**260 . Date: 07-01-2025Fixed Wing - Armed ISR / ISTAR - Small - General - PlatformKalashnikov Announces First Flight of KUB-10E Attack DroneURL: https://www.uasvision.com/2025/01/07/kalashnikov-announces-first-flight-of-kub-10e-attack-drone/**

The Kalashnikov Concern has released a video featuring the first flight of the KUB-10E, a new guided munition (GM) model in the KUB family.

It is designed to target enemy light vehicles and armored personnel carriers, command posts, air and missile defense facilities, communications surveillance and jamming sites, logistics infrastructure, combat and logistics units, field storage depots for ammunition, fuel, and lubricants, drone launch sites, and unsheltered aircraft (helicopters) at airfields.

The system can be used at any time of day, in various weather conditions, including wind gusts up to 15 meters per second. It operates effectively in temperatures ranging from -30 to +40 degrees Celsius at the ground level.

The new guided munition boasts a significantly longer range and greater power compared to the previous models in the line-up. The GM guidance method is based on pre-specified coordinates and data from the global navigation satellite system (GNSS). The drone is catapult-launched. It has a cruise flight speed of 100 km/h. Its flight altitude ranges from 100 to 2,500 meters.

The KUB GM has proved to be extremely effective in the SMO zone, and the feedback from the servicemen has been positive. This year, Kalashnikov Concern has almost tripled its production volume. The KUB range includes several versions of guided munitions.

**261 . Date: 07-01-2025Hybrid Rotary / Fixed Wing - Cargo - Small - GeneralWingcopter, ITOCHU and ANA Test Drone-Based Transport of Research Blood in JapanURL: https://www.uasvision.com/2025/01/07/wingcopter-itochu-and-ana-test-drone-based-transport-of-research-blood-in-japan/**

– ITOCHU Corporation, Wingcopter‘s partner in Japan, haa tested the transport of research blood1 using Wingcopter’s delivery drone in a research project. Together with ANA Holdings and the local blood center of the Japanese Red Cross, research blood was flown between the cities of Urasoe and Nago in Okinawa Prefecture.

The project2 aims to investigate the effectiveness and efficiency of drones in the delivery of blood products, with the long-term goal of relieving the burden on delivery staff and being prepared for disasters, especially in regions where traditional forms of transport are inefficient. The prefecture of Okinawa, with its 48 inhabited islands, is a prime example of such a region. Supplying these islands using conventional delivery methods requires a lot of personnel and time.

With drone deliveries, it will be possible to transport only the required amount at the exact moment it is needed. This enables a fast and efficient supply of blood products, even in emergencies and in response to natural disasters. Depending on weather conditions, the 53 km long test route between Urasoe and Nago was covered by the Wingcopter in as little as 32 minutes.

A special transport container was used to keep the blood at a constant temperature of 2 to 6 degrees Celsius during the flight. In addition, experts have also investigated the possible effects of transport by drone on the quality of the blood supplied.

“Okinawa Prefecture is located in the southernmost part of Japan and is known for its high temperatures in the summer. Prior to the Proof of Concept (POC), we conducted multiple basic studies confirming the temperature management capability of the drone’s blood delivery box, which was manufactured and retrofitted by SUGIYAMA-GEN CO., LTD. in Tokyo. In addition, we were able to transport blood in a manner that complies with Japan’s ‘Guidelines for Transporting Medicines by Drones’”, elaborates Hiroshi Fujita, MD, PhD, Director of Department of Transfusion Medicine at Tokyo Metropolitan Bokutoh Hospital.

“The types of blood transported were red blood cell fluid and whole blood. Both types of blood are likely to be used in disasters and emergencies and require strict temperature control of 2 to 6 degrees Celsius. The guidelines also require measures to deal with vibrations that occur during transportation. In this POC we were able to confirm that the group of blood transported by vehicle and drone was of comparable quality to the blood of the non-flying group (control group). The results of this verification therefore show that drones may be useful as a means of transporting blood appropriately to where it is needed. We hope to see Level 43 testing of blood transport by drones in the future.”

