how we go through that.”

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**3 . Date: 09-10-2023Armed ISR / ISTAR - MALE - General - PayloadGeneral Atomics: New radar to turn Gray Eagles into anti-drone huntersURL: https://www.defensenews.com/air/2023/10/09/general-atomics-new-radar-to-turn-gray-eagles-into-anti-drone-hunters/**

Correction: A previous version of this story misstated the timeline of General Atomics’ testing of the Eagle Eye radar. The correct time frame is available below.

WASHINGTON — A new multidomain surveillance radar from General Atomics Aeronautical Systems, dubbed Eagle Eye, aims to increase the U.S. Army’s ability to track and shoot down even small drones.

Mike Shortsleeve, vice president of Defense Department strategic development at the firm, said in a Monday interview at the Association of the U.S. Army’s conference in Washington that Gray Eagle 25M drones are now in production with Eagle Eye, a synthetic aperture radar.

A fact sheet from General Atomics said Eagle Eye’s synthetic aperture radar can spot targets up to 50 miles away at high resolution, or up to 125 miles when conducting maritime surveillance.

Recent conflicts, such as the Russian invasion of Ukraine and the days-old fighting between Israel and Hamas, show the growing importance of small drones in war, Shortsleeve said. Hamas in part used small, explosive-laden drones to take the Israeli military by surprise, Forbes reported.

The threat from drones is likely to increase, according to Shortsleeve, as technical advancements such as artificial intelligence and machine learning increase their capabilities and as the costs of such systems come down.

That is where General Atomics sees its Eagle Eye-equipped Gray Eagles — working hand-in-hand with other systems that could do the actual shooting down of enemy drones — benefiting the Army, Shortsleeve said.

For example, he added, it would be prohibitively expensive for a Gray Eagle to track and shoot down a small enemy drone with a multimillion-dollar missile. But the Gray Eagle can identify the target, track it and hand that target off to another counter-drone platform that could down an enemy UAV with a less expensive weapon, such as a cannon or directed-energy weapon.

In a May test, he said, the Eagle Eye was able to detect and track a small fixed-wing drone made out of balsa wood — much smaller than forces in the field would likely encounter from an enemy. An earlier test in late 2022 used the radar to shoot down a drone, General Atomics said.

Shortsleeve said Eagle Eye would be able to spot targets in the air, at sea and on the ground.

General Atomics expects to deliver the first tranche of 12 Eagle Eye-equipped Gray Eagle 25Ms to the Army National Guard in the second half of 2026, Shortsleeve said. Another six to 12 will follow for the active duty Army, he said. General Atomics plans to continue producing Gray Eagles with the new radars until the service decides to stop buying them or wants to put a different radar on the new Gray Eagle drones, he added.

The 25M variant of the Gray Eagle also includes open-architecture aircraft and ground systems, a better engine, advanced data links, and improved range, the company said.

General Atomics has been evolving the technology at the core of Eagle Eye for years, but work on the program dramatically accelerated in the last five years, Shortsleeve said.

And loitering munitions of the kind that have gotten considerable use in Ukraine could also be targeted by the Eagle Eye radar, he said.

Some foreign nations have expressed interest in Eagle Eye-equipped drones, Shortsleeve noted, but he declined to identify the countries.

It would be possible to adapt this radar to other platforms besides the Gray Eagle, he said. But in years to come, he added, the Army is only going to need more capabilities to counter small drones in combat.

“The proliferation [of small drones] in combat operations is growing exponentially,” Shortsleeve said. In the future, “it’s going to be undeniable that [unmanned aerial systems] are going to be all over the battlespace, in any large-scale combat operations.”

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**4 . Date: 30-12-2023Armed ISR / ISTAR - HALE - Requirement - New in 2024: Air Force plans autonomous flight tests for drone wingmenURL: https://www.defensenews.com/air/2023/12/30/new-in-2024-air-force-plans-autonomous-flight-tests-for-drone-wingmen/**

WASHINGTON — The U.S. Air Force’s plan to create a fleet of drone wingmen to fly alongside piloted fighter jets will accelerate in 2024, as the service ramps up its experimentation with autonomous flight.

These drones, which the Air Force calls collaborative combat aircraft, are intended to fly alongside F-35s and the future Next Generation Air Dominance platform. The service wants them to be able to perform a variety of missions, including striking enemy targets, conducting surveillance, jamming enemy signals, or even acting as decoys.

The Air Force has been using a ballpark figure of 1,000 CCAs for planning, but Air Force Secretary Frank Kendall in November said the fleet will likely end up being larger than that.

But before fielding the drones, the Air Force needs to do more research on how autonomous flight will work, and how it can be folded into the day-to-day operations of units.

The service’s proposed 2024 budget calls for almost $50 million to test autonomous software on F-16 fighters under a program called Project VENOM. Another $69 million would be used to launch an experimental operations unit team, which would start developing tactics and procedures to incorporate CCAs into a squadron.

Project VENOM, which stands for “Viper Experimentation and Next-generation Operations Model,” would load autonomous code into six F-16s. Those fighters would be flown by humans from takeoff to an in-air experimentation zone, where the self-flying software would take over. The Air Force hopes these experiments will show whether autonomous flight, as envisioned by the CCA concept, can bring the intended benefits.

The Air Force wants to collect in-flight data from the Project Venom tests about how pilots and machines work together, and use that information to create more refined autonomous software.

The experimental operations unit would also help the Air Force figure out how CCAs might help with missions, and how squadrons would train to use them. This is intended to cut down on the risks that might come from teaming autonomous drones up with crewed aircraft.

Speaking at the Washington-based Center for a New American Security think tank, Kendall said the Air Force is using Boeing MQ-28 Ghost Bats as experimental aircraft to team them up with crewed aircraft and get airmen operational experience.

The service also wants CCAs to be cheap enough that they could be “attritable,” meaning the service could afford to lose some in combat. According to Kendall, CCAs will probably be roughly one-quarter to one-third of the cost of an F-35, suggesting they could run $20 million to $27 million.

Defense firms have already pitched several different concepts for CCAs, and the acquisition will take several years. The Air Force hopes to have the first “increment” of CCAs in production later this decade, and fielded “in reasonable quantities” soon after, Kendall said.

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**5 . Date: 13-02-2024Armed ISR / ISTAR - HALE - Requirement - US Air Force readies to award collaborative combat aircraft dealsURL: https://www.defensenews.com/air/2024/02/13/us-air-force-readies-to-award-collaborative-combat-aircraft-deals/**

DENVER, Colo. — The Air Force plans to whittle down the number of companies working to build the first batch of collaborative combat aircraft to two or three over the next few months, the service’s secretary said Tuesday.

And the Air Force plans to award contracts for the next round of CCAs — drones loaded with autonomous software that would fly themselves into battle alongside crewed fighters — in fiscal 2025, Frank Kendall said during a roundtable at the Air and Space Force Association’s Air Warfare Symposium here.

This next round of CCA development could also involve participation by the United States’ closest and “most strategic” international partners, he said.

On the first increment of CCAs, the Air Force has contracts with five companies: Lockheed Martin, Boeing, Northrop Grumman, General Atomics and Anduril. Kendall said the Air Force would like to cut that to three, but acknowledged budgetary limitations will make choosing just two companies more likely.

The Air Force plans to field several different types of CCAs, with different capabilities and levels of survivability, to carry out a wide range of missions including strikes, surveillance, jamming, and serving as decoys to draw enemy fire.

Kendall said the Air Force is working on its first two “increments” of CCAs as part of its five-year plan, and moving with a “sense of urgency” on the program. As with the first increment of CCAs, he said, the contracts for the second increment will cover concept definition and preliminary design work.

The Air Force will next focus on moving CCAs into production, Kendall said, and in the next few years will further downselect the companies working on the first increment of CCAs. Kendall said it remains uncertain how many companies will move into production, adding that there could be at least two firms working on the initial batch of CCAs.

Andrew Hunter, the service’s assistant secretary for acquisition, technology and logistics, said the Air Force’s CCA program has been closely consulting with Air Combat Command to see what kind of capabilities these aircraft would need in combat.

And the Air Force received a great deal of feedback from industry about how they could meet the service’s loose goal of fielding about 1,000 CCAs, Hunter said.

Companies who didn’t make the cut for the first increment will get a second shot in the next increment, Hunter said.

At least one defense contractor is hoping to do just that. In an interview with Defense News Tuesday, Steve Fendley, president of the unmanned systems division at Kratos Defense and Security Solutions, said that while the company didn’t make the cut for the first round of CCAs, it remains very interested in the program and plans to compete for the next version.

“We’re in the mix,” Fendley said. “Part of what’s important to the Air Force, and to us, is being able to see the range of capability systems and the range of cost systems to satisfy all of the different scenarios and mission challenges” for which the Air Force wants CCAs.

Most of the attention paid to CCAs has so far focused on the companies building the physical drone portion, Hunter said, but “another slew of contractors” is working alongside them on software and other elements of the program.

That work will continue apart from the individual increments to develop the CCA air vehicles, he said. And developing that kind of “foundational architecture” for CCAs is one potential area on which the Air Force can work with international partners, Hunter added.

He said creating a software core that allows a CCA to operate autonomously is the hardest part of this program. The Air Force can get it done in the first batch of CCAs, he noted — but there will be room to improve.

“We have a high degree of confidence that we can deliver useful autonomy in increment one,” Hunter said. “But it will be more limited than I think what you’ll see down the road.”

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**6 . Date: 01-03-2024Requirement - Thailand’s Air Force unveils new wish list, eyeing new jets and dronesURL: https://www.defensenews.com/air/2024/03/01/thailands-air-force-unveils-new-wish-list-eyeing-new-jets-and-drones/**

CHRISTCHURCH, New Zealand — The Royal Thai Air Force has laid out its future aspirations in a document released Feb. 29, with counter-drone systems, new fighter jets and medium-range air defense systems among the most pressing concerns.

The 74-page whitepaper, which the service unveiled during its annual symposium this week and which builds on a similar document published four years ago, details planned procurements out to 2037.

“The Air Force is aware of [the importance of] long-term development planning and spending of the national budget to achieve maximum value,” said the service’s commander, Air Chief Marshal Panpakdee Pattanakul.

Indeed, part of the whitepaper’s raison d’être is to stake claims for long-term funding as its aircraft inventories age. For instance, the 2020 version stated the fighter fleet had an average age of 26 years, a figure that continues to increase.

But the government’s procurement process is disjointed, according to Greg Raymond, an expert in Asia-Pacific affairs at the Australian National University. He cited factors like political instability, inadequate strategic planning, annual rather than multiyear budgeting measures, and weak civil oversight that allows each armed service to makes its own decisions.

In the latest whitepaper, the Air Force gives priority to a medium-range air defense system possessing a minimum 30-nautical-mile range from fiscal 2025 to fiscal 2028. Afterward, from FY33 to FY37, the service plans to carry out a second phase for a medium- or long-range air defense system.

From FY28 to FY32, the force plans to buy a short-range air defense system boasting gun-, missile and laser-based weapons. Credence is given to counter-drone systems, too, and a nine-year project to procure these is to commence in 2025.

The service is also eyeing 12-14 new fighters to replace the F-16 jets of 102 Squadron based at Korat. The procurement is scheduled to take place from FY25 to FY34, two years later than originally planned. The squadron’s F-16s from the late 1980s are to retire by 2028.

Two contenders have emerged for the aircraft requirement: Lockheed Martin’s F-16 Block 70/72 and Saab’s Gripen.

“We’re confident the F-16 Block 70/72 will complement the RTAF’s existing F-16 fleet and deliver the advanced 21st century security capabilities and performance needed to address Thailand’s most pressing defense requirements,” a Lockheed spokesperson told Defense News.

Thailand ordered its first Gripen C/D fighters in 2008. Following a January 2021 contract, the aircraft were upgraded to what the manufacturer calls the MS20 configuration.

Robert Björklund, who markets the Gripen to Thailand for Saab, told Defense News the existing fleet is integrated into the Saab-supplied Link T data system and that the aircraft provides its user with “a very wide range of weapon options, including its highly effective RBS15 anti-ship missile.”

A second fighter replacement project for 12-14 aircraft is slated for FY31 to FY35 to replace F-5E/F jets of 211 Squadron at Ubon that are to retire around the end of the decade. An identical number of fighters are needed to replace F-16A/Bs of 403 Squadron at Takhli from FY37 to FY46.

Thailand tries to maintain relations with several competing nations, including the United States, China, Russia and India, the whitepaper noted. Thailand previously purchase materiel from China, such as armored vehicles, air defense systems and a submarine.

Asked whether the Royal Thai Air Force would consider buying a Chinese fighter like the J-10CE, Raymond said the service values its relationship with the U.S. and likeminded allies too much to do so. He noted that Thai-U.S. relations have “largely stabilized,” despite the latter denying the former’s request to buy F-35A jets last year.

“They wouldn’t want to see themselves placed on the outer [circle] in terms of not getting invitations to things like [exercise] Pitch Black in Australia. I tend to think they’d be perhaps more careful about getting Chinese aircraft than the Thai Navy was about getting a submarine,” he said.

The whitepaper also detailed an effort starting this year to refurbish C-130H Hercules transport aircraft. The 2020 version recommended the service buy 12 replacements, but that idea was dropped.

As for pilot training, last year’s delivery of 12 T-6TH trainers allowed the Air Force to retire its Pilatus PC-9 fleet last month. New Zealand-built CT-4E trainers are to retire in 2031, so basic trainers will be needed from FY33. New lead-in fighter trainers are also sought from FY25, with Thailand already operating the South Korean T-50TH in this role.

The new whitepaper also emphasized unmanned technologies. One effort underway is the Thai-developed M Solar X solar-powered drone. Loitering munitions are also schedule for purchase by 2026, as are medium combat drones from FY26 to FY29 and high-altitude pseudo-satellites from FY24 to FY35.

The Air Force also mentioned procurement programs for micro- and nano-drone swarms from FY26, and a research and development effort for weaponized tactical drones from FY29.

And two Saab 340B Erieye airborne early warning aircraft are to receive enhanced command-and-control capabilities, with their dorsal-mounted radars to be replaced. This would take place from FY26 to FY29.

The government’s FY24 defense budget bill calls for a 198 billion baht (U.S. $5.5 billion) fund, of which $1 billion is for the Air Force. The service has already applied for an allocation of approximately $530 million for a first batch of four fighters.

Gordon Arthur is an Asia correspondent for Defense News. After a 20-year stint working in Hong Kong, he now resides in New Zealand. He has attended military exercises and defense exhibitions in about 20 countries around the Asia-Pacific region.

**7 . Date: 15-06-2024Armed ISR / ISTAR - HALE - Requirement - No 30-year-old drone wingmen: US Air Force eyes regular CCA overhaulsURL: https://www.defensenews.com/air/2024/06/15/no-30-year-old-drone-wingmen-us-air-force-eyes-regular-cca-overhauls/**

The Air Force’s aircraft fleet is replete with fighters, bombers, tankers and other aircraft that are still flying after decades or even generations.

But the service’s planned collaborative combat aircraft — drones that will fly alongside crewed fighters — probably won’t last even a single generation before they need to be replaced or heavily overhauled, Chief of Staff Gen. David Allvin said Thursday.

Allvin, speaking at the Air and Space Forces Association in Arlington, Virginia, said planning from the start to regularly replace CCAs is the best way to keep their missions simple and costs down, so the service can field them in significant numbers.

“I don’t want a set of collaborative combat aircraft that’s going to last for 25 to 30 years,” Allvin said. “If it’s going to last 25 or 30 years, then it’s gotta do everything but make you toast in the morning.”

Making CCAs into complex, multi-mission aircraft will inevitably drive up the cost, Allvin said, meaning the Air Force could only buy a limited number of them. '

Air Force officials have regularly talked about the need for CCAs to augment its crewed fighters and provide what they call “affordable mass.” A smaller fleet of more expensive drone wingmen, as Allvin is trying to avoid, would make achieving that affordable mass goal harder to reach.

Allvin instead envisions technology advancing quickly enough that after a decade, a class of CCAs might be outdated and ready to be replaced – or heavily updated with new technologies.

“That CCA won’t be as relevant — but it might be adaptable, and that’s why we’re building in the modularity,” Allvin said.

Air Force Secretary Frank Kendall has told the service to plan for a CCA fleet of about 1,000 drones to fly alongside the F-35A Joint Strike Fighter and the service’s planned Next Generation Air Dominance fighter. The missions CCAs would carry out will likely vary and include strike operations, gathering intelligence and reconnaissance, conducting electronic warfare, and serving as decoys.

Kendall also made affordability a requirement for the CCA program, and has said each drone must cost a fraction of an F-35′s price tag.

In April, the Air Force announced it had selected Anduril and General Atomics to further develop designs for their CCA concepts, and then build production-representative test aircraft.

At Thursday’s event, Allvin noted the financial stresses the Air Force is facing, including inflation and limited budgets.

“All of those pressures are coming to bear against us, and we do have to ask the fundamental question: What does an effective Air Force look like in the future and how much of that is dependent on external resources?” Allvin said.

But when asked if the service will be able to produce NGAD as it has planned, Allvin did not explicitly commit to the sixth-generation fighter.

“We’re going to have to make those choices, make those decisions across the landscape,” Allvin said. “That’s going to probably play out in the next couple of years.”

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**8 . Date: 23-07-2024HALE - Market - Boeing says it will shun fixed-price contracts for drone wingmenURL: https://www.defensenews.com/air/2024/07/23/boeing-says-it-will-shun-fixed-price-contracts-for-drone-wingmen/**

FARNBOROUGH AIR SHOW — A top Boeing executive said Monday the company plans to keep bidding to make drone wingmen for the Air Force — but not if it means agreeing to a fixed-price contract.

“If it’s a fixed-price development program that requires a ton of maturity … that is a recipe for failure,” Ted Colbert, president and chief executive at Boeing Defense, Space and Security, told reporters at the Farnborough Air Show in England. “It really is. The stuff that we do is really hard, and we’ve got to set ourselves up for success.”

The Air Force wants to create a fleet of autonomous drones known as Collaborative Combat Aircraft to fly alongside F-35s and the future Next Generation Air Dominance fighter. The service is now planning to create a fleet of about 1,000 CCAs to carry out a variety of missions including conducting airstrikes, jamming enemy signals, gathering intelligence, surveillance and reconnaissance, and serving as decoys in combat.

In April, the Air Force awarded contracts to Anduril and General Atomics to design and build the first round of CCAs. A second wave, or as the Air Force calls it, “Increment 2,” will follow, and Boeing plans to bid on it unless it means agreeing to a fixed-price contract.

Under a fixed-price contract, a company agrees to create a system for the military at a set price tag. If the program busts its budget, the company is on the hook for cost overruns.

Boeing has ended up taking billions of dollars in losses on fixed price deals for programs like the KC-46 Pegasus refueling tanker. In an October 2023 earnings call, Boeing chief financial officer Brian West told investors the company has not signed any further fixed-price development contracts, “nor [do we] intend to.”

Boeing’s newfound reluctance to agreeing to fixed-price contracts showed up late last year, when the company was disqualified from the contest to build the replacement for the E-4B Nightwatch “doomsday plane.”

Colbert said the deal to build the Survivable Airborne Operations Center would have entailed agreeing to fixed-price elements and other components that were unacceptable to Boeing. Sierra Nevada Corp. ultimately received the deal to build SAOC for the Air Force.

“We submitted a proposal on that … but we were disqualified,” Colbert said. “And that was it. … There were dimensions of that, that we just cannot sign up for. Especially given the complexity of that particular system.”

And when a program involves “immature technology” or a system that is among the first of its kind, such as CCAs, Colbert said Boeing will need to protect its own interests.

“This isn’t meant to be an adversarial comment,” Colbert said. “It’s about doing it right together with our customer. It’s about us acknowledging that these programs are really tough in the early years.”

Boeing’s work on the MQ-28 Ghost Bat, an autonomous drone primarily flown by the Royal Australian Air Force, and the MQ-25 Stingray autonomous drone refueler has laid the groundwork for more work on the CCA program, Colbert said.

Colbert predicted the Air Force’s future fleet of CCAs will be made up of a variety of different drones.

“Kind of like your families of car models,” Colbert said. “Small, medium, large, attritable, lethal. That whole market is set up for a lot of competition going forward, and we’re investing to make sure that we can compete in that market.”

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**9 . Date: 16-10-2024ISR / ISTAR - Small - Pitch - AeroVironment pitches Army drone for quick battlefield changesURL: https://www.defensenews.com/air/2024/10/16/aerovironment-pitches-army-drone-for-quick-battlefield-changes/**

The California-based firm AeroVironment has developed an autonomous, all-electric uncrewed aircraft that users can rapidly convert from a reconnaissance unit to a strike drone — on the battlefield and without tools in a matter of minutes.

AeroVironment, which specializes in small and medium drones, uncrewed ground vehicles and loitering munitions like the Switchblade, created the P550 drone as a candidate for the Army’s Long Range Reconnaissance program.

One of the company’s top priorities — and a key lesson it took from customers who used its other drones — was to make the P550 easily adaptable and allow integration of multiple capabilities, product line manager Cris Cornell said in an interview ahead of the Association of the U.S. Army’s annual conference.

“The battlefield changes so quickly, things need to be adaptable very quickly,” Cornell said.

The P550 is designed with modular open systems architecture principles to allow users to quickly hot swap payloads such as batteries, sensors and other equipment in the field in less than five minutes, he added. Hot swapping refers to a component being added or replaced without shutting the system down.

The P550 will be able to conduct strike missions, Cornell said, but won’t be a one-way loitering munition like the Switchblade. Instead, he described it as a “miniature bomber” that could drop weapons, such as mortars, on enemy targets.

AeroVironment has already integrated the Shryke precision munition, made by L3Harris Technologies and Corvid Technologies, onto the P550, Cornell said, and is talking with other companies on pairing additional munitions with the platform.

CACI’s Pit Viper electronic warfare module is another outside capability that AeroVironment has integrated into the P550, Cornell said.

AeroVironment also partnered with Parry Labs to integrate digital engineering, software and mission system hardware into the P550 to make it easily adaptable.

Users would slide new payloads, including weapons, into the P550 “almost like sliding a drawer,” Cornell said, which would then latch into place. To remove most payloads, he said, the user simply pushes a release button and pulls the unit out.

For safety reasons, removing unfired weapons would be a more detailed process, Cornell said, requiring the use of a tool to ensure weapons don’t slip off.

The P550 can carry up to 15 pounds of payload, according to AeroVironment. Its all-electric propulsion system allows it to fly for up to five hours and up to 60 kilometers.

AeroVironment largely used a fresh design for the P550, but incorporated elements from previous drones like autopilots, sensors and navigation systems.

Ukraine’s experience during the last two-plus years of war with Russia has demonstrated how vital drones are to modern war, Cornell said, and how rapidly troops need to be able to adapt those drones.

“Robotics are being used on the battlefield in ways that none of us thought possible even a few years ago,” Cornell said.

AeroVironment hopes the Army will choose the P550 for its Long Range Reconnaissance program, but Cornell said other services, U.S. civilian organizations and nations have also expressed interest. He declined to say which countries are eying the P550. AeroVironment has briefed Ukraine’s government on the P550, Cornell said, and will continue to assist the nation in its fight against Russia.

Ukraine has used AeroVironment’s two models of Switchblade drone — the smaller Switchblade 300 and the larger Switchblade 600 — to great effect, and raised the company’s profile considerably.

The Pentagon in August awarded AeroVironment a $990 million contract to make Switchblades for infantry units to target tanks, personnel carriers and other enemy targets. And the Army plans to field more than 1,000 Switchblades as part of the Pentagon’s Replicator program.

Cornell would not say how much the P550 costs.

AeroVironment plans to build the P550 in Simi Valley, California, Cornell said, and would be ready to start delivering the first units in early 2025.

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**10 . Date: 15-11-2024Armed ISR / ISTAR - HALE - Requirement - Air Force buying more drone wingmen to develop operational tacticsURL: https://www.defensenews.com/air/2024/11/15/air-force-buying-more-drone-wingmen-to-develop-operational-tactics/**

The Air Force is buying more drone wingmen known as collaborative combat aircraft to experiment with, the service’s acquisition chief said Wednesday.

Andrew Hunter, the assistant secretary of the Air Force for acquisition, technology and logistics, said at Defense One’s State of Defense Business forum that he recently approved the purchase of more CCAs for the service’s experimental operations unit.

That unit, which the Air Force is now standing up, is in charge of developing tactics and procedures for how CCAs would be used in a real-world operational scenario.