Armando Koerig Gessinger, Chief Revenue Officer at Wingcopter, comments:

“We are pleased to have worked on this project with ITOCHU, ANA and other partners, and to once again have been able to demonstrate the versatility of the Wingcopter 198. It is important to test as many real-world applications as possible under a wide range of conditions before type certification is granted, so that we can then scale up across Japan together with our partners.”

Kenji Suzuki, Vice President at ANA Holdings Inc., adds;

“Based on ANA’s technology and experience accumulated through more than 70 years of aircraft operation, ANA performed safe high-speed flights over long distances with the Wingcopter. In collaboration with ITOCHU and Wingcopter, ANA will take on the challenge of solving the issues facing the transportation of blood products.”

Masaharu Sato, Deputy General Manager, Aerospace Department at ITOCHU Corporation, adds:

“The feasibility study in Okinawa Prefecture brings us another step closer to our goal of offering drone-based services that address the diverse needs and social problems of the Japanese society. That is why we have already conducted POCs with different focuses in Hokkaido and Niigata, among other places, and intend to conduct further ones in the coming months.”

ITOCHU plans to integrate multiple simultaneously operating delivery drones into the conventional ground-based supply network in the future, thus helping to maintain a sustainable medical system, even in the event of labor shortages and emergencies in times of crisis. In addition, the company aims to introduce a commercial drone delivery service, in which the Wingcopter 198 will be used, among other things, to deliver high-priority medical and pharmaceutical products.

In March 2024, Wingcopter, with the support of ITOCHU, had applied for type certification in Japan for the Wingcopter 198 and was the first foreign company to be accepted for the type certification process by the Japan Civil Aviation Bureau (JCAB) of the Ministry of Land, Infrastructure, Transport and Tourism. A successful completion of the process would allow commercial flights beyond visual line of sight (BVLOS) and over inhabited areas.

**262 . Date: 09-01-2025Fixed Wing - ISR / ISTAR - Mini - ContractCalifornia Startup Wins $100M US Air Force Drone ContractURL: https://www.uasvision.com/2025/01/09/california-startup-wins-100m-us-air-force-drone-contract/**

The US Air Force has awarded Firestorm Labs a $100-million contract for its small unmanned aerial systems. The project calls for the California-based company to deliver its flagship drones, associated support services, and research and development work for multiple applications.

Firestorm currently offers the Tempest 50, a platform manufactured through the use of proprietary 3D printers called xCell, which could enable the rapid production of drone parts at a temporary location near a warzone.

According to an update from the Pentagon, the deal will cover the integration of the drones into the US Air Force’s innovation arm AFWERX at Eglin AFB in Florida.

It will also support the Adaptive Air Enterprise, Hale Cluster, and Babbage Flock initiatives, which are military and federal projects that utilize drone swarms.

Additionally, the contract will be employed for activities related to “robotic and autonomy platforms for interoperable devices.”

Firestorm will run associated works in San Diego, with an expected completion date of December 2031.

The Tempest 50 weighs less than 55 pounds (25 kilograms), has an airframe length of 6 feet (1.8 meters) and a wingspan of 7 feet (2.1 meters). It is designed to transport up to 10 pounds (4.5 kilograms) of cargo including standard payloads and explosives.

Tempest 50 unmanned aerial systems

Firestorm claims that the modular and open-architecture drone costs about one-fifth of the production value and about one-tenth the time to build compared to existing fixed-wing systems with similar specifications.

In the field, the aircraft can deploy for up to 36 hours.

Firestorm secured $12.5 million in initial seed funding last year from a Lockheed Martin-led consortium to expand the startup’s projects, particularly in its expeditionary 3D specialty.