CCAs are autonomous drones intended to fly alongside F-35 Joint Strike Fighters and the future Next Generation Air Dominance fighter, and perform missions for them such as striking enemy targets, conducting surveillance, or jamming enemy signals. Air Force Secretary Frank Kendall wants CCAs to cost a “fraction” of an F-35, which can run from $80 million to $100 million.

The Air Force in April awarded contracts to General Atomics and Anduril Industries to keep designing, building and testing their own versions of the first batch of CCAs, and subsequent, more advanced iterations of CCAs are planned to follow.

But before CCAs can fully be integrated into squadrons, the Air Force has to develop concepts of operations for them, or exactly how they would be controlled and operate in battle. The experimental operations unit is working with Australia’s military — which has been working on a similar program with Boeing’s Ghost Bat for several years — and other international partners, Hunter said.

As the experimental operations unit sets those tactics, Hunter said, it’s important to have actual CCAs to experiment with.

The Air Force will be buying both Anduril’s Fury and General Atomics’ Gambit CCAs for the experimental operations unit, Hunter said, though he could not say how many or when they might arrive.

The Air Force is trying to move quickly on the CCA program, Hunter said, and thinking early in the process about how they will be manufactured and how to keep future sustainment costs down.

Part of that includes reconsidering how it needs to go about evaluating a CCA’s airworthiness, Hunter said, since they’re designed to be affordable and won’t have pilots that need protecting. The same engineering work will apply, he said, but CCAs will not always have to meet the higher standards other aircraft have met.

“We think about airworthiness differently,” Hunter said. “With prior uncrewed aircraft that we’ve procured, we’ve kind of done airworthiness largely the old way, and we really need to do it in a fundamentally new way.”

An Air Force Materiel Command official also said at another event Wednesday, this one hosted by the Mitchell Institute for Aerospace Studies, that both General Atomics’ and Anduril’s CCAs have passed a key design review. Air and Space Forces Magazine reported that Col. Timothy Helfrich, AFMC’s senior materiel leader for advanced aircraft, told reporters that the critical design review was successfully completed in early November, which could allow CCAs to enter a more advanced production phase.

Flight tests of CCAs are planned for 2025, Hunter said, and will be key to show whether can carry out their promised tasks at a relatively affordable price.

That will be a key step to figuring out which of the first two CCAs the Air Force wants to officially add to its fleet, Hunter said. But how each company approaches production is also important, he said — and both could still be in the running.

“You learn a lot when you get into flight test,” Hunter said. “But … it’s [also] the approach to production, the people demonstrating they can scale to the rates that we envision for this platform, and that are necessary for it to be affordable mass. I think both vendors have an opportunity to succeed, and it’s entirely conceivable that we could move forward with both.”

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**11 . Date: 05-03-2025Fixed Wing - Armed ISR / ISTAR - HALE - General - Platform‘F’ for fighter: Air Force combat drones get novel mission designationURL: https://www.defensenews.com/air/2025/03/05/f-for-fighter-air-force-combat-drones-get-novel-mission-designation/**

AURORA, Colo. — The Air Force’s first two prototype collaborative combat aircraft have received their mission design series designations and will fly this summer, Chief of Staff Gen. Dave Allvin said Monday.

The CCAs, which are being built by Anduril Industries and General Atomics Aeronautical Systems Inc., are the first aircraft the Air Force has dubbed fighter drones. General Atomics’ CCA is now known as the YFQ-42A, and Anduril’s is the YFQ-44A, Allvin said in his keynote address at the Air and Space Forces Association’s AFA Warfare Symposium here.

In Air Force nomenclature, fighter aircraft are given an F designation, and Q stands for drones. Prototype aircraft are also given a Y prefix, which these CCAs will drop once they enter production.

“For the first time in our history, we have a fighter designation in the YFQ-42 Alpha and YFQ-44 Alpha,” Allvin said. “It may just be symbolic, but we are telling the world we are leaning into a new chapter of aerial warfare.”

CCAs are autonomous drones that will one day fly alongside crewed fighters like the F-35, or perhaps the future Next Generation Air Dominance fighter the Air Force is considering. The Air Force is heavily investing in CCAs as a way to expand airpower and provide strike capabilities, conduct reconnaissance, carry out electronic warfare operations, or even act as decoys.

Former Air Force Secretary Frank Kendall said in 2023 that the service plans to have about 1,000 CCAs, but the exact number of the future fleet is not yet known.

The Air Force awarded contracts to Anduril and General Atomics in April 2024 to build the first iteration of CCAs; further so-called “increments” are in the works.

Until now, General Atomics has referred to its CCA drone as Gambit, and Anduril’s CCA has been called Fury.

In his keynote address, Allvin said CCAs and their core technologies will be crucial for the Air Force to win wars to come.

“Embracing and leaning into human-machine teaming, understanding what autonomy can do for us,” Allvin said. “We know that’s got to be a part of our future.”

Anduril and General Atomics heralded their aircrafts’ designations as signs their work is bearing fruit.

“These aircraft represent an unrivaled history of capable, dependable uncrewed platforms that meet the needs of America’s warfighters and point the way to a significant new era for airpower,” said David Alexander, president of General Atomics Aeronautical Systems Inc.

“The designation is evidence of the program’s progress, and we continue to work tirelessly to deliver a capability that will expand the United States’ ability to project combat airpower,” Jason Levin, Anduril’s senior vice president of engineering, was quoted as saying in a company statement.

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**12 . Date: 01-05-2025Fixed Wing - Armed ISR / ISTAR - HALE - General - PlatformAir Force starts ground testing Anduril collaborative combat aircraftURL: https://www.defensenews.com/air/2025/05/01/air-force-starts-ground-testing-anduril-collaborative-combat-aircraft/**

The Air Force has started ground testing its first Anduril-made semiautonomous drone wingmen known as collaborative combat aircraft, which could be flying within months.

Air Force Chief of Staff Gen. Dave Allvin announced the beginning of the ground testing phase in a post on X, formerly known as Twitter, Thursday morning. It included a video of hangar doors opening dramatically to reveal Anduril Industries’ YFQ-44A, which the company previously referred to as Fury.

“This is a huge milestone and another step toward first flight and rapid delivery [of CCAs] to our warfighters,” Allvin said. “These unmanned fighters are going to be badass!”

Now that ground testing of Anduril’s CCA has begun, the company said in a statement, it expects to start flying the YFQ-44A this summer.

“Together, Anduril and the United States Air Force are pioneering a new generation of semi-autonomous fighter aircraft that will fundamentally transform air combat,” said Jason Levin, Anduril’s senior vice president of air dominance and strike. “YFQ-44A delivers highly capable, mass-producible, and more affordable fighter capability at the speed and scale required to stay ahead of the threat.”

The Air Force also said it wants to locate the first aircraft readiness unit for CCAs at Beale Air Force Base in California. That unit will be in charge of “provid[ing] combat aircraft ready to deploy worldwide at a moment’s notice,” the service said in a statement.

The Air Force in April 2024 announced it had selected Anduril and General Atomics to design, build and test the first iteration of CCAs, which will fly alongside aircraft such as the F-35 and the Next Generation Air Dominance fighter now known as the F-47.

CCAs will use autonomous software to fly themselves with minimal direction from the pilots they accompany, and will be able to carry out missions such as airstrikes, intelligence gathering and reconnaissance, electronic warfare, or serving as decoys to lure enemies away from crewed aircraft.

The Air Force has suggested it could have a fleet of about 1,000 CCAs, and said they will be cheaper than traditional fighters. The service wants them to extend the service’s reach at a time when pilots and advanced fighters are in short supply.

Allvin also said on social media that the Air Force’s CCA strategy heralds “a new way of acquisition,” that focuses on quickly iterating new designs instead of sustaining existing models for decades.

“Our new mantra needs to be ‘built to adapt’ rather than ‘built to last,’” Allvin said in the post.

Those comments underscore remarks Allvin made in June 2024, in which he said the Air Force wanted to keep CCA missions simple and costs down, so they can be fielded in large numbers and replaced after a decade or so with fresh models. Allvin also suggested CCAs could be modular and heavily adapted with new technologies to keep them relevant.

Ground testing of General Atomics’ YFQ-42A has not yet begun. In a statement, the company said, “We remain on schedule to test and fly YFQ-42 in the coming months.”

Allvin said in the Air Force’s statement that the beginning of ground tests for the Anduril CCA “bridges the gap between design and flight” and reduces the risk that comes from integrating a new system. He also said both Anduril and General Atomics are meeting or exceeding key milestones, and innovative design and acquisition strategies are speeding up the process for fielding CCAs.

“We’re moving fast because the warfighter needs this capability,” Allvin said. “CCA is about delivering decisive advantage in highly contested environments. … These aircraft will help us turn readiness into operational dominance.”

An advantage of pilotless CCAs is that they will not have to be flown daily to maintain pilots’ readiness, the Air Force said.

That means the readiness unit planned for Beale would be able to keep CCAs in a “fly-ready status” and flown minimally, the service said, which will require a “substantially lower” number of support airmen such as maintainers than other aircraft require.

The Air Force plans to make a decision in fiscal 2026 on which of the two CCA versions to move into production. Also that year, the service expects to start developing the second so-called “increment” of CCAs, which it hopes will have a broader suite of missions it can be used for and integrate cutting-edge technology.

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**13 . Date: 09-08-2023HALE - Partnership - Kratos, Hypersonix team up on hypersonic systems for US marketURL: https://www.defensenews.com/battlefield-tech/2023/08/09/kratos-hypersonix-team-up-on-hypersonic-systems-for-us-market/**

WASHINGTON — Kratos Defense and Security Solutions and Australia’s Hypersonix have formed a partnership to integrate their hypersonic vehicle and propulsion systems and expand their footprint within the U.S. national security market.

Under the agreement, Kratos committed to initially buy 20 of Hypersonix’s DART AE hypersonic vehicles once the system is completed and demonstrated. The U.S.-based company will integrate its Zeus line of propulsion systems with DART AE.

“This exclusive partnership . . . enables the Kratos/Hypersonix team to be first-to-market with relevant capability in support of U.S. and Australia hypersonic initiatives,” Dave Carter, president of Kratos’ defense and rocket systems business said in an Aug. 9 press release.

The teaming arrangement comes as the U.S. looks to expand its cooperation with Australia and the United Kingdom through the trilateral security agreement known as AUKUS. That means deepening its partnerships with those allies on a range of advanced capabilities -- including hypersonic systems, which can travel at speeds above Mach 5.

The move also will expand Hypersonix’s presence in the U.S., following a contract award in March from the Defense Innovation Unit. The Pentagon’s commercial technology hub selected DART AE for its Hypersonic and High-Cadence Airborne Testing Capabilities program, which aims to leverage commercial progress developing reusable, low-cost hypersonic test vehicles to help alleviate strain on government test infrastructure.

Hypersonix expects DART AE to fly for the first time in 2024.

Kratos is No. 88 on Defense News’ 2023 Top 100 list, which ranks companies based on annual defense revenue. The company’s hypersonic development work includes both propulsion and vehicle development for DoD and classified national security customers.

The company is on contract with the Air Force Research Laboratory for its Mayhem program, which is developing a hypersonic ISR and strike platform, and the Naval Surface Warfare Center’s Multi-Service Advanced Capability Hypersonics Testbed.

Kratos has experience working with Australian technology firms, noting in its press release that it has launched several hypersonic missions in collaboration with the country’s Defense and Science Technology Group and the University of Queensland.

“Both Hypersonix and Kratos view the teaming arrangement as an important step towards rapid future hypersonic flights in the United States,” Kratos said.

Courtney Albon is C4ISRNET’s space and emerging technology reporter. She has covered the U.S. military since 2012, with a focus on the Air Force and Space Force. She has reported on some of the Defense Department’s most significant acquisition, budget and policy challenges.

**14 . Date: 02-02-2024Armed ISR / ISTAR - HALE - General - ArmamentGeneral Atomics demos 3-D printed air-launched effects vehicleURL: https://www.defensenews.com/battlefield-tech/2024/02/01/general-atomics-demos-3-d-printed-air-launched-effects-vehicle/**

General Atomics Aeronautical Systems said it successfully released a new air-launched effects platform made with additive manufacturing from the internal weapons bay of an MQ-20 Avenger unmanned system.

The company partnered with Divergent Technologies, Inc. to design and build the Advanced Air-Launched Effects vehicle, or A2LE, using Divergent’s Adaptive Production System (DAPS) “to support rapid, low-cost manufacturing of the demonstration vehicle,” it said in a statement.

The Nov. 28 demonstration at Dugway Proving Ground, Utah, showed additive manufacturing, also known as 3-D printing, early in the design process can create efficiencies, the company said. It’s a key step in validating AM process and material properties for incorporation in future systems to be employed by both manned and unmanned platforms.

The flight was “a crucial first step in demonstrating GA-ASI’s ability to rapidly develop, manufacture, and test a Small Unmanned Aircraft System (SUAS) in a controlled, low-risk approach,” Mike Atwood, company vice president of advanced programs, said in the statement. “A2LE demonstrates the coupling of GA-ASI’s pedigreed aircraft design capabilities with Divergent’s DAPS, paving the way for continued maturation of affordable, modular SUAS platforms that can be tailored to meet warfighter needs at a fraction of the cost and lead time of currently fielded systems.”

The company is planning a network of A2LEs providing a “persistent, expansive grid” for surveillance, attack, enemy air defense suppression or communication pathways, according to the statement, while enhancing current and future manned and unmanned platforms with increased capability.

The U.S. Army has been extensively evaluating launched effects for roughly five years and is considering several size classes of launched effects. It’s evaluating an initial small, launched-effects prototype – a collaboration between Anduril Industries, RTX’s Collins Aerospace and Aurora Flight Sciences – as it experiment swith requirements and capabilities for a future program.

The service plans to launch these small, uncrewed aircraft not only from air platforms, but from launchers on the ground or off vehicles. It has demonstrated the capabilities several times, including at the service’s first Edge exercise in 2021, which experiments with technology to enhance operations in the aerial tier.

General Atomics demonstrated another ALE — the Eaglet — that the company deployed from a Gray Eagle UAS a year ago.

The Eaglet would fit in the large class, the company said, which translates to having the ability to carry a wide variety of more powerful sensors and payloads. The Gray Eagle would still be able to carry it for thousands of kilometers before launching it. A2LE is considered to fit in the small category.

“General Atomics has been approaching the future of uninhabited aerial vehicles and systems from a ‘family of systems’ approach,” said C. Mark Brinkley, a spokesman. “Whether air launched or ground launched, recoverable or expendable, we see these aircraft as offering different options configured for different missions.”

The company is working on several launched effects offerings in addition to Eaglet and A2LE like Sparrowhawk and LongShot, Brinkley added.

“All of these are similar and all of them are different, but the main theme here is affordable mass at scale, attacking a variety of problems in a variety of ways,” he said.

“It wouldn’t be fair to compare these aircraft head-to-head at this point, because they’re all being driven by different requirements and intended uses,” Brinkley noted, “but each of these programs are absolutely leveraging best practices and lessons learned from one program to the next to help us iterate and innovate very quickly.”

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**15 . Date: 26-04-2024ISR / ISTAR - Small - Pitch - Army heads into competitive flight demos for future tactical droneURL: https://www.defensenews.com/digital-show-dailies/aaaa/2024/04/26/army-heads-into-competitive-flight-demos-for-future-tactical-drone/**

DENVER — The U.S. Army is moving its Future Tactical Unmanned Aircraft System competition into a flight demonstration phase with two teams, Griffon Aerospace and Textron Systems.

In the fall, the Army tapped the two companies from a group of five; now it has formally awarded contracts to both to move into the final two phases of competition.

“FTUAS provides transformational capabilities including VTOL for runway independence, On-The-Move command and control, Soldier led field level maintenance, and enables rapid capability insertions, further allowing the system to keep pace with technology,” according to an April 25 service announcement.

The service has completed a rapid prototyping program that included a preliminary and critical design review with the two competitors and will now focus on both the flight demonstration and subsequent phase, where the teams will deliver “production representative prototypes” for testing and operational demonstrations.

Soldiers will have a chance during demonstrations to test the prototypes’ capabilities, the announcement notes, including vertical takeoff and landing, reduced acoustic signature and rapid setup. The phase also includes Modular Open System Architecture verification efforts.

Later on, the prototypes will be tested in varying environmental conditions and the service will assess the drones’ ability to operate in places where the electromagnetic spectrum is challenged. Prototypes will also be evaluated for transportability.

The entire effort will culminate in a production readiness review, the statement notes.

While Army senior leaders have pushed to move quickly to field tactical UAS to replace the Shadow UAS, the program has long been in the works.

The Army began considering requirements for a replacement for its Textron-made Shadow drone in 2018; by 2019, it had narrowed the pool of competitors to a Martin UAV-Northrop Grumman team, Textron Systems, L3Harris Technologies and Arcturus UAV. Aerovironment purchased Arcturus in 2021, while Shield AI bought Martin UAV in the same year.

The service evaluated the four drone offerings over a year with operational units, culminating in a spring 2021 rodeo at Fort Benning, Georgia. The Army awarded Aerovironment an $8 million contract in August 2022 to provide the Jump 20 UAS as an interim FTUAS capability for a single brigade.

Now, the Army plans to field FTUAS to the first unit equipped in 2026, Maj. Gen. Wally Rugen, director of Army aviation in the G-3/5/7, said in an April 25 speech at the Army Aviation Association of America’s annual summit here.

And while the Army announced earlier this year it officially plans to quickly retire Shadow, “there’s no amount of money that will accelerate [FTUAS] left,” Rugen said, referring to a faster fielding schedule.

“What we in the building are doing is putting more units into the fielding process, and that’s our version of acceleration,” Rugen added, while emphasizing that with the Shadow replacement “the demand is going to be off the charts … the demand by divisions to have that tactical UAS capability in their formations at squadron echelon.”

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**16 . Date: 12-09-2023ISR / ISTAR - Small - General - PlatformAnduril announces Ghost-X, with more payload capacity, longer flightsURL: https://www.defensenews.com/digital-show-dailies/dsei/2023/09/12/anduril-announces-ghost-x-with-more-payload-capacity-longer-flights/**

LONDON — U.S. tech firm Anduril Industries unveiled its Ghost-X autonomous uncrewed aircraft system here Sept. 12, an upgraded version of its Ghost system that can carry heavier payloads and fly for longer periods of time.

The system is flexible, modular and “purpose-built for reconnaissance, security and force protection,” the company said in a statement released during the DSEI conference. The design is based on feedback from the U.K. Ministry of Defence and other Ghost customers, including the U.S. Air Force, the U.S. Marine Corps and U.S. Special Operations Command.

“The Ghost platform was designed to adapt to user needs with a flexible and rail-centric design, and Ghost-X embodies that mission through the integration of new propulsion, payloads, and software to meet the needs of operators in challenging environments around the world,” Anduril said in the statement.

The X-variant’s upgraded propulsion system allows the aircraft to carry two batteries, extending its flight time to 75 minutes and doubling its payload capacity to 9 kilograms (20 pounds). The system also has an optional long-range communications kit and can be configured to fly a range of sensors and payloads, including electro-optical gimbals and a vision-based navigation module that allows it to fly without the Global Navigation Satellite System or GPS.

“These new capabilities contribute to a layered system of hardened navigation and communications to maximize resiliency in low-connectivity and denied environments,” the company said.

The announcement follows news Anduril has purchased Blue Force Technologies, an uncrewed aircraft system developer based in North Carolina. Blue Force builds a Group 5 UAS; these typically weigh more than 1,300 pounds and can operate above 18,000 feet. By contrast, Ghost is a group 2 UAS; they weigh less than 55 pounds and operate below 3,500 feet.

The purchase of Blue Force, according to Anduril’s head of strategy Christian Brose, builds on the company’s investments in mission autonomy software and small UAS development, adding larger systems to its portfolio.

It also positions the company to respond to calls from the U.S. Department of Defense for larger quantities of commercially available systems, particularly drones and AI capabilities, Brose told C4ISRNET in an interview.

“This has very much been a mantra of ours for the past several years, and we’re thrilled to see the progress that’s now emerging,” he said. “We have a lot to contribute to that type of objective if that is the direction the department and the United States head. It seems very clear that that is where they want to go.”

Defense Deputy Secretary Kathleen Hicks on Aug. 28 announced an initiative called Replicator, which aims to field thousands of low-cost autonomous systems over the next two years. Speaking at the Defense News Conference Sept. 6, Hicks said the effort is designed both to deter conflict with China and to ensure the U.S. has a tactical advantage if conflict does arise.

It’s also a move to drive a change in how the Defense Department develops and fields technology, signaling a push for affordable mass — whether that’s aircraft, ships, missiles or satellites.

“We’ve seen in Ukraine what low-cost, attritable systems can do — not to mention other commercial technologies,” Hicks said. “They can help a determined defender stop a larger aggressor from achieving its objectives, put fewer people in the line of fire, and be made, fielded and upgraded at the speed warfighters need, without long maintenance tails.”

Courtney Albon is C4ISRNET’s space and emerging technology reporter. She has covered the U.S. military since 2012, with a focus on the Air Force and Space Force. She has reported on some of the Defense Department’s most significant acquisition, budget and policy challenges.

**17 . Date: 12-05-2023Loitering Munition - Mini - Partnership - Greece lines up kamikaze drone production with ParamountURL: https://www.defensenews.com/global/europe/2023/05/12/greece-lines-up-kamikaze-drone-production-with-paramount/**

MILAN – Greek state company Hellenic Defense Systems is gearing up for the local production of long-range loitering munitions by partnering with South Africa’s Paramount Group, a move aimed at strengthening the country’s indigenous manufacturing capabilities.

Dubbed IRIX, the system will be the first of its kind to be produced in Greece, which historically has not had a noteworthy domestic market for armed drones or loitering munitions. The country only announced its first locally built combat drone in January.

The Greek vendor, which goes by the acronym EAS, announced the signing of a strategic partnership with global aerospace firm Paramount for the new weapon at a defense industry conference in Athens this week.

The IRIX loitering munition is based on Paramount’s existing N-Raven unmanned aerial vehicle technology. The N-Raven, manufactured by subsidiary Paramount Aerospace Systems (PAS) headquartered in the United Arab Emirates, began production last month in Abu Dhabi with first deliveries set for October.

Speaking to Defense News at the International Defense Exhibition & Conference in Abu Dhabi, UAE, in February, a Paramount representative said the system was designed specifically for quick transfers of technology in order to facilitate localization for customers.

That scenario is expected to play out in Greece with IRIX. The Greek company will also participate in ongoing research and development of future upgrades to be made on the platform.

The specific capabilities of the new loitering munition have yet to be disclosed. Paramount has described it as a cost-effective system capable of striking high-value targets deep within enemy territory as well as providing aerial reconnaissance.

Since its design is based on the N-Raven, the IRIX could have a loitering endurance between 2 and 4.5 hours, a range up to 100 kilometers and be able to carry more than 13 kilograms of payload.

PAS has also previously stated that a swarming version of the N-Raven is in advanced stages of development and expected to be industrialized in the second half of 2024. It remains unclear whether Greece plans on acquiring this capability.

Elisabeth Gosselin-Malo is a Europe correspondent for Defense News. She covers a wide range of topics related to military procurement and international security, and specializes in reporting on the aviation sector. She is based in Milan, Italy.

**18 . Date: 14-07-2023ISR / ISTAR - MALE - Requirement - Serbia looks to join Spanish surveillance drone programURL: https://www.defensenews.com/global/europe/2023/07/14/serbia-looks-to-join-spanish-surveillance-drone-program/**

MILAN — Serbian officials have confirmed that the country, one of the largest military drone operators in the Balkans, is looking to join the Airbus-led surveillance drone program SiRTAP, already planned to be acquired by Spain and Colombia.

During a recent guest appearance on a national television station, Serbian Assistant Minister of Defense for Material Resources Nenad Miloradovic confirmed that the country is exploring industrial cooperation opportunities with Airbus for Belgrade to partake in the effort.

The project, led by Airbus Spain, aims to produce a tactical unmanned aerial vehicle designed for intelligence gathering and surveillance. Although the drone is currently still in a pre-design phase, the Spanish MoD recently approved funds nearing $542 million from its defense budget to invest into the program and is looking to acquire a total of 27 SiRTAPs.

Serbia has previously signaled interest in the program, but it remains too early to tell in what capacity it would be joining the initiative.