In an interview with the San Diego Business Journal, Firestorm CEO Dan Magy revealed that the firm will move its operations from its existing 15,000-square-foot (1,394-square-meter) center south of Marine Corps Air Station Miramar in San Diego to a 35,000-square-foot (3,252-square-meter) space on the northern section of the base.

The company is also working on a second unmanned aerial system called El Niño that has a smaller airframe compared to the Tempest.

**263 . Date: 16-01-2025Fixed Wing - Armed ISR / ISTAR - MALE - SafetyDrishti Starliner Crashes off Indian Coast During TrialsURL: https://www.uasvision.com/2025/01/16/drishti-starliner-crashes-off-indian-coast-during-trials/**

The Drishti 10 Starliner drone, manufactured at Adani Defence and Aerospace facility Hyderabad, on Tuesday crashed off the Porbandar coast in Gujarat during its pre-acceptance trials. It would have been inducted upon completing trials.

Sources confirmed the drone, also known as Hermes 900, that crashed was operated by the supplier while it crashed into the sea.

“It has been recovered,” a source said.

While each system costs more than Rs 120 crore ($13.8M), “there won’t be any financial implications for the Indian Navy as the system was not yet inducted,” added the source.

These drones are being assembled under licence from Israel and are based on Hermes 900 Starliner manufactured in Israel by its firm Elbit Systems. The medium-altitude long-endurance drone is already in service with the Navy which inducted one last year. The Navy and the Army had ordered two such drones each.

**264 . Date: 21-01-2025GeneralGeneral Atomics Pitches Drone Launch System for US and Allied WarshipsURL: https://www.uasvision.com/2025/01/21/general-atomics-pitches-drone-launch-system-for-us-and-allied-warships/**

General Atomics unveiled concepts for the installation of a new drone launch system on a variety of vessels, including the Royal Navy’s Daring-class (Type 45) destroyer and U.S. Navy’s Expeditionary Sea Base.

The company claims the “Electric Launch System for Unmanned Aircraft” is part of a broader effort to support the launching of drones in constrained environments both on land and at sea.

“As you know, with the proliferation of RPAS [Remotely Piloted Aircraft System] worldwide, whether on land or sea, we’ve been asked to look at the launch of RPAS in very small footprint from Navy vessels. It’s been looked at primarily Europe right now. Possibly over in the Indo-Pacific area too,”

Gary Hopper, Vice President of Strategic Development at General Atomics Electromagnetic Systems told Naval News.

Concepts for the installation of the Electric Launch System for Unmanned Aircraft on the Daring-class destroyer, Expeditionary Sea Base Ship, Izumo-class helicopter destroyer and Queen Elizabeth aircraft carrier. Courtesy of General Atomics

The company stressed that the concepts shown on the show floor of the annual Surface Navy Association symposium were “entirely different” from the company’s Electromagnetic Aircraft Launch System seen on the Ford-class aircraft carriers and the future French Navy PANG. According to Hopper, the concept prioritizes the launching of unmanned systems compared to the fighter and support aircraft launched from carriers. Compared to EMALS, the drone launcher requires a minimal footprint on a vessel. Company graphics claim that the launcher only needs a 4 foot by 2 foot installation area.

“It doesn’t have the same redundancy, same requirements you have for manned flight. So it’s a lot simpler system that (can be) put on, possibly some the British carriers or other vessels,”

said Hopper.

Installation proposals on the Royal Navy’s Queen Elizabeth-class and Japan Maritime Self-Defense Force’s Izumo-class carriers were also displayed. In addition, a rendering for a ground-based system in support of expeditionary missions was highlighted. Electromagnetic Systems also confirmed that Aeronautical Systems, a sister company, is examining this concept for the deployment of its Collaborative Combat Aircraft from land-based airfields.

Hopper noted that further designs were being examined by the company for other countries within the North Atlantic Treaty Organization and characterized the broader effort as an initiative by the alliance to get unmanned aerial systems onto vessels beyond aircraft carriers.