“Serbia has experience with producing its own Pegaz combat drone and now operating the CH Chinese series [CH-92 and CH-95] as well,” Peter Voinovich, editor-in-chief of Serbian aviation news portal TangoSix, told Defense News. “Hence, some capabilities are there. This could possibly be a joint venture for manufacturing and export but, naturally for Serbia to be one of the prospective customers [of SiRTAP].”

The Serbian Ministry of Defense could not be reached for comment.

At the Madrid Feria Internacional de Defensa y Seguridad (FEINDEF) exhibition held in May, Airbus officials noted that although the ambition was to produce 90% of SiRTAP’s components in Spain, due to the fast-track of the program, they may have to go with non-Spanish suppliers in some instances.

Cost is expected to play into those decisions, as one of the drone’s premises is that it will be affordable for air forces with lower budgets wishing to gain advanced capabilities.

The collapsible design of SiRTAP drones implies that troops will ultimately be able to transport it by air in transport aircraft such as the C-295, which Serbia has contracted Airbus for two models to be delivered later this year.

Elisabeth Gosselin-Malo is a Europe correspondent for Defense News. She covers a wide range of topics related to military procurement and international security, and specializes in reporting on the aviation sector. She is based in Milan, Italy.

**19 . Date: 12-09-2023Armed ISR / ISTAR - Tactical - Partnership - PlatformBAE Systems, QinetiQ sign pact on drone collaborationURL: https://www.defensenews.com/global/europe/2023/09/12/bae-systems-qinetiq-sign-pact-on-drone-collaboration/**

LONDON — BAE Systems and QinetiQ are exploring the possibility of joining forces in the development of uncrewed systems, the two British companies announced Sept. 12.

The companies said they have signed a framework agreement looking at the potential to collaborate in the aerial drones and mission management systems sector.

Coinciding with the potential tie-up, Qinetiq announced it was launching a low-cost, disposable drone development called Jackdaw.

QinetiQ is collaborating with BAE and Inzpire, a mission systems company it owns, in the development of Jackdaw.

Under the framework agreement, signed on the opening day of the DSEI exhibition here, the companies will continue to develop their own uncrewed systems but would be aligned to a common product strategy enabling collaboration on existing and future platforms.

In a joint statement the two British companies said the first stage of the collaboration will “explore the use of BAE Systems’ autonomous mission management system on uncrewed platforms developed by both companies to work alongside each other - and with existing and future crewed and uncrewed combat aircraft.”

The autonomous mission management system gives operators the ability to use a mix of crewed and uncrewed assets collaboratively, all managed by a human.

An agreement is already in place to explore the use of BAE’s autonomous goal-based mission management system on Jackdaw.

Whilst the drone is designed to be reusable, Qinetiq said its low-cost disposable characteristics provide the option to sacrifice it when needed.

Designed for swarming and collaborative autonomous operations including crewed-uncrewed teaming, Jackdaw will eventually be able to undertake missions including reconnaissance, electronic warfare, airborne decoy and threat representation.

Design work has been underway for a while. The first variant on offer will be the disposable drone that is scheduled to be available from the mid-2020s.

Mick Andrae, Qinetiq’s global campaign director for robotics and autonomous systems said the drone concept “leverages QinetiQ’s expertise in low-cost, high-performance aerial targets – such as the Banshee – and is enhanced with autonomous mission management and human-machine teaming capabilities.”

Jackdaw is designed to carry a 30 kg internal payload, have over three hours endurance and fly at speeds of 400 knots and altitudes of 30,000 ft.

Andrew Chuter is the United Kingdom correspondent for Defense News.

**20 . Date: 06-06-2024Armed ISR / ISTAR - HALE - General - PlatformAirbus, Diehl aim at future air war with drone wingman, remote carrierURL: https://www.defensenews.com/global/europe/2024/06/06/airbus-diehl-aim-at-future-air-war-with-drone-wingman-remote-carrier/**

PARIS — Airbus and Diehl Defence provided a glimpse at the future of air combat, presenting concepts for stealthy drone systems that will be able to team up with manned aircraft such as Eurofighter or Rafale years before a future European sixth-generation fighter becomes reality.

Airbus showed off its Wingman concept, a large fighter-type stealth drone to fly alongside piloted jets such as the Eurofighter, at the Berlin Air Show near the German capital on Wednesday. The company also signed an agreement with German defense-software startup Helsing to develop artificial-intelligence technology for a future Wingman system.

Diehl presented a model of a new light remote carrier called Feanix, a drone that can be air launched with payloads including sensors or lethal and non-lethal effectors, and stealth aspects that make it hard to detect by enemy air defenses. The company said it’s been self-financing research into light remote carriers, which it dubbed the missiles of the future.

Germany has called for faster fielding of military drones than the timeline envisaged for the Future Combat Air System (FCAS) being developed with France and Spain. The French senate has said the sixth-generation fighter at the core of FCAS won’t be available before 2045 or 2050, and has called for a wingman drone for the Rafale fighter.

“The current conflicts on Europe’s borders show how important air superiority is,” Airbus Defence and Space CEO Mike Schoellhorn said in a statement on Wednesday. “Manned-unmanned teaming will play a central role in achieving air superiority: with an unmanned Wingman at their side, fighter pilots can operate outside the danger zone.”

Most of the world’s military powers are developing future air-combat systems combining a sixth-generation fighter with unmanned systems. In the U.S., the Kratos XQ-58A Valkyrie drone in 2021 successfully launched a smaller unmanned aircraft from its internal weapons bay, while the U.K. is developing remote carriers as part of the Tempest project.

Many of the developments in unmanned vehicles are in response to a critical need to compensate for a shortfall in the number of conventional combat aircraft, French think-tank Fondation pour la Recherche Stratégique said in an April report.

Airbus is the prime contractor for the remote carriers that will be part of FCAS, with missile maker MBDA and Spain’s Satnus as the main partners. German air force chief Lt. Gen. Ingo Gerhartz said in November that remote carriers resulting from the program were needed “much, much earlier” than the 2040s.

The Wingman concept drone is Airbus’s answer to the German Air Force’s “clear need” for an unmanned companion aircraft before FCAS will be operational, and can result in an “affordable solution” for Germany for the 2030s, according to Schoellhorn. The drone can take over dangerous tasks such as target reconnaissance and destroying or jamming of enemy air defenses.

Artificial intelligence will be a critical component of the system for the German Air Force, Helsing co-CEO Gundbert Scherf said in a statement. “Whilst we will always have a human in the loop, we must realize that the most dangerous parts of an unmanned mission will see a high degree of autonomy and thus require AI,” he said.

Airbus is self-funding the Wingman effort to develop the technologies for entry into service in the early 2030s, in order to operate alongside current-generation aircraft such as the Eurofighter, an Airbus spokesman said in an emailed response to questions. The company is in talks with Germany and Spain about the concept, but no program has been started.

While the most obvious use case is the Eurofighter, the Airbus drone could work with other fighters such as Rafale, Gripen or the F-35, or even larger aircraft such as the A400M transporter or A330 MRTT tanker, the company said.

Dassault Aviation has been working on its nEUROn drone, which the French senate has said could be the basis for an unmanned wingman for the Rafale. The program’s technological demonstrator completed its first flight in December 2012, and first released a weapon from the internal bay in September 2015.

The Airbus Wingman drone on display in Berlin has a wingspan of 12 meters and an overall length of 15.5 meters, and the company expects the aircraft would operate at high transonic speed, so around the speed of sound.

The Diehl drone is significantly smaller, and a length of less than 4 meters and weight of less than 300 kilograms means the unmanned aircraft could be air launched. Pan-European missile maker MBDA has been working on similar remote carriers.

“Remote carriers are a core element of the international FCAS program, but are also used beyond the FCAS role, which is why Diehl Defence aims for an operational availability well before the FCAS realization period of 2040 plus,” the company said in a statement on Wednesday.

The teaming and swarming capability of the system will be a game changer in future scenarios, the company said. Light remote carriers operation will be highly automated and independent from the carrier system, with high numbers providing combat mass, Diehl said.

Rudy Ruitenberg is a Europe correspondent for Defense News. He started his career at Bloomberg News and has experience reporting on technology, commodity markets and politics.

**21 . Date: 09-10-2024Armed ISR / ISTAR - HALE - General - PlatformFrance kicks off development of wingman drone for Rafale fighter jetURL: https://www.defensenews.com/global/europe/2024/10/09/france-kicks-off-development-of-wingman-drone-for-rafale-fighter-jet/**

PARIS — France kicked off the development of an air-combat drone that will serve as an unmanned wingman for the country’s Rafale fighter, part of a contract with Dassault Aviation to start work on an upgrade package for the aircraft.

The stealthy wingman drone will be operated directly from the Rafale cockpit, the Armed Forces Ministry said in a post on X, formerly Twitter. The unmanned combat aerial vehicle will build on Dassault Aviation’s work on its unmanned nEUROn demonstrator, the company said in a statement on Tuesday.

“This stealth combat drone will contribute to the technological and operational superiority of the French Air Force by 2033,” Dassault Aviation CEO Éric Trappier said in the statement.

The French plan to give Rafale pilots a drone buddy come as the timetable for the jet’s successor remains unclear. France’s senate in November had called on Dassault Aviation to start work on the Rafale upgrade, including a so-called loyal wingman, as soon as 2024 because of the lack of visibility on the Future Combat Air System being developed with Germany and Spain.

The wingman drone will incorporate stealth technologies, autonomous control with man-in-the-loop functionality and internal payload capacity, and designed to evolve with future threats, according to Dassault Aviation.

The French aircraft builder started the nEUROn program in 2003, and the drone had its maiden flight in December 2012 and first released a weapon from its internal bay in September 2015. Partners in the program include Leonardo for the internal weapons bay, Saab for the design of the main fuselage, avionics and fuel system, as well as Airbus for expertise on the wings.

Airbus showed off its self-funded Wingman concept, a large fighter-type stealth drone to team up with piloted jets such the Eurofighter, at the Berlin Air Show in June. The company described the drone as an answer to the “clear need” of the German Air Force for an unmanned buddy aircraft before FCAS will be operational.

German air force chief Lt. Gen. Ingo Gerhartz said in November that remote carriers resulting from the FCAS program were needed “much, much earlier” than the 2040s.

Dassault Aviation is the main contractor for the work on the fighter jet at the heart of the FCAS program, with Airbus as the principal partner. Development of the remote carriers is led by Airbus, with MBDA as the principal partner.

The governments involved aren’t waiting for FCAS though, with Germany agreeing in 2022 to buy the F-35 jet from the United States. France as recently as January announced an order for an additional 42 Rafale jets, lifting the total number of aircraft ordered to 234, including a special order for 12 fighters in 2021 to replace aircraft transferred to Greece.

The future F5 standard Rafale carrying the future ASN4G nuclear missile will be a “major evolution” for France’s airborne nuclear deterrent, the Armed Forces Ministry said on Tuesday. Manufacturers received the first orders for the upgrade program several weeks ago, according to Armed Forces Minister Sébastien Lecornu.

The modernized Rafale “will be ready to face the threats of the 2030s and 2040s, Lecornu said. “For strategic air forces and conventional aviation alike, this is a revolution as significant as the transition from the Mirage 2000 to the Rafale.”

The French Air and Space Force received the first Rafale fighters upgraded to the F4 standard in March last year. The standard is focused on connectivity and includes the Mica medium-range air-to-air missile supplied by pan-European missile maker MBDA as well as an upgrade of the Spectra self-defense system developed by Thales.

MBDA is working on the ASN4G nuclear missile to replace the supersonic ASMP air-launched missile now carried by the Rafale, with the new missile scheduled to be operational around 2035, MBDA board adviser Adm. Hervé de Bonnaventure said in a parliamentary hearing last year. The new missile will have multiple warheads and performance “in the realm of the hypersonic,” according to the admiral.

French aerospace research lab Onera, with MBDA as co-contractor, received an order from France’s Directorate General for Armament to pursue work on the supersonic and hypersonic propulsion that will power the future nuclear missile, the researcher said Sept. 30.

The lab will focus in particular on the combustion chamber for air breathing propulsion within the Myhysis program. The program will also develop quantum computing capabilities with the potential to create a breakthrough in fluid and energy mechanics, an area of challenges for hypersonic missiles due to the speed at which they travel through the atmosphere.

MBDA and Onera have been studying hypersonics since the 2000-2010 period, de Bonnaventure said in last year’s parliamentary hearing.

France on Tuesday also announced the first qualification firing of the next-generation Aster 30 B1 surface-to-air missile, the upgraded interceptor that will arm the SAMP/T NG air-defense system ordered by France and Italy, as well as both countries’ air-defense frigates.

SAMP/T NG can intercept hypersonic missiles and deal with threats in a 360 degree radius, Lecornu said in a post on X. The system, developed by the Eurosam joint venture between MBDA France, MBDA Italy and Thales, is scheduled to enter service in the French forces by 2026.

“From Ukraine to the Middle East, the current conflicts illustrate to what extent ground-air defense is key,” Lecornu said.

France still expects to deliver Mirage 2000 jets to Ukraine in the first quarter of 2025, with the jets currently being fitted with new air-to-ground capabilities and electronic-warfare countermeasures, Lecornu said Tuesday, adding that training of Ukrainian pilots and mechanics continues. France has been gradually replacing its fleet of Mirage 2000s with the Rafale, which first flew in 1986.

Rudy Ruitenberg is a Europe correspondent for Defense News. He started his career at Bloomberg News and has experience reporting on technology, commodity markets and politics.

**22 . Date: 30-10-2024Requirement - Italian Navy tasks Fincantieri to design drone-laden warshipsURL: https://www.defensenews.com/global/europe/2024/10/30/italian-navy-tasks-fincantieri-to-design-drone-laden-warships/**

ROME — The Italian Navy is planning for a future in which swarms of airborne, surface and undersea drones will deploy from its ships and has challenged shipyard Fincantieri to build and adapt vessels which are ready for the task.

“We expect new navy vessels in ten years will be using a large number of drones and we want to be prepared,” said Capt. Gianluca Marcilli, who heads the Technology Innovation Office at the Navy General Staff’s General Space and Innovation Office (UGSI).

A new Navy research project called “Swarm Drone Carrier,” which was unveiled by Marcilli at a Rome conference this week, has focused on how numerous drones used for search and rescue, interception and interdiction missions can be hosted on ships and integrated with sensors and combat management systems.

Officials have meanwhile tasked Italy’s Fincantieri – the Navy’s go-to ship builder – to drum up designs for future drone-friendly vessels.

“We want to challenge Fincantieri to rethink designs in a way that we can use launch and recovery systems for aerial, surface and undersea drones,” Marcilli told Defense News.

“It means looking at how best to handle storage, maintenance and loading ammunition,” he said.

Marcilli said the study was based on the concept of a vessel being able to host between six and 10 undersea drones, able to be launched through apertures in the hull, rather than being launched with a crane.

The study also envisages four to six Unmanned Surface Vehicle (USV) drones on board, and has used Fincantieri’s SAND USV as a reference. Launched at Euronaval in 2022, the SAND (Surface Advanced Naval Drone) offers autonomy of up to 72 hours at eight knots.

The study proposed a typical airborne component of four to six drones, using as a reference the Hero, a 200kg rotary drone developed by Italy’s Leonardo.

The Navy is also looking at how to host fixed-wing, loitering munition on vessels, Marcilli said.

A major challenge officials face is integrating purchased drones with vessels’ highly classified Combat Management Systems, he added.

The study has led to the creation of a ‘proof of concept’ Landing Platform Dock design which could act as a drone carrier.

But Marcilli said the point of the study, and of Fincantieri’s involvement, was primarily to adapt vessels which are currently being built or planned.

That means figuring out how to better integrate drones into Italy’s under-construction Trieste Landing Helicopter Dock, which will also host the F-35B combat jet.

He said planners were also looking at Italy’s new PPX patrol vessels as well as two Fremm EVO vessels ordered last year from Fincantieri. The upgrades to Italy’s Fremm frigates are meant to offer enhanced capabilities for defeating drone attacks while operating their own drones.

Tom Kington is the Italy correspondent for Defense News.

**23 . Date: 30-12-2024Acquisition - Italy sells Piaggio Aerospace to Turkish drone maker BaykarURL: https://www.defensenews.com/global/europe/2024/12/30/italy-sells-piaggio-aerospace-to-turkish-drone-maker-baykar/**

ROME — Turkish drone manufacturer Baykar has purchased Italy’s Piaggio Aerospace, reflecting Baykar’s growing global ambitions while marking a timely rescue for the troubled Italian aircraft producer.

The deal, which was announced on Friday by Italy’s industry ministry, follows six years of Italian state management at Piaggio after it went into receivership in 2018.

Founded in 1884 and one of the world’s oldest aviation firms, Piaggio is known for its P.180 business turboprop but has also secured maintenance work in recent years on Italian army helicopters.

In a statement, the Italian industry ministry said Baykar had been picked as buyer over two other suitors.

Its offer, which was not quantified in the statement, was “the most suitable to guarantee the interests of the employees and creditors” of Piaggio Aerospace and to “relaunch the group’s industrial prospects.”

Industry minister Adolfo Urso said the deal “has guaranteed the relaunch of the company with a clear and ambitious industrial vision.”

He added, “After six years we are giving a future to Piaggio Aerospace, which is a strategic asset for our country.”

The purchase gives an Italian presence to Baykar, the Turkish company which has risen to prominence in the UAV market since its TB2 drone was reportedly used to great effect by the Ukrainian military following Russia’s 2022 invasion of Ukraine.

In a post on X, company CEO Haluk Bayraktar wrote, “We will work to preserve the historic identity of Piaggio, boost its productive capacity and support the growth of jobs in Italy, uniting innovation with respect for its roots.”

The choice of a Turkish buyer for an Italian aviation firm, complete with promises to save Italian jobs, is a remarkable turnaround given Italy’s traditional heft in the aviation industry.

The deal reflects Baykar’s soaring success in drone manufacturing as well the failure of a Piaggio unmanned project which prompted the firm’s near-collapse.

Piaggio was taken over in 2014 by Mubadala Development Company, an Abu Dhabi-based strategic investment and development company which was due to build an unmanned version of the P.180 for the UAE.

The UAE however said it would buy the platform on condition Italy bought it first - a condition Italy agreed to.

But when Italy delayed its purchase, the UAE cancelled its planned order, sending the firm into receivership in 2018.

Tom Kington is the Italy correspondent for Defense News.

**24 . Date: 17-01-2025M-Rotary - Swarm - Mini - General - SoftwareSweden unveils drone swarm to be paired with ground troopsURL: https://www.defensenews.com/global/europe/2025/01/17/sweden-unveils-drone-swarm-to-be-paired-with-ground-troops/**

MILAN — Sweden has unveiled a cluster of swarming aerial drones envisioned to equip ground and air units of the Swedish Armed Forces for intelligence and surveillance applications.

The project was announced by Swedish Minister for Defense Pal Jonson during a Jan. 15 press conference.

In a demonstration video shared with Defense News, a formation of 10 quadcopters is seen taking off and relaying footage of their flight trajectory above snowy forests to ground operators.

A Swedish voice-over explains that the drones’ high-resolution imagery and artificial intelligence-driven analyses enable commanders to have immediate and actionable insights for faster decision-making – military lingo describing the advantage of having flying eyes and ears for securing a perimeter.

The initiative has involved the participation of the Swedish aerospace company Saab in cooperation with the Swedish military, the Swedish Defense Material Administration and the Swedish Defense Research Agency.

While Saab does not provide the drones themselves, for now, it worked alongside the other agencies to design a software for their command and control.

“The individual UAVs in the swarm are equipped with different capabilities, such as varying sensors, payload, and communication capacities – the swarms are controlled by a single operator who can assign … tasks to one or more swarms, for instance via a mobile phone,” a Saab spokesperson told Defense News in an email statement.

The Saab representative added that the drone swarm technology was developed in “a very short period,” and that additional NATO countries have already expressed interest in it.

The Scandinavian country borders the Baltic Sea, where NATO recently launched a maritime patrol mission, following a series of sabotage incidents against underwater infrastructure.

The interest in drone swarms is not new, as militaries around the world have examined both the opportunities and threats they present. In a recent publication for the U.S.-based Atlantic Council think-tank, the head of the Ukrainian defense-technology hub Brave1 listed drone swarms as a top priority for Kyiv in 2025.

“Ukrainian drone units are already moving beyond the initial concept of one drone, one operator and looking to transition towards drone swarms this year,” she wrote.

A key challenge swarms have presented is that they are typically composed of relatively small, short-range drones, which implies that their flight time is highly limited to around 30 minutes.

Elisabeth Gosselin-Malo is a Europe correspondent for Defense News. She covers a wide range of topics related to military procurement and international security, and specializes in reporting on the aviation sector. She is based in Milan, Italy.

**25 . Date: 24-01-2025Partnership - PayloadLeonardo, drone maker Baykar seek ‘synergies’ on battlefield sensorsURL: https://www.defensenews.com/global/europe/2025/01/24/leonardo-drone-maker-baykar-seek-synergies-on-battlefield-sensors/**

ROME — Italy’s Leonardo and Turkish drone maker Baykar are discussing a team-up which could see Leonardo’s electronics and radar mounted on Baykar’s drones.

Leonardo CEO Roberto Cingolani visited Baykar’s Turkish facility this week to meet management and check out the firm’s line of drones including the Bayraktar TB2, which has influenced conflicts in Libya, Nagorno-Karabakh and Ukraine.

“There was a great interest in seeking synergies,” a Leonardo source told Defense News.

While Baykar has established a huge presence in the drone market, Leonardo has also sold over 50 of its Falco drone variants and is also a partner on the evolving Eurodrone program with Spain, France and Germany.

The firm also specializes in airborne electronics and sensors like the Gabbiano electronically scanned radar, which will be mounted on the Eurodrone, suggesting Leonardo could put its systems on Baykar drones.

“Cingolani’s logic is that there must be the possibility for synergy in terms of technology, and on the basis of that commercial synergy can be looked at, as was the case with Leonardo’s cooperation with Rheinmetall,” the source said.

In October, Leonardo and Rheinmetall teamed to build new fighting vehicles and tanks for the Italian army which will feature Leonardo electronics and turrets combined with Rheinmetall platforms.

Last month, Baykar purchased Italy’s Piaggio Aerospace, bringing the firm out of six years of receivership.

Tom Kington is the Italy correspondent for Defense News.

**26 . Date: 02-05-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - Contract - PayloadBritish jammer drone opens door to unmanned wingmen in combatURL: https://www.defensenews.com/global/europe/2025/05/02/british-jammer-drone-opens-door-to-unmanned-wingmen-in-combat/**

ROME — The U.K. has launched a new jammer drone it says will fly into the battle space ahead of F-35s and Typhoons and jam and bamboozle enemy radar.

The RAF StormShroud, which went into operation on Friday, is based on the 100km range AR3 drone built by British-Portuguese firm Tekever, which has been used in Ukraine.

On board, the StormShroud carries the BriteStorm stand-in jammer supplied by Leonardo UK, which is designed to block enemy radar or spoof it, creating “ghost” jet signatures.

The new asset “means for the first time, the RAF will benefit from high-end electronic warfare without needing crew to man it, freeing them up for other vital frontline missions,” the UK government said in a statement.

“This is a seminal moment for the RAF to maintain our advantage in air combat and national security,” said RAF Air Chief Marshal Sir Rich Knighton.

An initial investment of £19 million ($25 million) by the RAF will see Tekever produce “hundreds” of platforms in the UK this year, the firm said.

The rail-launched AR3, which has a maximum operating weight of 25kg boasts 16 hour endurance and a cruise speed of up to 90kmh.

Tekever’s AR3 and AR5 drones have flown 10,000 hours in Ukraine.

“In a further vote of confidence in Britain’s defense industry, British-Portuguese tech company Tekever, who manufacture the drones in the U.K., plan to invest a further £400 million over the next 5 years across the U.K. and create up to 1,000 more highly skilled jobs,” the British government said.

The 2.5kg BriteStorm, which is about the size of six Coke cans, including its transmit and receive modules and antenna, uses Leonardo’s Digital Radio Frequency Memory (DRFM) technology to digitally capture enemy radar signals.

Leonardo has said that traditional, large manned aircraft carrying stand-off jammers must fly further back in the battle space and are less effective.

Operated by the RAF’s 216 Squadron, the StormShroud is designed to be expendable. Describing the BriteStorm, Leonardo said, “On its return, BriteStorm is rapidly reprogrammable for subsequent missions, but if destroyed in the defense of higher-value or crewed platforms, its loss would be tolerable.”

The drone marks a step towards the collaboration between manned and unmanned aerial platforms – an ambition of the UK-Italian-Japanese GCAP fighter program, which envisages swarms of drones flying alongside fighters.

The RAF said that it was determined to bring such technologies to the front line fast.

“Lessons learned from the war in Ukraine have boosted StormShroud’s production and it’s taken just a year from the Urgent Capability Requirement (UCR) being endorsed to delivering the new capability, significantly reducing program time and costs,” the service said.

Tom Kington is the Italy correspondent for Defense News.

**27 . Date: 13-12-2024Fixed Wing - Armed ISR / ISTAR - MALE - Safety - Kurdish forces in Syria accidentally shot down US Reaper droneURL: https://www.defensenews.com/global/mideast-africa/2024/12/13/kurdish-forces-in-syria-accidentally-shot-down-us-reaper-drone/**

Kurdish-led forces in Syria, allied with the United States, shot down an Air Force MQ-9 Reaper drone on Monday after mistakenly identifying it as a threat.

Troops from the Syrian Democratic Forces, a key ally for the United States in its fight against the Islamic State, were conducting operations in the region when they downed the MQ-9, a U.S. official familiar with the situation confirmed to Defense News.

The MQ-9 was operating over Syria to support the campaign against the remnants of the Islamic State, known as Operation Inherent Resolve.

U.S. forces recovered the parts of the drone that needed to be salvaged and destroyed the rest, the official said.

“U.S. Air Forces Central [Command] is actively assessing the actions that led to the incident and will adjust tactics, techniques and procedures to safeguard U.S., coalition, and partner forces and their associated assets,” the official said.

The SDF’s position in Syria has grown precarious in the days since the ouster of President Bashar Assad. Turkey, which borders Syria to the north, has accused the SDF of having ties to the Kurdistan Workers’ Party, or PKK, which Turkey views as a terrorist group.

The Telegraph reported the Turkish-backed Syrian National Army began advancing toward the Syrian Kurdish-controlled city of Manbij earlier this week, before the U.S. helped broker a ceasefire between the SNA and SDF.

U.S. forces, including B-52 Stratofortress bombers, A-10 Warthog attack planes and F-15 fighters, pounded 75 ISIS targets in dozens of strikes shortly after the rapid fall of the Assad regime.

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**28 . Date: 28-04-2023General - ArmamentTurkey’s Baykar unveils cruise missile for dronesURL: https://www.defensenews.com/industry/techwatch/2023/04/28/turkeys-baykar-unveils-cruise-missile-for-drones/**

ANKARA, Turkey —Baykar has revealed a new cruise missile for use on the Turkish company’s TB2, TB3 and Akinci combat drones.

The miniature weapon, known as the Bayraktar Kemankes, was on display April 27 at the Teknofest exhibition in Istanbul.

It is powered by a jet engine and has a range of 200 kilometers (124 miles). The company said it features an auto-pilot system supported by artificial intelligence technolgoy.

The missile can fly at a speed of Mach 0.7 and carry a 30-kilogram (66-pound) payload.

Baykar reported $1.4 billion in revenue for 2022. It announced that 99.3% of its revenue that year came from exports. The company has sold its TB2 combat drone to 28 countries, and its Akinci drones to six countries.

Baykar did not disclose a per unit price for the Kemankes. But a company engineer, speaking on the condition of anonymity as he was not authorized to talk to the press, told Defense News his team has tried to minimize the cost to “less than $20,000 per unit.”

Burak Ege Bekdil was the Turkey correspondent for Defense News.

**29 . Date: 31-01-2023Loitering Munition - Small - General - PlatformGeneral Atomics’ air-launched ‘Eaglet’ gets its wingsURL: https://www.defensenews.com/land/2023/01/31/general-atomics-air-launched-eaglet-gets-its-wings/**

WASHINGTON — A General Atomics Aeronautical Systems-developed unmanned aerial system flew for the first time, launching from another UAS in a demonstration at Dugway Proving Grounds, Utah.

The company, which is the manufacturer of the U.S. Army’s Gray Eagle UAS, has named its air-launched effect, or ALE, the Eaglet.

Eaglet launched from a U.S. Army-owned Gray Eagle Extended Range UAS in December as part of a jointly funded effort with the service’s Combat Capabilities Development Army Research Laboratory and Aviation & Missile Center, the unit of General Atomics said in a Jan. 31 statement.

The ALE is “intended to be a low-cost, survivable UAS with the versatility to be launched from a Gray Eagle, rotary-wing aircraft, or ground vehicles,” General Atomics President David Alexander said in the statement. “It enables extended reach of sensors and increased lethality while providing survivability for manned aircraft.”

The Army is pursuing options for both large and small ALEs to bring a variety of capabilities to the battlefield, from targeting to intelligence, surveillance and reconnaissance to providing communications connections and data links.

Eaglet fits into the large category, which General Atomics said translates to having the ability to carry a wide variety of more powerful sensors and payloads.

The company said Gray Eagle is capable of carrying Eaglet for thousands of kilometers before launching it.

Eaglet is intended to contribute to advanced teaming command-and-control capabilities and can work with other long-range payloads that Gray Eagles and other Army aircraft carry “to support deep sensing” in operations. The Army’s Program Executive Office for Intelligence, Electronic Warfare and Sensors, or PEO IEW&S, has taken a specific interest in ALEs as a means to jam, spoof or spy and fight from greater distance.

The next step for the Eaglet is to participate in other exercises to further determine its potential. The command in charge of Army modernization — Army Futures Command — approved an initial capability refinement document for ALE in the fall of 2019.

ALE is meant to be a part of what the Army calls its Future Vertical Lift “ecosystem,” which will include a manned Future Long Range Assault Aircraft, or FLRAA, another manned Future Attack Reconnaissance Aircraft, or FARA, a Future Tactical UAS and ALE.

“The plan to acquire ALE is through an incremental approach that allows rapid prototyping and fielding of technology to field available capabilities while continuing [science and technology] efforts to mature and transition emerging technologies to fully realize required capabilities,” according to the Army’s fiscal 2023 budget. “This is accomplished through multiple prototype development activities for the air vehicle, payloads, and mission system architecture through experiments, simulations, and demonstrations conducted in parallel and/or sequential timelines.”

The Army is aiming to develop multiple ALE prototypes to be able to more rapidly move capability into the operational force, the documents note, and future increments will upgrade mission systems, payloads and interface to extend the range of ALE for missions in support of Long-Range Precision Fires, meaning ALEs will help enable targeting for weapons systems such as the Extended-Range Cannon Artillery, or ERCA, beyond line-of-sight.

The Army has evaluated multiple payloads on large ALEs including a synthetic aperture radar, electronic warfare capability and communications systems at various experimentation efforts over the past several years.

Air-launched tech was tinkered with during Project Convergence 21, a large-scale networking experiment put on by the Army, and at the Edge 21 exercise, where sensors were used to collect and distribute real-time information.

In 2020, the service awarded 10 small contracts worth a total of $29.75 million to mature technologies in the realm of ALE as it works toward designing complex advanced teaming plans for what it anticipates will be needed as part of the aerial tier of the force in 2030 against high-end adversaries.

Raytheon, Alliant TechSystems Operations of Northridge, California, and Area-I of Marietta, Georgia, were awarded contracts to develop air vehicles while others like L3Technologies, Rockwell Collins and Aurora Flight Sciences Corporation were awarded contracts to develop mission systems.

Payloads development contracts went to Raytheon, Leonardo Electronics US Inc., Technology Service Corporation of Huntsville, Alabama, and Alliant.

The efforts were all meant to feed into the Army’s decision-making process as it develops ALE concepts and requirements.

In August, PEO IEW&S boss Mark Kitz said “some tech maturity investments” are expected in 2023. Coordination on ALEs between electronic warfare and aviation camps is in the early stages.

The Gray Eagle has also launched ALEs from other developers such as one built by L3Harris at the Army’s Edge event at Dugway in 2021. The system that flew at the event is capable of flying at more than 200 knots and has a range of more than 300 kilometers. The system had flown just one other time at Yuma, Arizona, in February.

The Army has also heavily tested and evaluated Area-I’s ALTIUS, the Air-Launched Tube-Integrated Unmanned System, over the course of nearly five years, first launching it from a UH-60 Black Hawk from a high altitude in August 2018.

Anduril bought Area-I in April 2021.

At Edge 21, the Army deployed ALTIUS from a C-12 transport aircraft at 18,000 feet and fired them from pneumatic tubes on an all-terrain vehicle on the move.

The Army intends to continue to develop its requirements and strategy for ALE and, according to budget documents, is aiming to release a request for proposals for ALE capability in the final quarter of FY24 and will go into engineering and manufacturing development in the third quarter of FY25.

**30 . Date: 28-02-2023Contract - US Army chooses 5 companies to compete for Army’s future tactical UASURL: https://www.defensenews.com/land/2023/02/28/northrop-4-rivals-to-compete-on-armys-future-tactical-uas/**

WASHINGTON — The U.S. Army said it selected five companies to build prototypes in a competition to ultimately provide the service with a Future Tactical Unmanned Aircraft System.

Aerovironment, Griffon Aerospace, Northrop Grumman, Sierra Nevada Corp. and Textron Systems were each awarded contracts between $1 million and $25 million to participate in five development phases and four option periods over the next three years, according to a Feb. 28 Army statement.

The Army began considering requirements for a replacement for its Textron-made Shadow drone in 2018 and by 2019 had narrowed the pool of competitors to a Martin UAV-Northrop Grumman team, Textron Systems, L3Harris Technologies and Arcturus UAV. Aerovironment purchased Arcturus in 2021. Shield AI bought Martin UAV in the same year.

The service evaluated the four drone offerings over a year with operational units, culminating in a spring 2021 rodeo at Fort Benning, Georgia. The Army awarded Aerovironment an $8 million contract in August 2022 to provide the Jump 20 UAS as an interim FTUAS capability that will go to a single brigade.

The service reopened competition in October 2021 with a request for white papers, which resulted in a bigger pool of bidders, Maj. Gen. Rob Barrie, the Army’s program executive officer for aviation, told Defense News in an interview last fall.

The new cast of bidders contain all of the old ones, except for L3Harris. Sierra Nevada and Madison, Alabama-based Griffon Aerospace are newcomers; neither participated in the FTUAS Increment 1 competition. Boeing’s Insitu also told Defense News it had submitted a bid for the second increment of the competition last fall.

The Increment 2 effort will include a series of design reviews through the base period of the contract and two option periods, according to the Army. The remaining competitors will demonstrate capabilities in actual flight demonstrations and will go through third-party verification of modular open system architectures during the third option period of the contract.

If competitors pass through the gauntlet into the fourth option period, each team will provide air vehicles, mission systems packages, payloads and ground controllers among other tools and manuals in order to go through qualification testing and operational assessments, the Army stated.

“These systems will undergo numerous evaluation activities such as environmental testing, electromagnetic environmental effects testing, MOSA verification, and flight qualification testing” conducted at both company and government test facilities, the Army said in its statement.

The Army primarily wants its FTUAS to be a vertical take-off and landing aircraft, in order to be runway independent. Additionally, the service wants the system to have improved maneuverability and the capability to control the UAS on the move. Other attributes include a reduced transportation and logistics footprint and a quieter system than is offered today to avoid enemy detection.

The FTUAS should “improve the brigade combat team’s ability to conduct reconnaissance and surveillance operations that collect, develop, and report actionable intelligence information about the enemy in degraded Global Positioning System environments,” the statement adds.

While the Army did not detail its timeline for the contract and when it will exercise options as part of that in its announcement, according to fiscal 2023 Army budget documents, the service plans to wrap up its competitive prototyping effort in the first quarter of FY25.

The Army is then slated to make a rapid fielding decision in the second quarter of FY25 and to hold an operation evaluation in the third quarter of FY25. The system is planned to then enter full-rate production in the second quarter of FY26.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**31 . Date: 19-01-2024Market - Private-equity firm acquires aviation firm Kaman for $1.8 billionURL: https://www.defensenews.com/land/2024/01/19/private-equity-firm-acquires-aviation-firm-kaman-for-18-billion/**

WASHINGTON — Private-equity firm Arcline Investment Management will acquire aviation technology company Kaman Corp. in a roughly $1.8 billion all-cash deal, according to a Jan. 19 announcement.

Kaman will become a privately held company when the transaction is final, it notes.

“Over the last several quarters, we have made significant progress executing our strategy by transforming our portfolio, through investing in innovation, pivoting to new growth technologies, and optimizing the Company’s cost structure,” Ian Walsh, Kaman’s chief executive, said in the company announcement. “[W]e look forward to benefiting from increased resources, expertise and flexibility as a private company post-closing.”

Under the agreement, Kaman shareholders will receive $46 per share in cash, the company announcement said. This price is roughly double Kaman’s closing share price on Jan. 18.

The Bloomfield, Connecticut-based Kaman, founded in 1945 by aviator Charles Kaman, is known for its heavy-lift K-MAX manned helicopter, which saw operations in an unmanned mode in Afghanistan in 2011.

The company spent nine months developing its KARGO unmanned aerial system to deliver a medium-lift logistics capability. It unveiled KARGO, a quadcopter meant to resupply small units of Marines scattered around island chains as part of the Corps’ expeditionary advanced base operations concept, in 2021.

Kaman also manufactures aircraft components and aerostructures for helicopters, fixed-wing and unmanned aircraft and has performed subcontract work to restore, modify and support the SH-2G Seasprite maritime helicopters.

“Kaman has long been a trusted solutions provider of engineered components and subsystems of mission-critical markets and we believe the Company is in a strong position to grow and benefit from attractive tailwinds,” Arcline said in the statement. “We look forward to working closely with Ian and the rest of the talented Kaman team to drive further growth through accelerated investments in both new product development and strategic acquisitions.”

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**32 . Date: 28-08-2024Loitering Munition - Mini - Contract - Aerovironment wins nearly $1B to supply Switchblade munitions to ArmyURL: https://www.defensenews.com/land/2024/08/28/aerovironment-wins-nearly-1b-to-supply-switchblade-munitions-to-army/**

The U.S. Army has awarded Aerovironment a contract worth up to $990 million to provide Switchblade loitering munitions for infantry battalions, according to a Pentagon announcement posted Tuesday evening.

The Defense Department announced the contract to supply “an organic, stand-off capability to dismounted infantry formations capable of destroying tanks, light armored vehicles, hardened targets, defilade and personnel targets.”

Funding will be determined with each order and the Pentagon estimates the work will be completed in five years.

Aerovironment said in a statement Wednesday it expects to begin delivering systems to the Army “in months.”

The contract fulfills the service’s directed requirement for loitering munitions for soldiers in infantry battalions, the company said.

Switchblades are tube-launched munitions with small wings that pop out like a switchblade knife when ejected and can be flown like drones. They are designed to hit targets and detonate.

The Army has used the Switchblade for more than a decade, but as the systems have been sent to Ukraine and used with great success by the Ukrainian Armed Forces, the service has recognized its broader utility within its own force.

The United Kingdom is the only other current Switchblade operator, but France, Lithuania and Australia have all signed on to buy the systems since war broke out in Ukraine.

U.S. Defense officials revealed earlier this year that the Switchblade 600 would be one of the systems selected for the Pentagon’s Replicator program, which is aimed at speeding up the purchase and delivery of drones to the services.

The Pentagon wants the services, through Replicator, to field thousands of drones by August 2025 while learning how to run acquisition sprints to get weapons quickly when an urgent demand must be met.

Aerovironment won a previous contract to fulfill the Army’s loitering unmanned systems directed requirement in December and is delivering systems to the Army under the contract.

“AV is proud to have been selected to provide Switchblade for this critical and urgent Army requirement,” Brett Hush, AV’s senior vice president and general manager of loitering munition systems, said in the statement. “This latest contract underscores the unmatched maturity and effectiveness of our system, as well as AV’s strategic positioning to rapidly produce and deliver these cutting-edge solutions to operators in the field.”

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**33 . Date: 12-09-2024ISR / ISTAR - Mini - Contract - Army picks two companies to get small drones to brigade combat teamsURL: https://www.defensenews.com/land/2024/09/12/army-picks-two-companies-to-get-small-drones-to-brigade-combat-teams/**

The U.S. Army has picked Anduril Industries and Performance Drone Works to provide Small Uncrewed Aircraft Systems, or SUAS, to Army units as part of an effort to buy capability fast and get it into soldiers’ hands as the service races to modernize its force.

Army Chief of Staff Gen. Randy George has called the effort “transformation in contact,” where the service buys available commercial-off-the-shelf capability and then battle tests it with soldiers, instead of spending decades developing something before fielding it only to discover it is outdated by the time it gets to units.

“Transforming in contact is the way our Army can adapt its formations and get new technology in the hands of soldiers to experiment, innovate, learn, and change at the pace required,” George said in a statement Thursday. “The Company Level Small UAS Directed Requirement effort is a great example of how we are achieving this.”

The program “is another example of the Army’s ability to rapidly move from an idea to a requirement, to a competition, to testing, to contract awards for production,” the Army’s acquisition chief, Doug Bush, added. “This shows the acquisition system can move at the pace needed to support the Army, especially in rapidly emerging technology areas like small uncrewed aircraft systems.”

Anduril and Performance Drone Works will provide the first tranche of systems that will meet the company-level SUAS requirement in a deal valued at $14.42 million. The service approved the requirement in June 2023.

Performance Drone Works’ C-100 UAS and Anduril’s Ghost X will give brigade maneuver companies the ability to conduct reconnaissance, surveillance and target acquisition missions. The drones will be reconfigurable with modular payloads and attritable.

The Ghost X drone was spotted earlier this year as part of the Army’s human-machine integration evaluation event at Fort Irwin, California, where it served as the preliminary eyes of an infantry company concealed by the surrounding mountains readying to reclaim a village held by the enemy as part of a live-fire exercise.

The Army is prioritizing the acquisition of small, adaptable and expendable drones as it continues to learn from drone use in the Ukraine and other ongoing wars.

The service was able to move quickly in selecting drones for the first tranche because both platforms are already on the Defense Innovation Unit’s Blue UAS list of technology approved for Defense Department use, the statement notes.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**34 . Date: 16-10-2024Loitering Munition - Mini - General - Army speeds up development of multipurpose ‘launched effects’URL: https://www.defensenews.com/land/2024/10/16/army-speeds-up-development-of-multipurpose-launched-effects/**

With funds freed up from the U.S. Army’s aviation rebalance earlier this year, the service will move more quickly on Long-Range Launched Effects development and procurement, according to the Army’s program executive officer for aviation.

Launched Effects, or LE, is the service’s term of art for an envisioned unmanned segment among its aerial platforms, capable of delivering a wide range of capabilities such as targeting, reconnaissance, surveillance, network extension or kinetic strike. Launched Effects can be deployed from both air and ground vehicles.

The effort represents a new direction in the Army’s aviation portfolio, which prioritizes drones and the more loosely defined category of LE platforms as the tip of the spear in enemy contact.

“We were able to accelerate the long-range efforts by about a year,” Brig. Gen. David Phillips told Defense News in an interview before the Association of the U.S. Army’s annual conference.

This means the Army will likely put out a request for proposals for what is considered more of a Corps-level asset in the third quarter of fiscal 2026. The service was originally looking at focusing on small and medium launched effects first and had yet to secure funding for the long-range version.

At the same time, the Army is making sure it is collaborating with the joint force to ensure it is not duplicating efforts.

“We have been paying close attention to the maturity of longer-range capability,” Phillips said.

The Army also continues to mature its medium-range capability which is in a prototyping effort well underway using Anduril Industries’ Altius 700 aircraft. Collins Aerospace, a Raytheon Technologies company, is the mission system provider, and Aurora Flight Sciences is the system integrator. Technology Service Corp. and Northrop Grumman Information Systems are providing modular payloads.

“We completed some additional flight testing off of an MH-60 Black Hawk helicopter at Dugway Proving Ground, Utah, last month and we’re looking at a way to deliver that capability faster,” Phillips said.

The medium-range LE will also be developed in conjunction with Program Executive Office Missiles & Space to fill its requirement for a helicopter-fired Long-Range Precision Munition.

The service was debating whether it made sense to pursue a separate LRPM program through PEO M&S or if the capability essentially could be classified as an LE and was therefore a redundant effort.

The Army’s ruling is that “it is a Launched Effects Medium Range. It’s captured in that requirement and that’s [how] we’re going to go about the acquisition process,” Lt. Gen. Karl Gingrich, who overseas the programs and resources division of the Army staff at the Pentagon, told Defense News.

As part of the requirement, the Army is looking at ways to accelerate the lethal version of the medium-range LE to meet the service’s need for an air-launched precision munition.

“We’re being more efficient and effective that way,” Phillips said.

The Army has already issued a request for white papers for a short-range LE.

“We’re squarely in the evaluation space,” Phillips said.

The service plans to launch an effort late this year or early next year that will lead to a user demonstration aimed at getting feedback from the force.

The method is similar to what the service has done with other small, unmanned aircraft systems efforts. “That may sound familiar, that model, but it’s working for us in the small UAS space,” Phillips said.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**35 . Date: 30-10-2024Solar ISR / ISTAR - Mini - Contract - US Army buys long-flying solar drones to watch over Pacific unitsURL: https://www.defensenews.com/land/2024/10/30/us-army-buys-long-flying-solar-drones-to-watch-over-pacific-units/**

The Army’s 1st Multi-Domain Task Force has used a small number of Kraus Hamdani Aerospace K1000 Ultra Long-Endurance, solar-powered unmanned aircraft system across the Pacific theater in places like the Philippines and Guam in recent years. Now the Pentagon has ordered $20 million worth of the systems for the unit as well as special operators.

The Pentagon made the award through the Accelerate the Procurement and Fielding of Innovative Technologies (APFIT) program, one of the largest awards since the fund’s 2022 creation.

The K1000ULE is designed to “mimic nature by utilizing onboard artificial intelligence to silently glide through the air like a bird and generate clean onboard energy,” an Oct. 30 company statement reads. “The K1000ULE is the longest-endurance, fully electric, zero-emissions autonomous aircraft in its size and weight category.”

The K1000 will provide Aerial Tier Network Extension for communications, Electronic Warfare and Intelligence, Surveillance and Reconnaissance capabilities, the statement lists.

“Over time, we have matured our technology in line with the requirements of the U.S. Army and continue to align the K1000ULE to meet the needs of the warfighter in a dynamically changing environment,” Fatema Hamdani, Kraus Hamdani Aerospace CEO and co-founder, said.

Defense News witnessed the 1st MDTF’s Extended Range Sensing and Effects Company use the K1000 on a remote island airfield in the Philippines during an annual bilateral drill called Balikatan this spring. The aircraft spent its days flying above the South China Sea collecting data for the company.

The Army has also been using the aircraft in a variety of other experiments over the past several years like the Edge exercise and Project Convergence.

The lightweight K1000, which features solar panels on its wings, previously broke the endurance record for class 2 unmanned aerial systems by flying for 76 hours. That category currently applies to drones weighing between 21 and 55 lbs.

The aircraft does not have landing gear and relies on 3D-printed skids that can be swapped out after they wear down.

The K1000 is difficult to detect, with most sensors and radars mistaking it for a bird, according to Kraus engineers on site in the Philippines.

The aircraft fits inside a standard case, and it takes users roughly 10 minutes to unload, assemble and launch. The drone takes off from a moving vehicle as it catches the wind. In the Philippines, it took off from the roof of a black SUV.

The Army is retiring its Shadow UAS program, and Kraus believes the K1000 is a good candidate to fill both small and large UAS capabilities with a logistics footprint of smaller drones, the statement notes.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**36 . Date: 10-01-2025N/A - Loitering Munition - Requirement - US Army wants spy drones to launch from high-altitude mothershipsURL: https://www.defensenews.com/land/2025/01/10/us-army-wants-spy-drones-to-launch-from-high-altitude-motherships/**

The Army is scouring industry for unmanned aircraft systems to launch from medium- or high-altitude platforms that would perform tasks like intelligence, surveillance and reconnaissance, according to a request for information posted to the federal business opportunities portal Sam.gov.

The Special Electronic Mission Aircraft Product Directorate, part of the Army’s Fixed-Wing aircraft Project Office, plans to demonstrate operational capability in the fiscal 2026 timeframe, the notice states.

The “Launched Effects” systems, or LE, would be integrated onto “the hardpoints” of an executive jet category aircraft, such as a Bombardier G6500, which would operate above 41,000 feet mean sea level and would reach true airspeed of above 400 knots for more than seven hours. This means the LE and its sensors would need to survive in an air temperature 65 degrees below zero for lengthy durations.