“There are other we’re looking at some other examples, other NATO countries. I’d say it’s more of a NATO initiative to look at putting it on aircraft. So we use that particular vessel, but there are other vessels out there, again, similar, similar size. In fact, we’re talking about takeoff distance of 22 meters, not very long at all,” said Hopper.

General Atomics Mojave drone taking off from ROKS Dokdo – ROK Navy Photo

General Atomics performed tests of its drones of HMS Prince of Wales (R09) and ROKS Dokdo (LPH-6111) in 2023 and 2024 respectively. The company told Naval News that it is working on a “very unique recovery plan” given the lack of space on surface combatants and support vessels to receive the drones.

**265 . Date: 22-01-2025Fixed Wing - Armed ISR / ISTAR - MALE - GeneralFrance Retires Reaper Block 1 for Block 5 Extended-Range UASURL: https://www.uasvision.com/2025/01/22/france-retires-reaper-block-1-for-block-5-extended-range-uas/**

France has retired its General Atomics Aeronautical Systems Inc (GA-ASI) MQ-9 Reaper Block I unmanned aircraft system (UAS) in favour of the MQ-9 Reaper Block 5 Extended-Range (ER) UAS.

The French Air and Space Force (l’Armée de l’Air et de l’Espace: AAE) announced the transition on 21 January, noting the conclusion of 11 years of Reaper Block 1 operations at Cognac-Chateaubernard Air Base.

“Now it’s time for the Reaper Block 5 in its extended range version, a new step to go even further for longer,”

the AAE said on its official X (formerly Twitter) account.

France had six Reaper Block 1 unmanned aerial vehicles (UAVs) that it is now replacing with 12 Reaper Block 5 ER UAVs, the first of which were delivered in 2020. The Block 5 ER builds on the Block 1 in that it features field-retrofittable capabilities, such as wingborne fuel pods and reinforced landing gear. It also features winglets and a four-bladed pusher-propeller in place of the standard three-bladed unit. These combine to give the Block 5 ER a 30 hour endurance (compared with 24 hours for the Block 1) and a range of 2,592 km (compared with 1,850 km).

While the earlier Block 1 UAVs had been unarmed and used exclusively for intelligence, surveillance, and reconnaissance (ISR) missions, the Block 5 ER UAVs are armed with GBU-12/49 Paveway precision-guided bombs and AGM-114 Hellfire air-to-surface missiles, and are equipped with a Foreign Military Sales (FMS)-acquired pod for electronic intelligence gathering.

**266 . Date: 22-01-2025M-Rotary - General - SoftwareParalysed Man Flies Virtual Drone Using Brain ImplantURL: https://www.uasvision.com/2025/01/22/paralysed-man-flies-virtual-drone-using-brain-implant/**

Researchers at the University of Michigan in Ann Arbor have developed a device that let a 69-year-old man with paralysis fly a virtual drone using only his thoughts.

The brain–computer interface (BCI) decoded the man’s brain activity as he imagined moving three groups of digits in real time. By associating neural signals with the movements of multiple fingers, the work builds on previous BCI research, most of which has focused on moving a single computer cursor or whole virtual hand. The feat offers hope that BCIs could one day help people with paralysis to perform a wider range of activities, such as typing or playing complex video games.

“There’s a lot of things that we enjoy or do as humans where we use multiple individuated finger movements, so like typing, sewing, playing a musical instrument,”

says study co-author Matthew Willsey, a neurosurgeon at the University of Michigan in Ann Arbor.

“That’s what this line of work is focused on, how we enable the control of multiple things at the same time.”

The study, published on 20 January in Nature Medicine, was inspired by the participant’s own request to use a BCI to fly a drone. He told the researchers that controlling the virtual object was like playing a musical instrument.

“Flying it is tiny little finesses off a middle line, a little bit up, a little bit down,” he said.

The research was published in a paper entitled ‘A real-time, high-performance brain-computer interface for finger decoding and quadcopter control’ that can be accessed here.

**267 . Date: 24-01-2025Partnership - ArmamentHevenDrones Partners with SMARTSHOOTER for Drone DefenseURL: https://www.uasvision.com/2025/01/24/hevendrones-partners-with-smartshooter-for-drone-defense/**

– HevenDrones (Heven), the market leader in hydrogen-powered drones, has announced a partnership with SMARTSHOOTER, a global innovator in fire control systems that significantly increase hit probability against static and moving ground and aerial targets.

The collaboration integrates SMARTSHOOTER’s SMASH Dragon platform with Heven’s H100 and Urban drone platforms, enabling precision targeting and engagement of both ground and aerial threats.

“As drone conflicts escalate, we know that counter-drone technology will prove critical to the evolving needs of the armed forces,” said Bentzion Levinson, CEO of Heven. “By integrating our drones with SMARTSHOOTER’s fire control systems, we aim to address customer demand for the future needs of remotely-controlled warfare.”

SMASH Dragon is an advanced robotic weapon payload that can be mounted on various drones and unmanned aerial platforms. Leveraging SMARTSHOOTER’s SMASH proprietary fire control and target acquisition algorithms, along with ballistic-calculated shot release, the system directs the weapon and accurately times the shot to achieve a precise hit. The system is uniquely designed to lock, track, and engage unknown targets in unpredictable environments, whether static or dynamic, day or night, unaffected by target movements or human errors such as fatigue and stress.

Smash Dragon

Staying at the forefront of military technology innovation, SMASH’s proven track record includes recent successful deployments and significant contracts to supply the SMASH 3000 system to NATO Countries for counter-drone operations and equipping the British Army with SMASH systems for counter-unmanned aerial system (C-UAS) capabilities.

About HevenDrones

HevenDrones was founded in 2019 with a clear vision: To unlock the immense potential of the drone economy. Heven’s hydrogen-powered, runway-independent drones are designed with endurance and adaptability in mind. Built for the most complex missions, Heven’s drones operate anywhere—efficiently, quietly, and reliably— providing the warfighter with the technology to get the job done.

About SMARTSHOOTER

Founded in 2011, SMARTSHOOTER is an Israeli-based company that has developed world-leading fire control systems to enhance the accuracy and effectiveness of small arms. Their SMASH product line, which includes the SMASH Dragon, utilizes artificial intelligence, computer vision, and advanced algorithms to enable precise targeting of both ground and aerial threats, including drones. Headquartered in Yagur, Israel, SMARTSHOOTER also operates subsidiaries in the U.S. (Maryland), Europe (Germany), and Australia, serving a diverse array of global clients such as the Israel Defense Forces, U.S. Army, British Army, and other NATO member forces.

**268 . Date: 28-01-2025Fixed Wing - Research - HALE - ContractXQ-67 Getting Upgrades in Demon Ape ProgramURL: https://www.uasvision.com/2025/01/28/xq-67-getting-upgrades-in-demon-ape-program/**

The U.S. Air Force’s XQ-67A drone is set to receive modifications and upgrades to demonstrate its ability to perform certain missions as part of a program called Demon Ape. Originally developed as a ‘sensor truck’ for the once-secretive Off-Board Sensing Station (OBSS) program, the stealthy XQ-67A is now being used as a testbed to support the Air Force’s larger Collaborative Combat Aircraft (CCA) advanced drone effort.

General Atomics, which built the drone, has also confirmed that it served as the basis for its now-in-development CCA design.

The Air Force Research Laboratory (AFRL) awarded General Atomics Aeronautical Systems, Inc. (GA-ASI) a sole-source contract for the Demon Ape-related work on Jan. 17. Demon Ape is actually a forced acronym standing for Demonstration of Autonomous Collaborative Platform Performance and Effectiveness. The XQ-67A broke cover in February 2024, which TWZ was the first to report, and made its maiden flight later that month.