Launched Effects is the service’s term of art for an envisioned unmanned segment among its aerial platforms, capable of delivering a wide range of capabilities such as targeting, reconnaissance, surveillance, network extension or kinetic strike. Launched Effects can be deployed from both air and ground vehicles.

The LEs would be carried on the aircraft from wing pylons and should be able to deploy from the aircraft when flying in configuration, according to the RFI.

The overall launched effect effort represents a new direction in the Army’s aviation portfolio, which prioritizes drones and the more loosely defined category of LE platforms as the tip of the spear in enemy contact.

The Army is leaning hard into developing and deploying launched effects on the battlefield and is working to speed up its plan to procure a variety of LEs capable of flying at different ranges and speeds. The service canceled its manned Future Attack Reconnaissance Aircraft a year ago and has used some of that freed-up funding to pursue launched effects more at a quicker clip.

In 2020, the service selected 10 companies to provide mature medium-range launched effects technologies. From those, the Army then chose five companies earlier this year to come together to build a prototype, with each company bringing a different element to the system.

Anduril Industries is providing the air vehicle. Anduril purchased Area-I, the original developer of the vehicle — the Altius 700 — in 2021. The Altius 700 has been in use by the Army to evaluate launched effects for over five years.

Collins Aerospace, a Raytheon Technologies company, is the mission system provider, and Aurora Flight Sciences is the system integrator. Technology Service Corp. and Northrop Grumman Information Systems are providing modular payloads.

The medium-range LE will also be developed in conjunction with Program Executive Office Missiles and Space to fill its requirement for a helicopter-fired Long-Range Precision Munition.

The Army is also working on a short-range LE and a long-range version with plans to begin prototyping for the short-range version early in fiscal 2025 that will continue through fiscal 2029. The service plans to put out a request for proposals for the long-range system in the third quarter of fiscal 2026, a year ahead of its original schedule.

Additionally, the service has expressed interest in experimenting with launched effects for even higher altitude platforms like balloons or long-endurance, fixed-wing, solar-powered platforms capable of operating in the stratosphere.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**37 . Date: 29-01-2025Fixed Wing - Loitering Munition - Mini - General - PlatformCummings Aerospace releases its Hellhound for Army competitionURL: https://www.defensenews.com/land/2025/01/29/cummings-aerospace-releases-its-hellhound-for-army-competition/**

Huntsville, Alabama-based Cummings Aerospace is readying its Hellhound for submission to the U.S. Army’s loitering munition competition set to kick off later this year, having recently wrapped up flight tests of its turbo-jet powered, 3D-printed kamikaze drone.

The company took its S3 version of its man-portable loitering munition out to the Pendleton Unmanned Aircraft Systems test range in Oregon this month and was able to verify and validate the system’s performance against the Army’s preliminary Low Altitude Stalking and Striking Ordnance, or LASSO, program requirements, CEO Sheila Cummings told Defense News in a Tuesday interview.

“We were able to successfully demonstrate that we could meet the range requirements for LASSO and then ultimately trying to make sure that we’re exercising the max flight speed and so we achieved that,” Cummings said. “We were also able to successfully integrate an inert warhead and conduct flights with that as well as test other subsystem functionality that are critical to overall system verification and validation.”

Hellhound is unique among loitering munitions because it uses turbojet propulsion which provides increased speed, according to Cummings.

“It also gives you the ability to throttle the engine so it gives you a lot more flexibility in your mission in order to maximize either range or flight time,” Cummings said.

In the tests, the loitering munition, weighing in at less than 25 pounds, flew faster than 350 miles per hour at full throttle while passing distances of 20 kilometers using just 50% of its fuel, according to the company. It performed in wind, snow and very low temperatures.

Hellhound is Cummings Aerospace’s first major end-to-end weapon system it has developed. Cummings is a Native American woman-owned small business founded in 2009 as an aerospace engineering outfit with expertise in design, development, production and sustainment of capabilities like missiles, radars and command-and-control system technologies.

Loitering munitions are proving their might on the battlefield, proliferating in places like Ukraine as troops there continue to fight off the Russian invasion, and the Army is developing a structured way to continue to procure a stream of highly capable loitering munitions in its inventory. In particular, the Army plans to enable its Infantry Brigade Combat Teams with the capability to provide the same lethality in this space as Armored BCTs.

In early January, the Army posted a notice on the federal business opportunities website Sam.gov stating it had released controlled but unclassified information outlining the objectives of the LASSO program.

While the objectives are not public, the notice emphasized the need for industry offerings to be compliant with the service’s modular and open systems architecture.

“The compliance with modular open systems architecture standards is another key element of our design,” Cummings said. “That’s actually been a key enabler for us to rapidly conduct design iterations throughout its development, so we’re [using] very rapid design cycles using the 3D printing technology, we can produce new vehicles very quickly and take them out for test[ing].”

Cummings Aerospace plans to submit its offering to the Army’s competition to procure loitering munitions when the service is expected to release a formal request for proposals in the May or June timeframe.

How quickly the Army plans to move forward with the program and how many vendors it might select for demonstration or evaluation has yet to be announced publicly, but the pool would likely include loitering munitions makers like Aerovironment — the manufacturer of the Switchblade deployed in Ukraine — and Anduril, which recently went under contract with the Marine Corps to supply it with its Bolt loitering munition.

Cummings also has its eye on other programs where Hellhound might fit to include the Army’s short-range Launched Effects program. The company is working on concepts where the launch canister can be integrated onto a ground vehicle or from an air platform, Cummings said.

“We’re poised with an incredible solution,” she said, “and the corporate facilities infrastructure to support the follow-on production program.”

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**38 . Date: 10-03-2025Hybrid Rotary / Fixed Wing - Research - Small - General - PlatformSikorsky proves out ‘rotor blown wing’ droneURL: https://www.defensenews.com/land/2025/03/10/sikorsky-proves-out-rotor-blown-wing-drone/**

Through extensive flight tests earlier this year, Lockheed Martin’s Sikorsky has proven the capability of a “rotor blown wing” unmanned aircraft system that can fly like a helicopter or an airplane, the company announced Monday.

The drone is a 115-pound, battery-powered twin prop-rotor aircraft that the company said can be scaled larger, “requiring hybrid-electric propulsion.”

The company designed the vertical take-off and landing aircraft to “fly faster and farther than traditional helicopters,” Rich Benton, Sikorsky’s vice president and general manager, said in a statement.

The drone development took place over the course of a year with the company’s rapid prototyping group – Sikorsky Innovations — moving through preliminary design, simulation and tethered and untethered flight.

In January 2025, Sikorsky Innovations successfully completed more than 40 take-offs and landings with the 10.3-ft composite wingspan aircraft, according to the statement. Sikorsky said the aircraft also performed 30 transitions between helicopter and airplane modes, calling it the “most complex maneuver demanded of the design.”

The drone also reached a top cruise speed of 86 knots.

“Our rotor blown wing has demonstrated the control power and unique handling qualities necessary to transition repeatedly and predictably from a hover to high-speed wing-borne cruise flight, and back again,” Igor Cherepinsky, Sikorsky Innovations director, said. “New control laws were required for this transition maneuver to work seamlessly and efficiently. The data indicates we can operate from pitching ships decks and unprepared ground when scaled to much larger sizes.”

The company envisions future applications for the aircraft in search and rescue, firefighting monitoring, humanitarian response efforts and pipeline surveillance, the statement notes.

Larger versions could perform long-range intelligence, surveillance and reconnaissance and manned-unmanned teaming.

Sikorsky will incorporate its MATRIX flight autonomy system in all variants of the drone, according the statement.

The company is also developing a 1.2-megawatt hybrid-electric tilt wing demonstrator called HEX that is large enough to carry passengers or cargo on longer-haul flights.

Sikorsky plans to demonstrate HEX’s hover capability in 2027.

Sikorsky’s technological advancements over the last year come on the heels of the U.S. Army’s abrupt cancellation of its Future Attack Reconnaissance Aircraft, or FARA. The company was competing for the program with a coaxial rotor blade aircraft called Raider X.

The company had, over a year prior to the cancellation, lost the Army’s other future aircraft competition to Bell. Sikorsky and its Boeing teammate had submitted another larger version of Raider X called Defiant.

Since then, Sikorsky hasn’t scrapped the promise of its X2 coaxial helicopter technology and continues to pitch it to other potential customers. The company is pursuing a next-generation helicopter for Italy and the NATO Next-Generation Rotorcraft Capability, among others. Lockheed, Airbus and Leonardo were awarded contracts in July 2024 to help NATO develop a new helicopter.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**39 . Date: 16-06-2023Requirement - Congressman wants faster drone testing, fielding to fill inventory gapURL: https://www.defensenews.com/naval/2023/06/16/congressman-wants-faster-drone-testing-fielding-to-fill-inventory-gap/**

WASHINGTON — One influential lawmaker is encouraging the U.S. military to accept more risk in pursuing unmanned systems, with the hope these drones can fill capability gaps left behind when old systems retire.

Federal spending caps for fiscal 2024 and fiscal 2025 forced the House Armed Services Committee to agree to retire aging ships and aircraft they may have otherwise fought to keep a little while longer, Rep Rob Wittman told Defense News.

But, he warned, “there’s probably going to be some gap” between when old platforms like the Air Force’s A-10s and the Navy’s cruisers retire, and when the services can fully rebuild their inventory.

“I think it really calls to the forefront the issue of using other smaller, less expensive, attritable platforms as the gap-filler,” Wittman, R-Va., said in a June 14 interview in his Capitol Hill office.

“Those things can be very, very capable, and these are platforms that are already out there that could go to production tomorrow. So unmanned surface vessels, unmanned underwater vessels — the Navy really has to push the gas pedal on this and say: ‘OK, how do we get these platforms integrated?’ ” added Wittman, who chairs the committee’s tactical air and land forces panel and also sits on its sea power and projection forces subcommittee.

Though Congress has questioned some of the Navy’s experimentation and acquisition efforts following expensive mistakes with the Littoral Combat Ship program, among others, Wittman said now is an appropriate time to take more risk in pursuing unmanned surface and subsurface vessels at a quicker pace.

The Navy has largely eyed programs of record based on the size of the platform: it’s aiming to award a contract for the Large Unmanned Surface Vessel’s design and construction in FY25, and a Medium USV would likely follow a few years behind. The Orca Extra Large Unmanned Undersea Vehicle program is running several years behind in the construction and testing of five prototype vehicles, but the Navy expects to see a version operating overseas by FY26.

Wittman said the Navy could potentially move faster if it focused on mission rather than size, which is more in line with the experimentation happening in the Middle East under Task Force 59.

“They need to go out there and say, ‘Listen, we believe this platform will do a great job as an addition to a carrier strike group, or as an addition to an [amphibious ready group], or destroyer squadron, or Virginia-class [attack submarine], or Ohio-class [ballistic missile submarine],’ and then buy a relative number that you can test very vigorously” for 12-18 months, and then either modify them or move into serial production, he said.

“The good news is, these things are at a price point where you can afford to take some risks. You can afford to have platforms that you look at and go: ‘Gosh, looked like it was going to work out, but it just didn’t,’ ” he added.

He’d also prefer the Navy have unmanned surface vehicles that can only perform surveillance missions, others solely meant for electronic warfare and more that only shoot weapons, he said, versus spent too much money and too much time trying to pursue a platform that can do it all.

“I just want the Navy to look at those things, and I think they can do that speed of relevance. That’s going to be the gap-filler because our exquisite platforms — aircraft carriers, our surface ships, our submarines — all great platforms, but it takes years and years and years to get them in the inventory. So even with the best of intentions, we’re not going to have that capability” in time for when China might attack Taiwan.

The Tactical Air and Land Forces Subcommittee included language in its section of the FY24 National Defense Authorization Act setting cost limits for collaborative combat aircraft plans, which would see a drone serve as a wingman for crewed jets, such as the future Next Generation Air Dominance fighter.

Wittman said this is a preemptive measure, and not because he has concerns about collaborative combat aircraft. In fact, he explained, he is “very comfortable” with what he’s seen, including several vendors with many options that come in at a good cost point.

He also said he’s optimistic about the way the competition is looking at this early stage, but wants to avoid requirements and therefore cost ballooning.

“We’ve seen that too many times with programs where we’re chasing requirements, we’re chasing technology, and you never catch it. And then all of the sudden we see platforms that started out as [an] X-million-dollar platform [that] are now three or four times the cost,” he noted.

Air Force Secretary Frank Kendall wants the collaborative combat aircraft, or CCA, to be cheap enough that, in some cases, the service can afford to lose some in combat. A drone wingman that could be sacrificed might not need as many protective subsystems, which could help keep down costs, Kendall said at the September 2022 Defense News conference.

The service considers CCAs a way to deliver combat capability at a lower price point and to move away from recent spiraling costs of fighters and bombers.

For his part, Wittman considers these drones important in light of the retirements of legacy Air Force planes and a dip in inventory in the short term. He connected CCA efforts to another program, the F-35 Joint Strike Fighter, for which the NDAA proposes creating a formal “major subprogram” to focus on the continuous development and delivery of new F-35 capabilities, and designating six aircraft as permanent test assets for this work.

Wittman said the focus of these efforts is to address ongoing software issues as well as engine power and cooling challenges today, and prepare to quickly address challenges in the coming decades.

“Along with partners, there’s going to be 3,300 of these aircraft out there. What we don’t want is all of a sudden for somebody to come back in 10 years and go: ‘Oh, sorry, the whole fleet’s antiquated,’ ” he said. “So let’s do some rigorous testing and evaluation, figure out how do we make sure this platform gets maximum utility. And I think there are a lot of ways that they can do that — and especially if you combine this platform with combat collaborative aircraft, and you combine it with E-7s, which has to happen — all of a sudden this aircraft is a pretty significant gap-filler until you get to endgame.”

“But you don’t have its full potential unless you rigorously test what the challenges are with the aircraft. And that’s on every element of the platform, from the avionics to the software to the engine systems to the power and cooling,” he added, noting the designation of the major subprogram would signal the seriousness of this effort to the Pentagon and congressional appropriators.

Even with budget caps in place, Wittman said the Tactical Air and Land Forces Subcommittee is trying to make these adjustments.

“We are making smart investments in the FY24 NDAA by reprioritizing and reallocating funding requested for Air Force and Navy NGAD programs,” he said, noting his subcommittee is making investments in CCA refueling technology maturation and risk reduction within the Air Force’s research and development budget, in the Adaptive Engine Transition Program that would replace the current F-35 engine, and in F-15 procurement and E-7 advance procurement.

Megan Eckstein is the naval warfare reporter at Defense News. She has covered military news since 2009, with a focus on U.S. Navy and Marine Corps operations, acquisition programs and budgets. She has reported from four geographic fleets and is happiest when she’s filing stories from a ship. Megan is a University of Maryland alumna.

**40 . Date: 08-05-2024Loitering Munition - Requirement - SEALs want loitering munitions aboard insert/extract patrol boatsURL: https://www.defensenews.com/naval/2024/05/08/seals-want-loitering-munitions-aboard-insertextract-patrol-boats/**

TAMPA, Fla. — Special operators are testing ways to add loitering munitions and other payloads to the medium-size, 60-foot watercraft used to insert and extract SEAL teams on special missions.

Over the past four years, Special Operations Command troops have been working through ways to add a launcher kit to the Combatant Craft Medium, or CCM, a 60-foot-long boat with a top speed of 52 knots that carries a crew of four and has space for 19 more passengers and a total load of 10,000 pounds.

The project aims to give boat operators an onboard “standoff, loitering, man-in-the-loop weapons system” that can target “individuals, groups, vehicles and small, oceangoing craft,” according to program materials.

But, the launcher can also carry other “effects” such as surveillance drones, electromagnetic warfare pods or sensor packages for a variety of missions, according to Navy Cmdr. Marty Burns, program manager for maritime surface systems.

An illustration of the launcher at SOF Week showed a multi-pod system with eight or more pods available to house munitions or other payloads.

Final testing and a live fire of the launcher kit are planned for late fiscal 2024 or early fiscal 2025, officials said during the Special Operations Forces Week conference, an annual gathering of the special operations community here.

When it comes to CCM payloads, a key concern is reducing the heat signature of any launcher added to the platform, to help it avoid adversary detection, Wyrick said.

The command has 31 combatant craft medium boats in its inventory.

Once testing concludes and the government-owned design for the kit is approved for installation, the command’s 31 CCMs will take turns going offline to install the kits as the rest of the fleet continues operations, Burns said.

The CCM patrol boat, made by shipbuilder Vigor Industrial, was first commissioned in 2015 to replace the rigid hull inflatable boat.

Navy Capt. Jared Wyrick, SOCOM program executive officer for maritime, said Tuesday that the command is also working on building a boat replacement, called the CCM Mk2.

Todd South has written about crime, courts, government and the military for multiple publications since 2004 and was named a 2014 Pulitzer finalist for a co-written project on witness intimidation. Todd is a Marine veteran of the Iraq War.

**41 . Date: 16-05-2024Cargo - MALE - General - PlatformAirbus developing an unmanned Lakota helo for Marine resupply missionURL: https://www.defensenews.com/naval/2024/05/16/airbus-developing-an-unmanned-lakota-helo-for-marine-resupply-mission/**

Airbus U.S. Space and Defense is pitching a version of its UH-72 Lakota helicopter as a potential unmanned resupply aircraft for the Marine Corps and will continue to develop it under a Marine Corps contract.

Airbus announced this week Naval Air Systems Command awarded it an other transactional authority agreement to develop a prototype for the U.S. Marine Corps’ Aerial Logistics Connector program.

In April, Carl Forsling, Airbus’ senior manager of business development and strategy for Marine Corps programs, told Defense News the company had already been developing its UH-72 Unmanned Logistics Connector using internal company funds.

Forsling said the Marines are looking at light and medium unmanned aerial systems to resupply squads and other small units operating away from ships and logistics hubs. This effort aims to create a large platform that can resupply larger units, such as the Marine littoral regiments the Corps is establishing in the Pacific to conduct expeditionary advanced base operations.

He said the UH-72 Unmanned Logistics Connector would leverage the Lakota platform — its mature airframe, its low flight hour costs, its well-understood maintenance needs — but would be built on the production line to be autonomous.

The biggest physical change to the aircraft would be a fly-by-wire capability, so the helo’s hydraulic actuators are commanded by an electronic signal rather than a pilot physically moving a control stick.

But Forsling said there are two challenges the company will tackle under this Marine Corps contract: adding autonomy such that the aircraft can make flight decisions on its own, and integrating the system into the larger Marine Corps command-and-control network.

The Marine Corps briefing slides showed at the Modern Day Marine conference note this Aerial Logistics Connector will be the aviation contribution to a larger contested logistics effort. Service leaders signed an acquisition decision memorandum in March to begin this prototyping phase, and the slides show four companies will be awarded contracts to build prototypes.

NAVAIR spokeswoman Megan Wasel told Defense News only one contract, the Airbus agreement, has been awarded to date.

These vendors will demonstrate their prototypes in late summer into early fall of this year, according to the slides.

Forsling told Defense News that basing its offering on a helicopter with a “huge number of flight hours and platform maturity” will help it create a successful prototype.

Megan Eckstein is the naval warfare reporter at Defense News. She has covered military news since 2009, with a focus on U.S. Navy and Marine Corps operations, acquisition programs and budgets. She has reported from four geographic fleets and is happiest when she’s filing stories from a ship. Megan is a University of Maryland alumna.

**42 . Date: 06-05-2023Cargo - Small - Contract - Marine Corps wants $13M for automated war zone air delivery dronesURL: https://www.defensenews.com/news/your-marine-corps/2023/05/05/marine-corps-wants-13m-for-automated-war-zone-air-delivery-drones/**

Amazon may have had the vision, but the Marine Corps is making it reality.

After years of experimenting with airborne delivery drones, the service believes it has a winner.

In its fiscal 2024 budget request, the Marine Corps is asking to buy 41 tactical resupply unmanned aircraft systems, or TRUAS, for a total investment of more than $13 million.

With the service set to take delivery of previous orders of the drones this spring and expecting to declare initial operational capability on the system later this fall, it will be a big year, not only for tactical resupply unmanned aircraft systems, but also for the concept of unmanned aerial resupply.

Built like large quadcopters, the systems are designed to carry payloads of up to 150 pounds over distances of up to nine miles in containers secured underneath. The unit cost of about $325,000 per drone is certainly steep, but Marine officials say it’s substantially more sophisticated than the remote-controlled commercial drones it resembles.

Rather than being manually flown, tactical resupply unmanned aircraft systems are programmed with waypoints that determine itinerary and flight pattern, meaning it requires less hands-on attention from Marine operators than most of the Corps’ quadcopters.

It takes just two Marines to monitor and maintain one in the field, and those Marines can learn everything they need to know about taking care of it in just five training days, according to Master Sgt. Chris Genualdi, an airborne and air delivery specialist with Combat Development and Integration, who discussed the system in an April news release.

The tactical resupply unmanned aircraft systems concept is closely aligned with the Marine Corps’ all-consuming vision for future warfare, which involves small, independent units operating from great distances from austere outposts ― perhaps on islands in the vast Indo-Pacific.

While the system isn’t designed to cross the ocean with supplies, it might be dispatched from a ship to a landing zone in hostile conditions ashore that might preclude a helicopter or V-22 Osprey delivery.

“As system technology advances in future years, [Unmanned Expeditionary Systems] will … include emerging technologies to include autonomous distribution capabilities for elements across the MAGTF and [Marine Littoral Regiments], enabling more diversified distribution and the sustainment of Marine Corps forces across future operating environments,” officials wrote in fiscal 2024 budget justification documents.

Tactical resupply unmanned aircraft systems provide “an organic battlefield logistics capability to distribute critical supplies via an unmanned platform while conducting” expeditionary advanced base operations safely within a weapons engagement zone, “where the risk to manned aircraft would deny manned aviation resupply operations.”

Marine leaders plan to scale the technology as it proves itself, according to the April news release, eventually building larger and higher-capacity platforms according to the same model that might further advance the objectives of the Corps’ expeditionary advanced base operations.

To this end, the service is also planning to launch a new military occupational specialty, or military job, focused on operating resupply drones. That job will be called small unmanned logistics system — air specialist. The timing of its rollout has not been announced.

In April, defense contractor Leidos announced a contract with the Marine Corps to build a larger autonomous drone prototype ― similar to a helicopter with a double stack of rotors ― that would be able to travel up to 100 nautical miles and carry up to 600 pounds.

“The utility of the TRUAS reaches beyond combat,” the recent Marine Corps release states, with its capabilities being highly effective in humanitarian assistance and disaster relief efforts.

“In disaster areas that may not be accessible by conventional means, the TRUAS could be used to transport much needed supplies.”

The Corps contracted for 35 tactical resupply unmanned aircraft systems drones in August 2022 and 30 more in March 2023, according to Marine Corps budget documents, but all are set for delivery in the first half of this year from SURVICE Engineering, out of Aberdeen, Maryland.

The effort to develop the tactical resupply unmanned aircraft systems began in earnest with a Department of the Navy “fly-off” prize challenge launched in 2020 at Yuma Proving Ground, Arizona, to build a rugged and reliable small cargo-carrying drone. SURVICE took the $100,000 first-place prize in that effort.

While tactical resupply unmanned aircraft systems only have been employed in field user evaluations and training and not proven in combat, the Marine Corps has moved relatively quickly to make its delivery-drone requirement a reality.

It’s far from the only entity seeking to capitalize on reliable unmanned aerial logistics. In 2013, online retail giant Amazon made headlines when then-CEO Jeff Bezos announced that it would be delivering packages via aerial drone by 2018.

A decade later, Amazon has launched a very limited regional version of the service, and the company says it’s still working on developing its vision for “Amazon Prime Air.”

Hope Hodge Seck is an award-winning investigative and enterprise reporter covering the U.S. military and national defense. The former managing editor of Military.com, her work has also appeared in the Washington Post, Politico Magazine, USA Today and Popular Mechanics.

**43 . Date: 21-08-2023Armed ISR / ISTAR - MALE - General - PlatformManned Marine helicopter refuels unmanned helo for 1st timeURL: https://www.defensenews.com/news/your-marine-corps/2023/08/21/manned-marine-helicopter-refuels-unmanned-helo-for-1st-time/**

Marines delivered fuel from a traditional crewed helicopter to an uncrewed autonomous helicopter in July for the first time in the history of the Marine Corps or Navy, according to the Corps.

During an exercise at Twentynine Palms, California, a Marine heavy-lift CH-53E Super Stallion provided fuel to an unmanned Navy MQ-8C Fire Scout, as a way to extend the range of the latter aircraft, the Marine Corps said in a Thursday Marine Corps story.