“The Government currently requires a mix of research and data, hardware, and software in support of continuing the research and development of the XQ-67A,” according to an online notice about the contract award. “That work consists of integrating specific mission systems and upgrading the vehicle to ensure adequate power generation and thermal management capacity.”

A copy of the formal justification for the sole-source contract is attached to the notice, but is heavily redacted. Still, it does provide some additional details, including that the changes to the XQ-67A are tied to at least one specific mission set.

“The Government intends to continue the research and development of the XQ-67A by modifying the aircraft [redacted],” the justification document says. “For the XQ-67A to perform this mission, the offeror will have to integrate the specific mission systems [redacted] as well as upgrade to ensure adequate power generation and thermal management capacity.”

“At the conclusion of OBSS, the XQ-67A will have designs ready for the integration of mission systems,” the Air Force’s justification for the sole-source contract adds. “Additionally, the XQ-67A will have been integrated with critical mission infrastructure [redacted].”

**269 . Date: 30-01-2025ContractInsitu Gets $25M US Navy Support ContractURL: https://www.uasvision.com/2025/01/30/insitu-gets-25m-us-navy-support-contract/**

– Insitu Inc., Bingen, Washington, was awarded a $25,667,674 firm-fixed-price order (N0001925F0180) against a previously issued basic ordering agreement (N0001921G0007).

This order provides unmanned aircraft systems intelligence, surveillance, and reconnaissance support services, to include pre and post deployment support, site survey, training, and coordination and data support in support of the Department of Defense and other government agencies.

Work will be performed in Bingen, Washington (20%); and various undisclosed locations outside of the continental U.S. (80%), and is expected to be completed March 2028. Fiscal 2025 operation and maintenance (Navy) funds in the amount of $4,305,873 will be obligated at the time of award, all of which will expire at the end of the current fiscal year. This order was competed as a limited source.

Naval Air Systems Command, Patuxent River, Maryland, is the contracting activity. (Awarded Jan. 27, 2025)

**270 . Date: 03-02-2025Fixed Wing - Armed ISR / ISTAR - HALE - General - PlatformChina’s Commercial Mach-4 Drone to Make First Flight Next YearURL: https://www.uasvision.com/2025/02/03/chinas-commercial-mach-4-drone-to-make-first-flight-next-year/**

A Chinese start-up is aiming to develop a supersonic drone capable of reaching speeds four times the speed of sound. Lingkong Tianxing Technology, the company behind the project, unveiled the unmanned aerial vehicle (UAV), named Cuantianhou or “Soaring Stone Monkey,” at a news conference in Chengdu, the capital city of Southwest China’s Sichuan Province.

The model’s development marks a significant step in adapting military hypersonic technology for commercial use. Cuantianhou’s design is part of the firm’s broader ambitions to create a supersonic passenger jet.

The UAV’s first test flight is scheduled for next year, signaling China’s growing advancements in supersonic technology and its potential civilian applications.

In October 2024, Lingkong Tianxing tested a prototype commercial plane capable of nearly double the speed of the Concorde’s supersonic performance.

The Chinese firm’s supersonic drone is claimed to be capable of reaching Mach 4.2 at an altitude of 12.4 miles (20 kilometers), more than twice the speed of Concorde.

Weighing 1.5 tonnes and measuring seven meters long, the unmanned aerial vehicle is powered by two detonation engines. Its first flight is scheduled for next year as part of a larger initiative to develop a high-speed passenger jet, projected for prototype testing by 2030.

Supersonic technology, traditionally a military asset, is now being adapted for commercial use. Several international start-ups, including ventures in the United States and Switzerland, are exploring similar advancements.

The Chinese drone and its related projects signal growing competition in hypersonic innovation, reflecting broader efforts to bridge military and civilian applications.

In October, Lingkong Tianxing Technology tested a prototype commercial plane capable of nearly double the speed of the Concorde’s supersonic performance.