On July 31, the hefty Super Stallion transferred approximately 700 pounds of fuel to the Fire Scout, just under the uncrewed aircraft’s maximum payload, according to the story.

The Super Stallion can afford to hand off that amount of fuel: Its maximum fuel payload is 23,450 pounds. That means the Super Stallion can refuel the Fire Scout multiple times in hard-to-reach areas, keeping the Fire Scout going over longer distances and periods of time, according to the release.

The Fire Scout typically operates from a littoral combat ship, a relatively small Navy vessel designed for operations that take place close to shore, the release said.

But in Service Level Training Exercise 5-23 in the California desert, Marines from Marine Heavy Helicopter Squadron 361 put the unmanned system to the test in a different kind of environment.

“We are in the desert, but the logistical, administrative, and most importantly the tactical lessons learned here are applicable to any clime and place,” Lt. Col. Nathaniel Griggs, the top acquisitions, construction and improvements officer at Twentynine Palms, California, said in the story.

The refueling occurred with both aircraft on the ground, the story said. The Fire Scout came from the Navy’s Helicopter Sea Combat Squadron 21.

In recent years, as it has stared down the potential threat of the technologically sophisticated Chinese military, the Marine Corps has emphasized reconnaissance and counter-reconnaissance, and the role of unmanned aircraft in particular.

The Corps also has contended with what leaders have acknowledged is an outdated, vulnerable logistics system. Fuel and other elements of logistics could come under stress in the more spread-out form of combat for which the service is preparing, new Marine doctrine says.

Irene Loewenson is a staff reporter for Marine Corps Times. She joined Military Times as an editorial fellow in August 2022. She is a graduate of Williams College, where she was the editor-in-chief of the student newspaper.

**44 . Date: 06-10-2023Armed ISR / ISTAR - HALE - General - PlatformWatch: Marine Corps flies its Valkyrie robotic aircraft for the 1st timeURL: https://www.defensenews.com/news/your-marine-corps/2023/10/06/watch-marine-corps-flies-its-valkyrie-robotic-aircraft-for-the-1st-time/**

The Marine Corps completed its first test flight Tuesday of a robotic aircraft that could get downed in battle without taking a big chunk out of the service’s budget.

The service received the first of two XQ-58A Valkyrie drones in March as part of its efforts to develop lower-cost unmanned systems, according to a Marine news release Thursday.

The test flight Tuesday was an early step toward getting the robot aircraft ready to fly in support of Marine Corps missions.

“The aircraft performed as expected,” the Corps said, without providing additional details about the results of the flight.

Video of the flight posted by the Marine Corps on Thursday shows the uncrewed jet, which doesn’t require a runway, take off at Eglin Air Force Base on Florida’s Gulf Coast.

The Valkyrie — which clocks in at approximately $6.5 million, according to the manufacturer — could be a relatively low-cost way for the Marine Corps to build out its inventory of uncrewed aircraft. In contrast, General Atomics’ MQ-9 Reaper drone, designed for surveillance, costs approximately $38 million, according to a Pentagon budget document.

The price tag and lack of crew would make the 30-foot-long Valkyrie “attritable,” in Pentagon lingo, meaning it would be OK with the military if the aircraft were downed in combat after a few missions, according to Air Force informational materials.

The long-range drone is highly autonomous, according to the Marine Corps. In other words, more than being simply uncrewed, the Valkyrie can be flown by artificial intelligence and requires minimal help from a human pilot.

The Valkyrie could fly in a variety of missions that crewed aircraft would otherwise complete, according to the Air Force, and could serve as a wingman to a traditional crewed aircraft.

The Marine Corps is engaged in a wide-ranging overhaul, called Force Design 2030, in an effort to prepare for conflict with a powerful, technologically capable military, especially China’s. That effort involves getting robots and drones into the hands of Marines, and training Marines to operate them.

The test flight Tuesday occurred as part of the Marine Corps’ Penetrating Affordable Autonomous Collaborative Killer – Portfolio program, according to the news release. The Corps is partnering with the Office of the Undersecretary of Defense for Research and Engineering, the Naval Air Systems Command and the Naval Air Warfare Center Aircraft Division on the Valkyrie.

In Norse mythology, a Valkyrie is a supernatural maiden who selects those to be slain in battle and taken to Valhalla, where those slain warriors reside. The manufacturer of the XQ-58A Valkyrie is the U.S. technology company Kratos, which takes its name from the personification of strength and power in Greek mythology.

The test flight Tuesday wasn’t the first overall for the Valkyrie drone. The Air Force, whose research laboratory developed the aircraft in partnership with Kratos, conducted the inaugural test flight in March 2019.

But the Corps’ test flight of the Valkyrie is a way for the service to determine what it requires from the drone, according to the news release.

The Marine Corps’ six planned test flights with the Valkyrie will evaluate aspects of the drone that include its ability to support intelligence, surveillance and reconnaissance missions and the potential for it to serve as a robotic wingman, according to the release.

Irene Loewenson is a staff reporter for Marine Corps Times. She joined Military Times as an editorial fellow in August 2022. She is a graduate of Williams College, where she was the editor-in-chief of the student newspaper.

**45 . Date: 08-07-2024Cargo - Small - Requirement - Navy tests using drones for medical supply deliveries during RIMPACURL: https://www.defensenews.com/news/your-navy/2024/07/08/navy-tests-using-drones-for-medical-supply-deliveries-during-rimpac/**

As the Navy looks to further integrate drones into the manned fleet, the sea service assessed using unmanned aerial systems to deliver critical supplies to the destroyer Curtis Wilbur last month during the massive Rim of the Pacific military exercise.

While these supplies are traditionally delivered to Navy vessels via manned aircraft, such assets are expensive and facing manning shortages — causing delays that drones could remedy, according to Navy officials.

The Curtis Wilbur conducted flight tests using the Skyways V2.6 Unmanned Aerial System and PteroDynamics X-P4 Unmanned Aerial System, launching and recovering six drones between from June 19 to June 24 as part of the Just In Time Delivery logistics effort with the Naval Air Warfare Center Aircraft Division.

“The Navy continues to drive rapid experimentation and implementation of new technologies,” Cmdr. Yilei Liu, commanding officer of the Curtis Wilbur, said in a statement. “While easy to configure and ready to deploy, it is vital to evaluate these technologies in different environmental conditions to define and scope the operating envelopes of these highly capable platforms.”

In 2021, Naval Air Warfare Center Aircraft Division awarded PteroDynamics a contract to deliver three vertical take-off and landing drone prototypes to the Navy to assist delivering repair cargo.

“Embedding autonomous platforms into our already-existing systems will define the nature of combat operations in the future,” Liu said. “Once tested, autonomous systems can provide independent defensive and offensive capabilities in a contested environment. These systems can perform potentially dangerous, high-risk evolutions with maximum efficiency and minimal risk to personnel.”

Exercise Rim of the Pacific, known as RIMPAC, is a biennial exercise held near the Hawaiian Islands and involves nearly 30 nations and more than 25,000 personnel.

The exercise concludes on Aug. 1.

**46 . Date: 24-11-2023Armed ISR / ISTAR - HALE - Pitch - Netherlands wants to join Europe’s OCCAR joint armament projectURL: https://www.defensenews.com/newsletters/unmanned-systems/2023/11/24/netherlands-wants-to-join-europes-occar-joint-armament-project/**

PARIS — The Netherlands wants to join Europe’s Organisation for Joint Armament Co-Operation, as it seeks to be a driver of European defense cooperation and better position its industry, the Dutch Defense Ministry said on Thursday.

Joining the group, known by its French acronym OCCAR, is an important step towards stronger European defense cooperation and to properly position the Dutch defense industry, according to the ministry. Both are “badly needed due to the war in Ukraine and the tightness in the defense market,’’ the ministry said.

OCCAR is a European organization that manages defense-equipment projects, with an operational budget of about €6 billion ($6.5 billion) and a portfolio of 17 projects including the A400M air lifter, the FREMM multi-mission frigate and the Eurodrone. The group was founded in 2001 by France, the U.K., Germany and Italy, with Spain and Belgium joining several years later.

“The Russian war in Ukraine and increasing threats and conflicts globally underscore the importance of a strong European industrial base,’’ the Dutch ministry said.

The government “wants the Netherlands to play a leading role in driving European defense cooperation,” the ministry said.”Membership in OCCAR fits within that ambition.”

The Netherlands has boosted defense spending following Russia’s invasion of Ukraine in February, with the budget for defense rising to €15 billion in 2023 from around €12 billion in 2022, and more than €21 billion budgeted for 2024.

The countries in OCCAR work together to lower costs and increase efficiency in the development and acquisition of new weapon systems, and joining will allow the Netherlands to remain close to key European partners, and accelerate the implementation of equipment projects, the ministry said.

Membership will also allow Dutch defense companies to more easily participate in projects managed by the group, as well as compete for European projects, even if the Netherlands does not participate itself.

Dutch Defence Minister Kajsa Ollongren informed parliament of the intention to join. The intention will be assessed by the OCCAR members, and actual accession for the Netherlands will go through a parliamentary treaty procedure, according to the ministry.

Rudy Ruitenberg is a Europe correspondent for Defense News. He started his career at Bloomberg News and has experience reporting on technology, commodity markets and politics.

**47 . Date: 24-02-2023Loitering Munition - Mini - Market - US vows to send more drones, aid to Ukraine on war’s anniversaryURL: https://www.defensenews.com/pentagon/2023/02/24/us-vows-to-send-more-drones-aid-to-ukraine-on-wars-anniversary/?utm\_source=sailthru&utm\_medium=email&utm\_campaign=mil-ebb&SToverlay=de88742f-46f7-4f2c-819d-3b36a47d6a7e**

WASHINGTON ― The Pentagon announced Friday morning it would send more drones to Ukraine as part of a new $2 billion package to help in the country’s fight against Russia on the first anniversary of the invasion.

The new $2 billion in aid includes more ammunition for High Mobility Artillery Rocket Systems, more ammunition for 155mm artillery and more munitions for unspecified laser-guided rocket systems. It also includes unspecified counter-drone and electronic warfare detection equipment.

The Pentagon plans to contract for the gear under the Ukraine Security Assistance Initiative, which allows the Biden administration to buy weapons from industry rather than draw from U.S. weapon supplies.

The funds would go toward the purchase of a new weapon for Ukraine: the Altius 600, a small drone with a range of 276 miles and endurance of more than 4 hours. The manufacturer, Anduril subsidiary Area-I, has said the system can operate as a loitering munition.

The other drones included are the fixed-wing, vertical takeoff and landing AeroVironment Jump 20 ― a surveillance drone that can fly for 14 hours and has a range of 185 kilometers ― and a system called K8, from CyberLux, a company that makes quadcopters.

The U.S. Army last year selected the Jump 20 unmanned aircraft system to be the first future tactical UAS as part of an effort to replace the runway-dependent Shadow drone.

The U.S. has declined to send Ukraine more sophisticated longer-range drones, such as the Grey Eagle and Reaper, which would give Ukraine a longer-distance strike capability. Some officials are concerned about Russia gaining access to such advanced technology if one were shot down.

Both Russia and Ukraine are reportedly using small, commercially available drones for surveillance and in some cases, to attack military targets.

In a statement to mark the one-year anniversary of the war, Defense Secretary Lloyd Austin said that under the Biden administration, the U.S. has committed more than $32 billion in ”game-changing” security assistance to Ukraine. America’s allies, he said, have committed $20 billion in security assistance to Ukraine.

“Difficult times may lie ahead, but let us remain clear-eyed about what is at stake in Ukraine,” Austin said. “And let us remain united in purpose and in action—and steadfast in our commitment to ensure that a world of rules and rights is not replaced by one of tyranny and turmoil.”

Joe Gould was the senior Pentagon reporter for Defense News, covering the intersection of national security policy, politics and the defense industry. He had previously served as Congress reporter.

**48 . Date: 19-11-2024Acquisition - AeroVironment to acquire BlueHalo for $4.1 billionURL: https://www.defensenews.com/pentagon/2024/11/19/aerovironment-to-acquire-bluehalo-known-for-drone-swarm-tech-for-4b/**

Editor’s note: The headline on this story was updated Tuesday, Nov. 19, 2024, to reflect that AeroVironment is acquiring BlueHalo for $4.1 billion.

AeroVironment, a leading drone manufacturer, announced Tuesday its plans to acquire BlueHalo, well-known for its drone swarm and counter-drone technology, for roughly $4.1 billion through an all-stock transaction.

“The acquisition of BlueHalo will create a diversified Defense Tech company with a highly complementary and differentiated portfolio of solutions in Uncrewed Systems, short and long range Loitering Munitions, Counter UAS, Space Technologies, Electronic Warfare and Cyber, powered by AI and Autonomy,” according to a joint statement from the companies. “This combination will drive innovation, expand manufacturing capacity and enable us to better support our customers and their critical missions.”

BlueHalo’s portfolio consists of “10 flagship solution families” and more than 100 patents, the statement lists.

“For over 50 years, AV has pioneered innovative solutions on the battlefield, and today we are poised to usher in the next era of defense technology through our combination with BlueHalo,” Wahid Nawabi, AV’s CEO, said in a statement.

BlueHalo has “pioneered solutions for drone warfare, distributed autonomy, and the need for more robust and assured access to space in an increasingly contested, crowded and competitive domain,” Jonathan Moneymaker, BlueHalo CEO, said. “By uniting with AV, we are building an organization equipped to meet emerging defense priorities and deliver purpose-driven, state-of-the-art solutions with unmatched speed.”

AeroVironment provides a number of unmanned aircraft systems and loitering munitions to the U.S. military and to other customers. A number of the company’s capabilities have been sent to Ukraine to aid its fight to beat back Russia’s invasion, such as the Switchblade loitering munition, the Puma UAS and Jump 20 tactical UAS.

BlueHalo has become more well-known in the defense sector in recent years, winning contracts like one with the U.S. Army to provide offensive swarm capability for evaluation purposes in 2022 and another multibillion deal with U.S. Space Force for its BADGER system, an adaptive phased array product.

The company has also provided directed energy counter-unmanned aircraft solutions for combat vehicles and delivered over 1,000 Titan counter-UAS systems to customers.

Having earned roughly $886 million in revenue in 2023, BlueHalo estimates it will generate $900 million in revenue in 2024, according to the statement, with a backlog of nearly $600 million along with multiple billion-dollar opportunities on the horizon.

Together, the merged businesses expect to generate more than $1.7 billion in revenue, the statement notes.

The merger is expected to close in the first half of calendar year 2025, according to the statement.

The combined company will be headquartered in Arlington, Virginia, where AV has its corporate headquarters.

Nawabi will be president and CEO of the combined company while Moneymaker will stay on as a strategic adviser to Nawabi and the company’s management team, the statement lays out.

Arlington Capital Partners, an investment company that is the majority owner of BlueHalo, will maintain “a significant” ownership stake in the company.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**49 . Date: 19-01-2023Market - Defense Innovation Unit eyes partnerships for drone-vetting effortURL: https://www.defensenews.com/unmanned/2023/01/19/defense-innovation-unit-eyes-partnerships-for-drone-vetting-effort/**

WASHINGTON — The long-term viability of a Defense Innovation Unit effort to vet commercial drones for military use and make it easier for the services to buy of off-the-shelf technology may be hampered by a lack of stable funding.

DIU, a Pentagon organization that partners with the military services to field commercial technology, created Blue UAS in 2020 to establish a streamlined process for the Department of Defense to certify U.S.-made drones for military use. Without it, agencies who want to buy commercially available small UAS would have to work with an established DoD program or seek a waiver — an arduous, time-consuming process.

In the last few years, Blue UAS has become the government standard for certifying drones that meet federal cybersecurity and supply chain requirements. It has also helped foster the development of US-made, compliant drone components and software.

This week, DIU announced it closed out the second phase of the effort after moving 17 drones from 11 companies through its vetting process. Now on the Blue UAS “cleared list,” those systems — which offer a range of military applications from base defense to search and rescue to ISR — are available on the federal supply schedule, which allows DoD and other government users to purchase them.

Among the companies on the cleared list are California-based Inspired Flight and Florida-based Harris Aerial. Both companies had two drones cleared through DIU’s process.

Small commercial drones — a broad category of UAS that includes systems weighing less than 55 pounds — have played a more prominent role in military conflicts in recent years. Ground troops in Russia and Ukraine have used them for surveillance and visibility and ISIS militants used armed versions to attack U.S. forces fighting in northern Iraq in 2016.

As the commercial drone market has grown, particularly in China, the U.S. government has been increasingly concerned about the security of the technology and the possibility that data collected by these systems could be shared with U.S. adversaries.

In 2018, DoD banned the military from buying commercial drones unless they secured a waiver. The exemption process is labor-intensive and the eventual approval lasts only six months before needing to be re-submitted. The following year, with the passage of the Fiscal 2020 National Defense Authorization Act, Congress added more constraints, blocking the military from buying or using certain drone components, including cameras, data transmission devices, radios, flight controllers and gimbals made by Chinese companies.

The ban was signed into law just after the U.S. Army had chosen a handful of prototype systems for its Short Range Reconnaissance program, which sought a small quadcopter drone to provide ISR support. With the new requirements in place, the service now had to ensure the five drones selected for its program were compliant with DoD and congressional policy.

At the time, DIU had already launched an initiative to expand the marketplace of domestically produced drone components and software that meet cybersecurity requirements. As it worked with the Army to identify commercial candidates for its quadcopter program, the organization saw a need for a streamlined approval process that didn’t require organizations to renew their waivers. So, DIU created the first iteration of the Blue UAS Cleared List to vet the five prototype systems.

David Michelson, a program manager at DIU, told C4ISRNET the experience not only underscored the need for a better process, but it highlighted the potential for commercial drones to meet military needs.

“Throughout that process, we realized that there is just so much that goes into this ecosystem on all different levels,” he said. “Small drones can fit that huge swath of mission sets that are out there and there were commercially available solutions already for some of those mission sets.”

Following its work with the Army, DIU set out to expand the number of cleared drones and refine its vetting process through a second phase. The program has received $35 million to fund Blue UAS 2.0 and for the hardware development work it’s conducted to date.

Companies who have moved through the Blue UAS process say it has helped accelerate their work with the government.

Larry Berkin, chief commercial and operating officer of California-based dronemaker FlightWave, told C4ISRNET that Blue UAS has offered his company “a stamp of approval” for would-be government customers. FlightWave’s flagship vehicle, the Edge 130, was vetted as part of Blue UAS 2.0 and added to the cleared list earlier this month.

“As a small company, it’s a very good thing for us,” Berkin said. “It opens up an alternative procurement cycle and procurement channels for us to sell into these large federal agencies that typically would not purchase from a small company.”

Skydio, a leading U.S. drone manufacturer, has participated in Blue UAS 1.0 and 2.0. CEO Adam Bry told C4ISRNET in an email that while DIU’s vetting process was rigorous, it has opened opportunities “across the Federal customer base” without requiring the company to go through a separate certification process with each agency.

While DIU’s work to create a pathway for government agencies to access compliant commercial technology has been successful, Michelson said the program isn’t sized to meet the demand it’s seeing. He noted that while Blue UAS is tailored for DoD, it’s drawn interest from state and local governments, not to mention federal agencies like the Department of Interior and Department of Justice.

“It’s a good problem to have, but we need a solution,” he said. “Our funnel isn’t big enough, and we’re not resourced to be able to certify all the systems that could possibly exist for any agency or user out there.”

One way DIU hopes to address the problem is through partnerships. The organization is working with the Association of Uncrewed Vehicle Systems International — a nonprofit focused on advancing uncrewed systems and robotics — to adapt the Blue UAS model for non-DoD agencies.

Michael Robbins, AUVSI’s executive vice president of government and public affairs, told C4ISRNET in an interview the goal is for companies to move through its process “and to come out on the other side with the same degree of trust in the system as they would had they gone through that process with DIU directly.”

DIU is also reaching out to the military services to find additional funding and work with them to continue some of the Blue UAS work in house. Like most of its projects, the effort doesn’t have its own budget, but instead works with DoD agencies for funding. While that arrangement is what helps funnel commercial technology into formal programs, it also makes it hard to sustain an effort like Blue UAS.

“I think we are making the right moves and the DoD is moving forward,” DIU program manager Matthew Borowski said in an interview. “But there are many things that keep us from making progress — and one of them really is putting the right amount of attention and resources towards solving the problem.”

The office is planning to ramp up its outreach efforts in hopes that it can “export” parts of the program throughout DoD. That includes creating an instruction manual for on-ramping cleared drone technology.

“We want to give other organizations and other units the opportunity to do the same thing that we’re doing, so they can leverage their funding and they can leverage their resources,” Michelson said. “We want to try to democratize the process.”

With Blue UAS 2.0 completed, DIU is also making plans for the program’s next phase. The details are still in the works, but Michelson said networking and interoperability will likely be a focus, due in part to lessons DoD has learned about Ukraine’s use of networked drones over the last year.

“What we’re seeing is even though the Ukrainians are building their drone program on a shoestring — on Band-Aids and bubble gum — they’re building their own networks. They are building their own interconnectivity,” he said. “And they’re finding ways for their systems to be as interoperable as they possibly can.”

More networked drones drives a need for interoperable hardware, like fight controllers and payloads. Michelson said a future phase of Blue UAS could help get after that challenge. DIU has identified some potential funding sources for the effort, which it hopes to launch later this year, but the scope will depend on what resources and partnerships the organization can secure.

Courtney Albon is C4ISRNET’s space and emerging technology reporter. She has covered the U.S. military since 2012, with a focus on the Air Force and Space Force. She has reported on some of the Defense Department’s most significant acquisition, budget and policy challenges.

**50 . Date: 13-03-2023ISR / ISTAR - Small - Requirement - Denmark seeks small drones able to operate in cold temperaturesURL: https://www.defensenews.com/unmanned/2023/03/13/denmark-seeks-small-drones-able-to-operate-in-cold-temperatures/**

MILAN, Italy — The Danish Defence Ministry has issued a multimillion-dollar tender for several small drones intended for intelligence, surveillance, reconnaissance and fire support operations.

The Tenders Electronic Daily, an online version of the Supplement to the Official Journal of the European Union that details public procurement efforts on the continent, published last month a detailed contract notice for the purchase of NATO Class 1 small unmanned aerial systems as well as sustainment, support and training. This category of drones generally refers to tactical unit systems weighing more than 15 kilograms (33 pounds).

The main components of the order will consist of a minimum of three drones capable of vertically taking off and landing without the need for a separate system, such as launchers or parachutes. Each drone should feature a synthetic aperture radar and a primary sensor package. The order would also include two ground control stations and all necessary ground equipment.

During the assessment phase, the Defence Ministry will consider as the most important factors the specific drone category and the lowest temperature at which the system can operate and land. The value of the initial purchases are expected to be about $107 million, and the tender will close March 23.

Other outlined technical capabilities include:

The drones are intended primarily for national and international ISR missions. Additionally, the online documents stated that each drone is “to be operated from a total of two trucks with ISO containers, making it possible for operators to continually operate one UAV while moving the ground control station from which the drone is operated.”

The Danish military has wanted to increase its unmanned capabilities for several years, specifically to monitor Arctic regions. In 2020, Denmark announced its intention to procure drones, but that notice was terminated. A report from Tenders Electronic Daily shows the decision was made after the Defence Ministry noticed the planned acquisition did not take into account operational needs for the country’s defense.

Denmark previously experimented with several types of smaller drones, but has never possessed larger systems such as the MQ-9 Reaper. Platforms of that size tend to be more costly than smaller variants and require greater infrastructure to operate. As the country has territorial claims in areas around the Faroe Islands and the north of Greenland covering parts of the North Pole, there are few land-based structures from which large drones can land and launch; this could be why the country prefers vertical-takeoff-and-landing platforms.

In 2007, it acquired 12 Raven B small drones from AeroVironment, on which the country relied during operations in Afghanistan. In 2012, Denmark replaced them with Puma AE drones, also produced by the American company, but they were larger and can loiter for longer durations. The country currently does not possess armed variants.

Elisabeth Gosselin-Malo is a Europe correspondent for Defense News. She covers a wide range of topics related to military procurement and international security, and specializes in reporting on the aviation sector. She is based in Milan, Italy.

**51 . Date: 15-03-2023Armed ISR / ISTAR - MALE - Safety - Downing of MQ-9 Reaper is latest US drone lost in contested zoneURL: https://www.defensenews.com/unmanned/2023/03/15/downing-of-mq-9-reaper-is-latest-us-drone-lost-in-contested-zone/**

WASHINGTON — An American intelligence drone splashed into international waters this week, after Russian fighter jets intercepted, harassed and ultimately careened into it over the Black Sea near Ukraine, U.S. defense officials said.

The uncrewed General Atomics MQ-9 Reaper was flying a routine surveillance mission when it and one of two nearby Su-27 jets collided March 14 around 7 a.m. local time, U.S. European Command said. The drone’s propeller was damaged, according to Pentagon spokesperson Brig. Gen. Pat Ryder, rendering it “unflyable, uncontrollable, so we brought it down.”

While military intercepts of aircraft are common — and typically follow a set of engagement rules — the alleged antagonistic nature of the Tuesday incident cast it in sharp relief.

Samuel Bendett, an expert at the Center for Naval Analyses, told C4ISRNET Russian media and other parties closely monitor “drone flights in the Black Sea and the proximity to Crimea, publishing flight maps of American drones in that area.” The general sentiment, he said, is “one of anger and resentment that the U.S. has such tools to conduct surveillance and reconnaissance, without an apparent Russian response.”

“Sooner or later,” he continued, “that pent up anger was going to erupt and Russians would respond in one way or another.”

The collision marked the first known physical contact between U.S. and Russian forces since the latter’s invasion of Ukraine in February 2022.

Here are five other U.S. drones that were downed, lost or crashed in contested areas, since 2015:

An Air Force MQ-9 Reaper crashed near Benghazi, Libya, in August 2022, prompting an investigation from U.S. Africa Command.

A command spokesperson told Military Times at the time that the drone was “operating in support of U.S. Ambassador and Special Envoy to Libya Richard Norland’s diplomatic engagements” when it went down. It was unclear what the cause was.

In 2019, officials with the self-styled Libyan National Army apologized for shooting down an unspecified U.S. drone near Tripoli, the capital, after mistaking it for a Turkish-made model used by rival militias.

The U.S. uses uncrewed aircraft in Africa to monitor extremist groups and kill militants.

Amid already high international tensions concerning the Islamic Revolutionary Guard Corps and violence in the Strait of Hormuz, an international oil chokepoint, the U.S. in June 2019 said a Northrop Grumman-made Navy RQ-4 Global Hawk surveillance drone was hit with an Iranian surface-to-air missile.

Air Force Lt. Gen. Joseph Guastella Jr., then the commander of U.S. Air Forces Central Command, described the attack as unprovoked.

“At the time of the intercept, the RQ-4 was operating at high altitude, approximately 34 kilometers from the nearest point of land on the Iranian coast,” Guastella told reporters at the Pentagon. “This dangerous and escalatory attack was irresponsible and occurred in the vicinity of established air corridors between Dubai, United Arab Emirates and Muscat, Oman, possibly endangering innocent civilians.”

The incident nearly resulted in armed conflict between the U.S. and Iran, as then-President Donald Trump mulled his options for retaliation, including strikes on missile and radar installations.

Iranian officials contend the RQ-4 violated their airspace.

Houthi rebels shot down an MQ-9 Reaper over Yemen in June 2019 with what U.S. Central Command described as an SA-6 surface-to-air missile.

The drone was likely targeted with assistance from Iran, the command said at the time, citing a clear “improvement over previous Houthi capability.”

Days later, CENTCOM said, a modified SA-7 surface-to-air missile failed to take out another MQ-9 that was monitoring activities in the Gulf of Oman. The missile missed by at least 1 kilometer.

The Air Force in 2015 acknowledged a General Atomics MQ-1 Predator was downed in Syria, after previously saying contact was lost with a drone during an intelligence-gathering flight.

Syria’s official news agency at the time said air defenses hit a “hostile U.S. surveillance plane,” the Washington Post reported.

Air Force Times reporter Rachel Cohen contributed to this article.

Colin Demarest was a reporter at C4ISRNET, where he covered military networks, cyber and IT. Colin had previously covered the Department of Energy and its National Nuclear Security Administration — namely Cold War cleanup and nuclear weapons development — for a daily newspaper in South Carolina. Colin is also an award-winning photographer.

**52 . Date: 26-05-2023Swarm - General - SoftwareSwarms of AI-fueled drones, vehicles track targets in AUKUS testsURL: https://www.defensenews.com/unmanned/2023/05/26/swarms-of-ai-fueled-drones-vehicles-track-targets-in-aukus-tests/**

WASHINGTON — A swarm of Australian, U.K. and U.S. artificial intelligence-enabled air and ground vehicles collaboratively detected and tracked targets during testing overseas.

The trials conducted by the AUKUS partners delivered several “world firsts,” including the live re-training and international exchange of AI models, according to the U.K. Ministry of Defence, which disclosed the news May 26, a month after testing.

More than 70 military and civilian defense personnel and industry players participated in the experiment, part of the AUKUS Advanced Capabilities Pillar, or Pillar 2, established to expedite the trilateral development of critical technologies, such as AI, quantum, cyber and hypersonics. Pillar 1 — more discussed — aims to help Australia acquire nuclear-powered submarines.

Abe Denmark, the U.S. senior adviser to the secretary of defense for AUKUS, in a statement said the April demonstration was “truly a shared effort.”

Together, teams developed models, directed different nations’ uncrewed aerial vehicles and evaluated performance. The joint deployments in the field featured Blue Bear Ghost and Insitu CT220 drones; Challenger 2 main battle tanks and Warrior armored vehicles; Viking uncrewed ground vehicles; a commercial FV433 Abbot self-propelled artillery gun; and a former Eastern Bloc BMP OT-90, an infantry fighting vehicle.

“By pooling our expertise and resources through our AUKUS partnerships,” Denmark said, “we can ensure that our militaries are equipped with the latest and most effective tools to defend our nations and uphold the principles of freedom and democracy around the world.”

Australian, U.K. and U.S. leaders have described AI as critical to international competitiveness in many sectors, finance, health and defense among them. By sharing AI and its underpinnings, the U.K. Ministry of Defence said in its announcement, the friendly militaries can figure out interoperability now, and not later, as well as save time and money.

The U.S. Department of Defense’s fiscal 2024 budget blueprint featured a $1.8 billion allocation for AI, with Deputy Defense Secretary Kathleen Hicks describing it as a “key technology” area. The department catalogued at least 685 ongoing AI projects as of early 2021, including several tied to major weapons systems.

Colin Demarest was a reporter at C4ISRNET, where he covered military networks, cyber and IT. Colin had previously covered the Department of Energy and its National Nuclear Security Administration — namely Cold War cleanup and nuclear weapons development — for a daily newspaper in South Carolina. Colin is also an award-winning photographer.

**53 . Date: 21-06-2023Armed ISR / ISTAR - MALE - General - ArmamentLeonardo displays Falco Xplorer drone armed with MBDA missileURL: https://www.defensenews.com/unmanned/2023/06/21/leonardo-displays-falco-xplorer-drone-armed-with-mbda-missile/**

PARIS – In what many are calling an important shift in Italy’s mentality on arming unmanned aircraft systems, Leonardo showcased for the first time its Falco Xplorer drone fitted with an MBDA Brimstone missile at the Paris Air Show.

Italian defense company Leonardo has been in the business of producing UAS for two decades, and today some sixty units of its Falco drones are in use worldwide. The company has in the past advertised its systems primarily for civilian operations as well as intelligence and surveillance-based missions. This has in part reflected a tendency that has existed in the broader Italian defense culture over time, which could somewhat be considered as a resistance or even taboo towards arming these types of systems.

This could be changing as Leonardo displayed its light medium-altitude long endurance, or MALE, drone, the Falco Xplorer, mounted with MBDA’s lightweight Brimstone missile at the Paris Air Show, going on this week. Although only one was visible, a company representative told Defense News that it could be fitted with a total of four missiles.

“MBDA and Leonardo are cooperating together on integrating Brimstone on the Falco Xplorer and are also currently doing joint integration studies and demonstrations,” the representative said.

The ambition is to have this variant available on the market for customers by 2025. It was not developed in response to a requirement issued specifically by the Italian Air Force, rather responding to a demand by other customers, they said.

The FALCO Xplorer has a maximum payload of 350 kilograms (772 lbs) and has an endurance of 24 hours.

Concerning potential sales, it is likely to peak the interest of existing Brimstone operators. Beyond the U.K., the missiles have in the past been sold to Saudi Arabia, Qatar, Germany and most recently Ukraine for use as a surface-launched ground attack system. The Spanish Air Force also selected the weapon earlier this year to equip its fleet of Eurofighters.

Elisabeth Gosselin-Malo is a Europe correspondent for Defense News. She covers a wide range of topics related to military procurement and international security, and specializes in reporting on the aviation sector. She is based in Milan, Italy.

**54 . Date: 03-08-2023Armed ISR / ISTAR - HALE - General - SoftwareArtificial intelligence flies XQ-58A Valkyrie droneURL: https://www.defensenews.com/unmanned/2023/08/03/artificial-intelligence-flies-xq-58a-valkyrie-drone/**

WASHINGTON — Artificial intelligence software successfully flew an XQ-58A Valkyrie drone, the Air Force Research Laboratory announced Aug. 2.

The U.S. lab led the three-hour sortie on July 25 with test units at the Eglin Test and Training Complex in Florida. The flight followed two years of work and a partnership with Skyborg Vanguard, a team made up of personnel from the lab and the Air Force Life Cycle Management Center with the intent of creating unmanned fighter aircraft.

“This sortie officially enables the ability to develop [artificial intelligence and machine learning] agents that will execute modern air-to-air and air-to-surface skills that are immediately transferrable to the CCA program,” said Col. Tucker Hamilton, the chief of AI test and operations with the Air Force. The CCA program, or collaborative combat aircraft, was designed to create combat drones that can operate with piloted aircraft.

The lab’s Autonomous Air Combat Operations team created algorithms for the flight that took millions of hours to mature in simulations, during sorties with the X-62 VISTA experimental aircraft, while working with the XQ-58A, and during ground test operations, according to the announcement.

Previous flights of the XQ-58A Valkyrie have supported the Air Force’s effort into loyal wingmen research. Kratos Defense and Security Solutions produces the drone.

The Air Force Research Lab is the service’s primary scientific research and development center responsible for the discovery, development and integration of cost-effective warfighting technologies for the country’s air, space and cyberspace forces.

“AI will be a critical element to future warfighting and the speed at which we’re going to have to understand the operational picture and make decisions,” Brig. Gen. Scott Cain, the lab’s commander, said in the announcement. “AI, Autonomous Operations, and Human-Machine Teaming continue to evolve at an unprecedented pace and we need the coordinated efforts of our government, academia, and industry partners to keep pace.”

Georgina DiNardo is an editorial fellow for Military Times and Defense News and a recent graduate of American University, specializing in journalism, psychology, and photography in Washington, D.C.

**55 . Date: 08-09-2023Cargo - Tactical - General - PlatformBritain tests transport drone’s ability to land, take off from shipURL: https://www.defensenews.com/unmanned/2023/09/07/britain-tests-transport-drones-ability-to-land-take-off-from-ship/**

LONDON — A twin-engine transport drone has landed on the deck of a British aircraft carrier in what the Royal Navy said is a first for the service.

The drone, dubbed HCMC, flew on and off the deck of the HMS Prince of Wales during a trial near the coast of Cornwall, southwest England, the Royal Navy announced Sept. 7.

The drone, developed by British company W Autonomous Systems, flew for about 20 minutes from an airfield at Predannack to then touch down safely on the carrier’s deck.

After unloading a small payload from drone, it took off again and returned to Predannack.

The Royal Navy said in its statement that the aim of program is to “deploy drones with a UK Carrier Strike Group in the future, using them to transfer stores and supplies — such as mail or spare parts — between ships, without the need to launch helicopters.”

“It’s a vital step along the way to operating crewless aircraft safely alongside F-35 Lightning jets and naval Merlin and Wildcat helicopters which are currently the backbone of the Fleet Air Arm,” the statement explained.

The twin-boom, twin-engine drone is capable of delivering payloads weighing up to 100 kilograms (220 pounds) with a maximum range of 1,000 kilometers (621 miles). The aircraft incorporates an autopilot system developed by British company Distributed Avionics, which eliminates the need for trained individuals to remotely control it.

The exercise wasn’t the first time a drone operated from the HMS Prince of Wales, with previous experiments including small quadcopters and the Banshee target drone; the latter launches by catapult and use parachutes to land.

However, the Royal Navy said the latest trials were in a “different league,” involving a larger, more capable uncrewed aircraft than anything previously tried.

The trials took place as the ship departed U.K. waters for an event off the East Coast of the United States taking place over the next few months involving drills with F-35 fighters, Osprey tiltrotor aircraft, and the General Atomic-made Mojave drone.

The HMS Prince of Wales was scheduled deploy this time last year, but suffered a propeller shaft failure soon after leaving its base in Portsmouth.

The HCMC drone trial is one of a series of experimental and operational drone programs with the Royal Navy, including a deal with Leonardo to develop an unmanned helicopter demonstrator and the purchase of Schiebel’s Camcopter S-100 for surveillance missions.

Andrew Chuter is the United Kingdom correspondent for Defense News.

**56 . Date: 26-09-2023ISR / ISTAR - Small - Contract - Griffon, Textron advance in Army’s Future Tactical UAS competitionURL: https://www.defensenews.com/unmanned/2023/09/26/griffon-textron-advance-in-armys-future-tactical-uas-competition/**

WASHINGTON — The U.S. Army picked two companies out of a group of four to move on in the Army’s competition to procure a Future Tactical Unmanned Aircraft System, or FTUAS.

Griffon Aerospace and Textron Systems were awarded a second agreement to provide prototypes to the Army following the first development phase which began in February, the service confirmed to Defense News.

At the start of the first phase, the Army had originally also included Northrop Grumman, Sierra Nevada Corp. and Aerovironment. It chose to eliminate Aerovironment, the supplier of an interim FTUAS product, in May.

The second agreement period, beginning Sept. 26, will cover the Army’s continued evaluation of the companies’ weapon system designs leading to a Critical Design Review, establishing a final design and initial product baseline.

In the first phase, the Army evaluated submissions against requirements including performance, cost, schedule, risk and whether it had a compliant Modular Open Systems Approach, or MOSA. The phase ended with a preliminary design review.

The Army has long been working to select a FTUAS, meant to replace its Shadow UAS fleet. In 2022, after a roughly four-year competition, the service awarded AeroVironment an $8 million contract to provide its Jump 20 system as an interim FTUAS capability for a single brigade. AeroVironment purchased Jump 20′s developer Arcturus in 2021. An undisclosed number of Jump 20s have been provided through U.S. security assistance to Ukraine.

The service wants its FTUAS to be a vertical take-off and landing aircraft, so it can runway independent. Additionally, the Army wants the system to offer improved maneuverability and the capability to be controlled on the move. Other planned attributes include a reduced transportation and logistics footprint and a quieter system than is offered today to avoid enemy detection.

After completing the CDR, the remaining companies will participate in flight demonstrations and MOSA third-party verification as part of a third phase of competition, the Army said.

Then in later phases, those companies will deliver production representative FTUAS and support equipment for developmental testing and operational demonstrations involving soldiers directly. The systems will go through environmental, electromagnetic environmental effects, transportation and flight testing as well as MOSA and Technical Manual verification, according to the service.

The system the Army ultimately chooses is scheduled to enter full-rate production in the second quarter of FY26, according to plans laid out by the service earlier this year.

Jen Judson is an award-winning journalist covering land warfare for Defense News. She has also worked for Politico and Inside Defense. She holds a Master of Science degree in journalism from Boston University and a Bachelor of Arts degree from Kenyon College.

**57 . Date: 10-10-2023ISR / ISTAR - Small - General - SoftwareShield AI unveils V-Bat Teams drone swarm tech, with eye to ReplicatorURL: https://www.defensenews.com/unmanned/2023/10/10/shield-ai-unveils-v-bat-teams-drone-swarm-tech-with-eye-to-replicator/**

WASHINGTON — California-based defense technology firm Shield AI on Monday launched a new drone swarming capability called V-Bat Teams — one it hopes the Defense Department might use for programs such as its Replicator initiative.

V-Bat Teams, which grew out of Shield AI’s experiments with the Air Force’s AFWERX innovation unit that culminated in a demonstration this summer, has at its core the company’s artificial intelligence pilot software dubbed Hivemind. These teams consisting of a handful of V-Bat aircraft are intended to operate autonomously in high-threat environments, without needing instructions or guidance from GPS or communications.

In an interview Tuesday at the Association of the U.S. Army’s annual conference in Washington, Shield AI’s co-founder and president said V-Bat Teams could be a “great fit” with the Pentagon’s Replicator program, which aims to field thousands of autonomous, attritable drones in the next two years to counter China.

Brandon Tseng added that V-Bat Teams would operate with minimal instruction from human operators, beyond the point where the humans tell them what target or mission to pursue. However, the V-Bats would notify humans when they notice something that needs to be brought to their attention.

Tseng said Shield AI conducted the first flight of V-Bat Teams in April and conducted a demonstration as part of the Air Force’s AFWERX autonomy effort in June. That demo, which was announced in August, showed how the Hivemind technology could launch and autonomously control a trio of V-Bats to monitor and surveil simulated wildfires.

V-Bat Teams now include four of the UAVs, Tseng said, but the company hopes to double that capacity every year — to eight in 2024, then to 16, and so on.

Hivemind’s autonomous software is, on its own, already able to control many more V-Bats, Tseng said. The limiting factor on V-Bat Teams comes in the operational logistics of launching multiple drones at once and then landing, he explained.

Sending large swarms of drones into the air isn’t a new trick, Tseng noted, as such demonstrations are commonly done at festivals or other celebratory events. But those are “brittle, dumb drones” that would fall out of the sky or automatically land if they were jammed, he added. Shield AI first focused on creating an intelligent, secure AI pilot in the form of Hivemind, and then the firm worked to add more drones into the mix to carry out different mission sets.

V-Bat Teams will first focus on maritime domain awareness missions, Tseng said, but their use could expand to include the suppression of enemy air defenses, strike operations, escort missions and logistics operations.

With their relatively low cost — Tseng said the V-Bat’s price point comes around the mid-six-figure range — V-Bats could even be used as decoys to lure out enemy fire and take hits that would otherwise target crewed aircraft.

V-Bats are attritable, Tseng noted, which means they could be sent into combat in considerable numbers and the military could easily weather their loss, while still being able to operate intelligently.

Tseng said some of Ukraine’s experiences have shown that throwing waves of basic drones at an enemy isn’t always enough to make a dent. “You need intelligent, affordable mass,” he noted. “Mass for the sake of mass is not helpful; it has very low returns.”

Shield AI aims to sell V-Bat Teams to all U.S. military services as well as foreign customers.

“You’re going to open up a new paradigm of these operations when you have this many aircraft that are able to do it autonomously,” Tseng said.

For now, however, Tseng doesn’t see V-Bat Teams fitting in with the Air Force’s plan to create a fleet of collaborative combat aircraft — autonomous drones that fly alongside crewed fighters such as F-35s. Shield AI is open to looking further into the collaborative combat aircraft program, he said, but what the Air Force has in mind differs from V-Bat’s design.

“We’re open to it,” Tseng explained. “But they want AI-piloted jets, and that’s what they’re focused on before they start thinking about how those AI-piloted jets work with other machines like a V-Bat.”

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**58 . Date: 23-11-2023Armed ISR / ISTAR - MALE - Requirement - Canada delays $3.6 billion Reaper buy until drones can work in ArcticURL: https://www.defensenews.com/unmanned/2023/11/23/canada-delays-36-billion-reaper-buy-until-drones-can-work-in-arctic/**

VICTORIA, British Columbia - The Canadian military’s acquisition of medium altitude armed drones is being delayed to allow for more development work to enable the aircraft to operate in the Arctic region.

The Remotely Piloted Aircraft System project was to deliver a fleet of drones for the Royal Canadian Air Force that would be operational by 2025. That date has now shifted and the delivery of the first aircraft is expected in 2028.

“The Canadian RPAS configuration will require significant development work in order to address RCAF requirements, which differ from our allies’ requirements,” said Department of National Defence spokesperson Andrée-Anne Poulin told Defense News.

Ottawa is focused on acquiring the General Atomics MQ-9B Reaper in a project budgeted with as much as 5 billion Canadian dollars ($3.6 billion). It’s hoping to have a contract in place by the end of this year or early next year.

The developmental work would require the integration of new systems on the MQ-9B, Poulin said in an email.

“For example, the need to operate at high northern latitudes, including in the Arctic, requires the use of satellites and aircraft antennas and communication components not previously integrated on the MQ-9,” she said. “Similarly, additional testing and qualification work will be required to ensure the RPAS can be operated and maintained in Canadian climatic conditions.”

Poulin said there is also some developmental effort required to integrate the Canadian-made WESCAM MX-20 EO/IR sensor onto the platform.

“Other examples include work required to develop a training solution tailored to RCAF requirements, and airworthiness certification required to support the RCAF concept of operations,” Poulin added.

Mark Brinkley, a spokesman for General Atomics Aeronautical Systems, declined to comment.

In September the U.S. State Department approved a potential Foreign Military Sale to Canada for 219 Hellfire missiles and other weapons and radars to be used by the MQ-9B. The proposed sale is worth an estimated $313 million.

Department of National Defence spokesman Andrew McKelvey said that FMS proposal was developed based on the current planned timelines for the RPAS project. The equipment and weapons expected to be provided through the FMS case will be delivered as and when required to support the RPAS integration, testing and production work that will be performed by General Atomics, he added.

David Pugliese is the Canada correspondent for Defense News.

**59 . Date: 01-12-2023Armed ISR / ISTAR - Small - General - PlatformAnduril reveals Roadrunner drone, mum on first US customerURL: https://www.defensenews.com/unmanned/2023/12/01/anduril-reveals-roadrunner-drone-mum-on-first-us-customer/**

WASHINGTON — Anduril Industries unveiled its latest autonomous system, Roadrunner — a reusable aircraft that can carry a range of payloads, takeoff vertically and intercept and destroy airborne threats.

The California-based technology firm revealed two variants of the system Dec. 1. The baseline Roadrunner can quickly launch and fly at high subsonic speeds and its payloads can be reconfigured for a variety of missions.

Roadrunner-M is a munitions version of the system designed to protect against uncrewed aerial system threats. The company says the vehicle can rapidly locate, track and disable adversary systems and its interceptors can be recovered, refueled and reused if they’re not deployed.

“Instead of having to fire multiple interceptors at one threat, you can now deploy multiple interceptors to go out and loiter, to gather additional intelligence, to be on site in a timely way in the case that you actually want to employ them,” Chief of Strategy Chris Brose told reporters Nov. 28.

Palmer Luckey, founder of Anduril , told reporters during the same embargoed briefing the company has been designing, building and demonstrating the Roadrunner systems with its own funding for two years and is about to begin low-rate production through a contract with a U.S. customer.

Luckey declined to disclose the customer, but said the initial order is for “hundreds of units” and he expects the company will quickly scale into the hundreds of thousands. Brose noted that the U.S. government has been closely watching the effort and Roadrunner has demonstrated operational utility through a rigorous flight test program.

“One of our main motivations as a company has been to prove it and then talk about it,” Brose said. “I think we’re at the beginning of that conversation on Roadrunner.”

The use of uncrewed aircraft systems on the battlefield has expanded in recent years and the Defense Department is working to both leverage the potential of swarming drones in its own arsenal and counter increased threats from adversaries.

The Pentagon established the Joint Counter-Unmanned Aircraft Systems Office to develop a coordinated, long-term response to drone threats in 2019, and in August, Deputy Defense Secretary Kathleen Hicks revealed a new DoD initiative called Replicator to field thousands of autonomous systems over the next two years.

Brose said Roadrunner was designed with both of those challenges in mind.

“We’re very hopeful that the government will see in this capability what we see in it, which is a novel solution that is built to be adaptable to where those threats are going in the near future – which, by the way, has been a process that’s been playing out over the past few years, and it’s just going to get worse,” he said.

Fielding capabilities such as drones and other high-need systems in larger quantities is a “critical challenge,” for DoD right now, Brose said, but he’s hopeful the department is serious about funding large-scale production efforts.

“Our belief and our hope is that this is an opportunity to really produce this capability at scale, which is something we are absolutely capable of doing,” he said.

On cost, Luckey said a single Roadrunner is “in the low hundreds of thousands of dollars,” but the company expects that to drop as it produces the systems at a higher rate.

“The more of these we make, the cheaper they get,” he said, adding that the company’s decision to build its own turbojet engines rather than work with another supplier will help it control cost and performance moving forward.