Lingkong Tianxing is accelerating its research and development in supersonic aircraft.

In October, the company successfully completed test flights of its Yunxing supersonic aircraft, evaluating key technologies like aerodynamics, heat resistance, and control systems. Initially scheduled for a full prototype flight in 2027, the Yunxing UAV’s timeline has been advanced to 2026 due to significant progress.

The company’s Cuantianhou UAV incorporates optimized aerodynamics compared to Yunxing, eliminating the front canard and adjusting components for a more efficient angle of attack.

Recent tests demonstrated the UAV’s capabilities, including a climb of 6.21 miles (10 kilometers) with speeds from Mach 3.3 to Mach 4.1 and dynamic pressure ranges of 39 to 114 kPa. The UAV showcased impressive fuel efficiency, consuming just 13.2 pounds (6 kilograms) of fuel to cover 31 miles (50 kilometers).

Lingkong Tianxing has also introduced its next-generation Jindou-400S detonation engine, an upgraded version of its predecessor. The new engine features multiple ignitions, weighs 100kg—down from 300kg—and produces 4,000 Newtons of thrust, an improvement from 2,500 Newtons. With a reduced length of 1.9 meters, the engine supports speeds up to Mach 4.2 while improving power-to-weight ratio and thrust.

The UAV series’ rapid iteration stems from extensive testing, including 88 test flights over six years, and the use of advanced supercomputing simulations. The company’s proprietary 3D printing technology has further enhanced the airframe design, reports SCMP.

According to the firm, with advancements in noise suppression, materials science, and flight control systems, the development of supersonic passenger flights is becoming increasingly feasible.

**271 . Date: 04-02-2025Fixed Wing - Armed ISR / ISTAR - MALE - SafetyBayraktar Akıncı Drone Crashes in LibyaURL: https://www.uasvision.com/2025/02/04/bayraktar-akinci-drone-crashes-in-libya/**

A Turkish-made Bayraktar Akıncı drone has crashed in Libya for the first time. Images and videos of the wreckage were shared online shortly after the incident.

The unmanned aerial vehicle (UAV) was found near Agilata, a city situated between Tripoli and the Tunisian border. This marks the first recorded crash of a Bayraktar Akıncı drone in Libya.

Markings on the wreckage confirm that the drone belonged to the Libyan Air Force. The presence of this advanced model in Libya was first confirmed in May 2023, when the Libyan Prime Minister released images of the Akıncı being used in anti-smuggling operations.

The drone, one of Turkey’s most advanced UAVs, was recently sold to the Libyan Government of National Accord (GNA) forces. It was likely based at Misrata Air Base, conducting both combat and training missions. Images show that it was armed with high-precision MAM-L guided aerial bombs.

First report of Tripoli acquiring the Akinci was in 2022, when Libyan politician and businessman Abdulhamid Dbeibah who is the prime minister of Libya under the Government of National Unity (GNU) in Tripoli on Tuesday 25, October 2022 visited Turkey where he signed a military cooperation with the Turkish Defence Minister Akar Hulusi.

Local media reported at the time that a deal for the acquisition of the Turkish-built Akinci drone was later signed between both countries. This move consolidated Dbeibah’s grip on power by protecting his administration from a fresh offensive by Haftar’s force, although, Turkish military presence is already preventing such attempts.

The exact cause of the crash is still unknown. Some sources suggest it may have been shot down by smuggling groups, pointing to smoke in the sky that indicates it was possibly hit by a missile fired by Libyan National Army (LNA) forces under General Haftar.

This crash is the first recorded loss of a Bayraktar Akıncı, a model that has only recently begun to be delivered to international clients. At least two of these drones were transferred to Libya in May 2023 for use in counter-smuggling operations.

In addition to Libya, the Bayraktar Akıncı is already in service in several countries, including Turkey, Pakistan, Ethiopia, Azerbaijan, Mali, the United Arab Emirates, and Burkina Faso.