Brose noted that while Roadrunner-M may cost more than other counter-drone systems, it can address a wider range of threats, making it a lower cost alternative to missiles like the Patriot, which cost about $4 million each.

“Roadrunner can come in and actually fill a gap in the market that is perhaps maybe a bit more exquisite and a bit more expensive than those low-end solutions, but it’s going to be an order of magnitude cheaper than a patriot missile,” he said. “That seems like a pretty good deal to us.”

Courtney Albon is C4ISRNET’s space and emerging technology reporter. She has covered the U.S. military since 2012, with a focus on the Air Force and Space Force. She has reported on some of the Defense Department’s most significant acquisition, budget and policy challenges.

**60 . Date: 24-05-2024Requirement - DARPA picks six firms to develop experimental ship-launched dronesURL: https://www.defensenews.com/unmanned/2024/05/24/darpa-picks-six-firms-to-develop-experimental-ship-launched-drones/**

The Defense Advanced Research and Projects Agency has chosen six companies to move forward on an experimental, low-weight drone that can take off and land vertically from a ship.

The companies DARPA selected for its ANCILLARY program — also known as the Advanced Aircraft Infrastructure-Less Launch and Recovery program — include a mix of major defense contractors and smaller aeronautics companies. AeroVironment, Griffon Aerospace, Karem Aircraft, Method Aeronautics, Northrop Grumman, and Lockheed Martin’s Sikorsky will now further develop and refine their proposed ANCILLARY designs.

DARPA wants ANCILLARY to lead to a future drone that can one day be deployed and retrieved from Navy ships without large mechanical launchers or landing and recovery equipment. These drones could carry cargo, conduct intelligence, surveillance and reconnaissance missions, and track and target enemies beyond a ship’s line of sight, DARPA said.

These small drones must be able to take off and land like a helicopter from the flight decks of ships or rough surfaces in most weather conditions, and then fly missions like a winged aircraft, DARPA said. It also must be able to carry large payloads and fly for long distances when needed.

“The goal of ANCILLARY is to increase small vertical takeoff-and-landing uncrewed aerial system [or UAS] capabilities by a factor of three over the current state-of-the-art flying today,” DARPA program manager Steve Komadina said in a statement. “Our performers are searching for innovative ways to increase payload weight and range [and] endurance of small, ship-launched UAS by means of novel configurations, propulsion, and controls while also removing the need for special infrastructure.”

Komadina said the Navy and Marine Corps would be most likely to use this technology, but it could also be useful for the Army, Air Force, Coast Guard, and U.S. Special Operations Command.

In June 2023, DARPA picked nine companies to pitch their initial concepts for ANCILLARY, before now whittling the list down to six. Those firms will now enter a 10-month phase in which they try to reduce the risks on their design, and conduct hover testing of elements of their proposed aircraft. Once this phase is finished, the companies will submit proposals to move on to the next phase, which will include fabrication and flight testing.

Formal flight tests of the overall design are expected to start in early 2026, DARPA said.

Christopher Harris, the program manager for Northrop’s ANCILLARY effort, said in an interview the company is incorporating its work on autonomous capabilities, vertical takeoff and landing and long-endurance aircraft design for its ANCILLARY pitch.

Pulling together an aircraft that can carry out the kind of endurance requirements DARPA set, without needing launch and recovery infrastructure, is challenging, Harris said May 24.

Northrop’s aircraft will be able to carry payloads of 60 pounds, and fly a range of 100 nautical miles for up to 20 hours. The company’s version of ANCILLARY will use a pair of rotors to take off and land, and another rotor as a propeller to fly forward, he said.

ANCILLARY will be able to take off and land from a ship in adverse sea conditions, and operate in highly contested environments, Harris said. And it could help with logistics by helping unload a ship and moving cargo to shore. Northrop is incorporating its work on autonomous capabilities, vertical takeoff and landing and long-endurance aircraft design for its ANCILLARY pitch, Harris said.

“We have a wide array of supplier awareness, we have our own innovative technologies, and we have a team that we think is uniquely capable to deliver what DARPA is asking for here,” he said.

Sikorsky said Wednesday it is conducting flight tests on its version of ANCILLARY. The company refers to its design as a “rotor blown wing,” which sits upright on its tail to take off like a helicopter, then transitions to horizontal forward flight.

Sikorsky said such a design will reduce drag on the wing when the aircraft is hovering and shifting to forward flight, and result in better efficiency and endurance when cruising.

“Flight tests are under way to verify our tail-sitting rotor blown wing UAS can launch and land vertically with high stability, and cruise efficiently on wing,” Igor Cherepinsky, director of Sikorsky Innovations, the company’s rapid prototyping group.

Cherepinsky said the articulated rotor system in Sikorsky’s version of ANCILLARY is similar to a traditional helicopter’s rotors, and the aircraft will use Lockheed’s autonomous MATRIX technology in its flight controls.

Sikorsky’s aircraft now in flight tests is powered by a battery, but the company plans to build a 300-pound hybrid electric version if it is selected to continue on the program. That aircraft would carry a 60-pound ISR payload, the company said.

Method Aeronautics said in a statement that it is working with Sierra Nevada Corp., which has a background in landing systems an aircraft modification and integration, and Bechamo on this project. Bechamo is a company that specializes in using artificial intelligence to create aircraft flight controls.

“Method’s design brings a novel approach enabling efficient, robust VTOL [vertical takeoff-and-landing] capability for Group 3 UAS,” Method said in a statement. “Method sees this program as critical technology development to enable wider use of VTOL UAS by U.S. forces abroad, and is actively working to accelerate development beyond the scope of the award.”

Group 3 drones are under 1,320 pounds and fly at speeds of up to 250 knots.

Statements from AeroVironment, Griffon and Karem were not immediately available.

Stephen Losey is the air warfare reporter for Defense News. He previously covered leadership and personnel issues at Air Force Times, and the Pentagon, special operations and air warfare at Military.com. He has traveled to the Middle East to cover U.S. Air Force operations.

**61 . Date: 30-07-2024Armed ISR / ISTAR - MALE - General - UK launches global MQ-9B drone users’ club for alliesURL: https://www.defensenews.com/unmanned/2024/07/30/uk-launches-global-mq-9b-drone-users-club-for-allies/**

LONDON – The U.K. has been discreetly building a global MQ-9B operators club in Europe open to NATO and non-NATO members operating or interested in acquiring the long-range drone that will be granted training access at an in-country flight facility.

On July 20, the Royal Air Force announced the creation of a new MQ-9 International Cooperation Support Partnership, or MIC SP, formed under the NATO Support and Procurement Agency, or NSPA, that builds on a previous similar U.K.-led project.

“The MQ-9B International Cooperative Program was established in 2019 and the work to determine the best way forward to enhance cooperation was done in 2023/24 with the conclusion that NSPA and a MIC SP delivered the best path,” an RAF spokesman for the program told Defense News.

The drone program is growing rapidly, the spokesman said, as it initially included six nations and now comprises ten.

“In April 2023, MICP nations were Belgium and the U.K. as participants (to the memorandum of understanding); with Canada, Denmark, Germany, Greece, Lithuania, and Norway as observers — since then, we have added Qatar and Sweden as observers,” he said.

The representative added very few obligations come with joining the program under observer status and countries “only need to be ‘interested’ in potentially procuring the MQ-9B.”

The ambitions laid out by the RAF for the users’ club include developing and testing a framework to increase cooperation amongst member nations, enhance interoperability and facilitate joint training. Countries can join either as participants, associated states or in an observer capacity.

Affiliates will further have the opportunity to benefit from the air and ground crew training provided by the U.K. through the NATO Flight Training Europe Remotely Piloted Aircraft Systems’ facility at the RAF Waddington base.

The station, located in Lincolnshire, is known as the hub of U.K. reconnaissance and surveillance, as well as the force’s main operating site for airborne intelligence aircraft and systems.

The MQ-9B is designed to be airborne for over 40 hours and differs from the MQ-9A variant in that it is able to be certified to operate in civilian airspace, according to its manufacturer, General Atomics Aeronautical Systems, or GA-ASI.

The RAF is one of the main operators of this aircraft, which it has named the Protector. Although some smaller countries, such as the Nordics, have expressed a strong interest in acquiring these drones, the hefty price tag attached to them has been somewhat of a trade-off they’ve acknowledged.

In a recent interview with Defense News, Maj. Gen. Jonas Wikman, chief of the Swedish Air Force, said that Sweden had not yet decided to buy an asset such as the MQ-9 Reaper “mostly because it does not fit our size or budget.”

An advantage the new MIC SP framework would provide is enabling multinational contracting with GA-ASI or the U.S. government to achieve benefits through “sharing of costs,” among member nations.

Having all three Nordic nations — Sweden, Norway and Denmark — onboard as observers is a good signal, the spokesman said, that they eventually may opt to buy this drone, which would be a force multiplier for the alliance’s intelligence assets in this region.

“It is hoped that all Nordic nations might acquire the MQ-9B to enhance cooperation in the Northern Atlantic and Polar regions, particularly in the maritime domain and to partner with nations’ maritime patrol aircraft, such as the P8,” he said.

Norway announced plans in April to acquire long-range drones to bolster its maritime surveillance, which local media reported would likely be a choice between Northrop Grumman’s MQ-4C Triton platform and the MQ-9B.

In an opinion piece published in Aftenposter, Norway’s largest newspaper, a retired Army major argued General Atomics’ “more affordable” offering and longer endurance were key factors for a state with scarce resources like Oslo.

In an emailed statement to Defense News, a senior advisor to the Norwegian Minister of Defense said a prerequisite for establishing a long-range drone capability is “that it must be carried out as part of a multinational collaboration — which can involve training, operation and development — with close allies.”

The officer added no decision has yet been taken on who this cooperation should take place with.

Elisabeth Gosselin-Malo is a Europe correspondent for Defense News. She covers a wide range of topics related to military procurement and international security, and specializes in reporting on the aviation sector. She is based in Milan, Italy.

**62 . Date: 02-10-2024Requirement - Pentagon taps commercial vendors for low-cost, throwaway dronesURL: https://www.defensenews.com/unmanned/2024/10/02/pentagon-taps-commercial-vendors-for-low-cost-throwaway-drones/**

Pentagon officials want to build America’s arsenal of cheap, disposable drones, staple weapons of the war in Ukraine, pinging commercial vendors for systems with mass-production potential.

The Defense Innovation Unit released a solicitation this week for one-way, uncrewed aerial systems that can fly at ranges of 50 to 300 kilometers in low-bandwidth, GPS-denied environments.

“Recent conflicts have highlighted the asymmetric impact low-cost, one-way unmanned aerial systems have on the modern battlefield,” DIU said in the notice. “The Department of Defense must be able to employ low-cost precision effects at extended ranges.”

DIU plans to hold a live flyoff demonstration as soon as December to evaluate the proposed systems.

Small, one-way attack drones have featured heavily in recent conflicts — from Ukraine to the Middle East. Since last fall, the Iran-backed Houthi militia group has targeted commercial shipping vessels in the Red Sea, using aerial vehicles, uncrewed surface vessels and cruise missiles. Last week, the group launched what the Pentagon termed a “complex attack” on U.S. ships in the region.

On Monday, Secretary Lloyd Austin announced that the Pentagon would focus the next round of its Replicator effort — a process for quickly fielding high-need technology at scale — on countering drone threats like these. But the department also recognizes the impact these systems can have and wants to stock up on its own supply.

“Reliable, affordable, and adaptable long-range UAS platforms that allow for employment at scale will maximize operational flexibility for the joint force,” DIU said.

A DIU spokesperson told Defense News that while the drones the department wants could perform attack missions, it’s also interested in systems that can fly electronic warfare, ISR and communications relay payloads.

According to the solicitation, the vehicles should also be hard to detect and track, have several pathways for two-way communications and be equipped with mission planning software. Critically, the department wants modular systems that can integrate new hardware or software in a matter of hours.

“Proprietary interfaces, message formatting or hardware that require vendor-specific licensing are not permitted,” DIU said.

The notice doesn’t detail how many systems the department might buy and it doesn’t set a cost target. The spokesperson said that omission was intentional because DIU’s selections won’t be based on the cost of a particular drone, but on the cost of the effect the platform achieves.

“The best way to think of what we’re targeting is a cost per effect,” the spokesperson said. “If we launch one $1M platform or ten $100k platforms and generate the same effect, then the cost per effect is the same and that’s what we want to focus on.”

Courtney Albon is C4ISRNET’s space and emerging technology reporter. She has covered the U.S. military since 2012, with a focus on the Air Force and Space Force. She has reported on some of the Defense Department’s most significant acquisition, budget and policy challenges.

**63 . Date: 15-02-2025Market - Pentagon expands list of commercial drones certified for military useURL: https://www.defensenews.com/unmanned/2025/02/14/pentagon-expands-list-of-commercial-drones-certified-for-military-use/**

The Defense Innovation Unit announced Feb. 14 it has selected 37 systems and components to add to its list of commercial drone capabilities certified for military use, pending final approvals to ensure they meet congressionally mandated cybersecurity and supply chain standards.

DIU in November staged a three-day flight demonstration at Marine Corps Air Ground Combat Center Twentynine Palms in California. Following the event, the department selected 23 systems as well as 14 unique drone components, which are now in the midst of a months-long cybersecurity verification process.

Once completed, the approved drones will be added to DIU’s Blue Unmanned Aircraft Systems, or UAS, List and the components to its Blue UAS Framework, making them available for the military services to buy.

“Advocacy for many of these new and enabling technologies continues to be critical for getting capabilities to the warfighter,” DIU said in a statement. “With the cycle for development of new capabilities in this space approaching three months, and current DOD timelines and processes for drone delivery lagging warfighter needs by multiple years, providing warfighters access to capabilities they need now through the Blue List and Framework is even more important.”

Small commercial drones have featured heavily in recent military conflicts, including those in Ukraine and the Middle East. As the market for these capabilities has grown, particularly in China, the U.S. government has been increasingly concerned about the security of the technology and the possibility that data collected by these systems could be shared with adversaries.

That concern led to a series of congressional mandates blocking the Pentagon from buying or using certain drone components made by Chinese companies. Units wanting access to commercial drones had to go through an intensive exemption process to get a waiver that lasted only six months before needing to be resubmitted.

DIU established Blue UAS in 2020 to create another avenue for validation. Since then, the organization has on-ramped 15 systems. It also created an inventory of approved components and software through its Blue UAS Framework.

Although the Blue effort has essentially become the government standard for commercial drone procurement, DIU has heard from companies and DOD users that the process was not meeting their needs. Military units said the list wasn’t providing the types of systems the military most urgently needs. Meanwhile, drone firms said there were too many financial and procedural hoops to jump through to get on it.

To address those concerns, DIU opted to refresh the Blue UAS List and build out the Blue UAS Framework effort. In response, firms from the U.S. and 18 partner countries applied to participate in last fall’s demonstrations.

The drones selected through that event are: Hoverfly Spectre, Neros Archer, ModalAI Stalker, Zone 5 Paladin, Teledyne FLIR Black Hornet, Parrot Anafi UKR, Skyfront Perimeter 8, Mountain Horse Solutions Rotron DT-300, Vantage Robotics Trace, Easy Aerial Sparrow, Shield AI V-BAT, Edge Autonomy VXE-30 Stalker, Skyfall Vampire, Quantum Systems Vector, AeroVironment Dragon, Zepher Flight Z1, Kraus Hamdani Aerospace K1000, Teal Black Widow, Freefly Systems Astro, Skydio X10D, Flightwave Edge 130, PDW C100 and Anduril Ghost/GhostX.

Notably, the list features drones from Ukrainian companies, including Skyfall’s Vampire and Parrot’s Anafi drone. It also has several first-person-view drones, which can wirelessly transmit video feeds to displays like goggles or headsets. The addition of FPV systems and tethered platforms came in direct response to feedback from military users, DIU said.

Courtney Albon is C4ISRNET’s space and emerging technology reporter. She has covered the U.S. military since 2012, with a focus on the Air Force and Space Force. She has reported on some of the Defense Department’s most significant acquisition, budget and policy challenges.

**64 . Date: 16-11-2023Armed ISR / ISTAR - MALE - General - SurvivabilityGeneral Atomics fires back at critics of MQ-9 drone after downingURL: https://www.defensenews.com/unmanned/uas/2023/11/16/general-atomics-fires-back-at-critics-of-mq-9-drone-after-downing/**

DUBAI, United Arab Emirates — The fate of the MQ-9 Reaper has once again entered public debate after senior U.S. defense officials confirmed Houthi militants had downed one of the drones over international waters off the coast of Yemen on Nov. 8.

In recent years, experts have questioned the sustainability of flying such expensive aircraft in contested environments, where less costly countermeasures are able to target them.

For example, in 2021, the Air Force sought to curtail procurement of the General Atomics Aeronautical Systems-made drone in the fiscal 2022 budget.

Earlier this month, Brandon Tseng, the president of drone and software firm Shield AI, said the MQ-9 is “too expensive and too slow to regenerate to continue operating within range of surface to air missiles.”

“MQ-9 is a great aircraft, I’ve used it. But for the future fight, it’s role needs to be re-defined to quarterbacking intelligent teams of attritable aircraft,” he wrote on LinkedIn. “And this doesn’t just apply to MQ-9; it includes MQ-4, MQ-1, P-8, SH-60, etc.”

And an article from earlier this year on the U.S. Military Academy’s Modern War Institute website noted “the MQ-9 Reaper may not be survivable in an environment characterized by large-scale combat operations.”

“There is a decision to be made,” wrote Liam Collins, who served as a defense adviser to Ukraine from 2016 to 2018. “Should the US military field more survivable UAVs — ones capable of conducting defensive maneuvers — or invest in smaller ones that it does not mind losing?”

The article was in response to a March 2023 incident that saw a Russian fighter jet force down a U.S. Reaper over the Black Sea, after initially damaging its propeller. The interception ultimately “resulted in a crash and complete loss” of the aircraft, Air Force Gen. James Hecker, commander of U.S. Air Forces Europe and Africa, said in a statement.

And in July, among other recent reports Russia was harassing MQ-9 drones, a Russian jet fired flares at a Reaper involved in a counterterrorism mission over Syria, damaging its propeller.

Asked about the acquisition process for building — and replacing — these systems, an official with General Atomics Aeronautical Systems said that, “with a hot production line, we can build one in three to eight months.”

“But combat loss and attrition are built into the [U.S. Air Force] order scheme. Some amount of loss is expected,” C. Mark Brinkley, senior director of communications with the firm, told Defense News at the Dubai Airshow this week.

The war in Ukraine has shown that successful battlefield outcomes are possible by using large quantities of low-tech and cheap weapons, rather than relying on fewer, more expensive drones.

But Brinkley pushed back at this assessment.

“There are companies out there that want you to believe you can replace the capability of a Reaper or [MQ-9B] SeaGuardian with a 100-pound stomp rocket that can carry 25 pounds for 10 hours. The only catch is they would need a billion dollars to invent some magical artificial intelligence to make them relevant,” he said. “Even if that AI existed today and you could swarm 50 of them together, your payload and endurance would be 25% of the MQ-9B. So don’t tell me that’s the future.”

To increase the Reaper’s survivability, Brinkley recommended the integration of air-to-air missiles and an early warning radar to “radically change the situation” and reduce harassment opportunities.

This echoed a similar recommendation made by retired Air Force Maj. Gen. Lawrence Stutzriem, who advised the Pentagon to fund the integration of a self-protection capability on the Reaper — something the department has yet to do.

Dave Alexander, the president of General Atomics Aeronautical Systems, offered two ways to respond to the Reaper’s vulnerabilities in contested areas.

“You either complain about it,” he told Defense News at the show, “or do something about it.”

Elisabeth Gosselin-Malo is a Europe correspondent for Defense News. She covers a wide range of topics related to military procurement and international security, and specializes in reporting on the aviation sector. She is based in Milan, Italy.

**65 . Date: 17-11-2023Loitering Munition - Small - General - PlatformBrazilian firm Mac Jee unveils exploding drone, with demo in monthsURL: https://www.defensenews.com/unmanned/uas/2023/11/17/brazilian-firm-mac-jee-unveils-exploding-drone-with-demo-in-months/**

SAO PAULO — A Brazilian defense organization has introduced an exploding drone prototype dubbed Anshar.

Its unveiling comes as the weapons class gains prominence amid Russia’s war in Ukraine. Also known as loitering munitions, they typically are able to remain in flight until a remote user issues the order to crash into a target.

Mac Jee Group, which displayed the loitering munition prototype at the Dubai Airshow this week, said the weapon has a range of 120 kilometers (62 miles), operates at 612 kph (380 mph), has a one-hour endurance and can carry a payload of 20 kilograms (44 pounds).

“It’s a new product from Mac Jee that aligns exactly with the new war doctrines,” Mathieu Izquierdo, the group’s sales business development director, said in reference to similar weapons used in Eastern Europe conflicts. “The Anshar was developed to meet the requirements of our customers outside Brazil.”

The drone “was designed to destroy high-value targets at a low cost, with simple maintenance and easy operation,” Izquierdo said, without providing details about the equipment cost.

Izquierdo noted a demonstration of the drone will take place next year during the World Defense Show in Saudi Arabia, which is scheduled for Feb. 4-8. “Mac Jee exports the majority of its products to the Middle East,” he added.

The company plans to launch the actual product in early 2025, he said.

Mac Jee is based in one of Brazil’s main defense hubs, the city of São José dos Campos, which is also home to aerospace specialist Embraer and other defense firms.

Pedro Pligher is a Latin America correspondent for Defense News. He has reported on politics, economics and the Brazilian small arms industry.

**66 . Date: 07-05-2024Loitering Munition - Mini - General - PlatformTeledyne unveils Rogue 1 exploding drone sought by Marine CorpsURL: https://www.defensenews.com/unmanned/uas/2024/05/07/teledyne-unveils-rogue-1-exploding-drone-sought-by-marine-corps/**

Teledyne FLIR Defense plans to provide more than 100 of its Rogue 1 attack drone, capable of targeting infantry and armored vehicles, to the U.S. Marine Corps this year.

The anticipated deliveries follow the company’s selection to the Organic Precision Fires-Light initiative, which seeks to arm Marines with easy-to-use, explosives-laden unmanned aerial systems. Teledyne is one of three companies competing for orders on the potential $249 million OPF-L arrangement; the two others are AeroVironment and Anduril Industries. AeroVironment said an initial order was valued at nearly $9 million.

Rogue 1 weighs about 10 pounds and can be retrieved from a carrying tube. Its quadcopter features fold out, and it is capable of vertical takeoff and landing, or VTOL, meaning no additional launching gear is required.

Its interchangeable warhead — for training, for taking out troops on foot, and for blasting through armor — sits on a gimbal and is coupled with sensors. Should the drone not explode or be recalled, it can be disarmed and reused thanks to a mechanical disconnect.

Brian Bills, the company’s director of UAS products, told C4ISRNET what makes Rogue 1 stand out is its VTOL design as well as the accuracy with which troops can hit a target.

“While we only have a roughly 1 pound warhead, we’re able to put that entire 1 pound to incredible use, due to that precision that’s offered by that gimbal,” Bills said in an interview. “One of them is designed to be kind of an anti-armor, so it’ll poke a hole through steel. The other one is forward-fragmenting, think of a really advanced shotgun effect with tungsten cubes, designed for anti-personnel and soft-skinned vehicles.”

The Marine Corps has since at least 2018 sought to put armed drones in the hands of infantry squads, Marine Corps Times reported.

The popularity of such systems has only ballooned since. Footage from the Russia-Ukraine war and across the Greater Middle East showcases their deadly effect.

Rogue 1 was first supplied to U.S. Special Operations Command in 2022 for its Ground Organic Precision Strike Systems program, or GOPSS. An initial batch was also provided to the Marine Corps Warfigthing Laboratory for testing as part of the IBX-30 exercise, according to David Viens, Teledyne’s vice president of U.S. business development.

“I think the Marine Corps is going to have to do some experimentation because the capability is so novel,” he said in an interview.

“You see Ukraine videos of Javelins hitting a T-90 tank and the turret going off the tank. We don’t believe that’s necessary,” he said. “Because of the precision of this, I can actually create a firepower- or a mobility-kill on the tank without a catastrophic explosion.”

Colin Demarest was a reporter at C4ISRNET, where he covered military networks, cyber and IT. Colin had previously covered the Department of Energy and its National Nuclear Security Administration — namely Cold War cleanup and nuclear weapons development — for a daily newspaper in South Carolina. Colin is also an award-winning photographer.