Bayraktar AKINCI is capable of conducting operations performed with fighter jets. It carries electronic support systems, dual satellite communication systems, air-to-air radar, collision avoidance radar and synthetic aperture radar.

Bayraktar AKINCI can be used in air-to-ground and air-to-air attack missions as well. Ethiopia and Burkina Faso have acquired the Akinci.

Libya already fields about 20 Bayrakter TB2 drones which were used extensively during the recent Civil war against Haftar’s Libyan National Army. However, several of them were lost during the conflict. They were ordered in 2019.

On its own, Haftar’s LNA fields Chinese-made Wing Loong I (6 units) and Wing Loong II (10) units, as well as 12 Iranian Mohajer-4 drones, and 10 Russian-built Orlan-10 tactical drones.

**272 . Date: 04-02-2025Fixed Wing - Armed ISR / ISTAR - MALE - GeneralIndian Navy Gets Replacement for MQ-9B Drone that Crashed In SeptemberURL: https://www.uasvision.com/2025/02/04/indian-navy-gets-replacement-for-mq-9b-drone-that-crashed-in-september/**

Months after an MQ-9B Sea Guardian drone crashed into the Bay of Bengal, the Indian Navy has received a replacement for the high-altitude long-endurance surveillance platform from its US-based manufacturer General Atomics, authoritative military sources said on Sunday.

One of the two MQ-9B drones that the Indian Navy had taken on lease was lost in a “controlled ditching” at sea following a technical snag in mid-September last year. General Atomics has sent a replacement for the drone that crashed into the sea as per contract obligations, the sources told PTI.

The MQ-9B drones are capable of remaining airborne for over 35 hours and can carry four Hellfire missiles and around 450 kgs of bombs. In 2020, the Indian Navy took the two MQ-9B drones on lease for a period of one year. However, the lease period was extended subsequently.

In October, India sealed a mega deal with the US to procure 31 Predator drones from General Atomics at a cost of nearly USD 4 billion to crank up the military’s combat prowess along the contested borders with China. The supply of the Predator drones will begin in January 2029, the sources said.

While the Navy will get 15 Sea Guardian drones, the Indian Air Force and the Army will each get eight Sky Guardian drones. The sources also said that the two multi-billion dollar procurement projects — one for 26 naval variants of Rafale jets from France and another for three Scorpene submarines — will be finalised by the end of the current fiscal.

Both the deals are in the final stages and will be sealed by March 31, they said. In July 2023, the defence ministry approved the purchase of 26 Rafale (marine) jets from France, primarily for deployment on board the indigenously built aircraft carrier INS Vikrant.

The ministry had also cleared the procurement of three Scorpene submarines from France. The procurement of the Rafale (M) jets along with associated ancillary equipment including weapon systems and spares would be based on an inter-governmental agreement (IGA).

The sources also said that the Navy is pushing the case for another indigenously-built aircraft carrier as the replacement for INS Vikramaditya, a Russian-origin platform.

India’s first indigenously built aircraft carrier INS Vikrant (IAC I) was commissioned into the Navy in September 2023. Built at a cost of around Rs 23,000 crore, INS Vikrant has a sophisticated air defence network and anti-ship missile systems. It has the capacity to hold 30 fighter jets and helicopters.

At present, India has two aircraft carriers — INS Vikramaditya and INS Vikrant. The Navy is pitching for another indigenously-built aircraft carrier as a replacement for INS Vikramaditya which is expected to have a lifespan of another 10 years.

**273 . Date: 05-02-2025M-Rotary - Loitering Munition - Mini - General - PlatformUS Startup Develops Football-Sized Kamikaze DroneURL: https://www.uasvision.com/2025/02/05/us-startup-develops-football-sized-kamikaze-drone/**

The American startup company XDOWN recently announced details of a state-of-the-art, throwable tactical drone designed for quick and stealthy use.

Known as the P.S. Killer (PSK), the unmanned aerial system (UAS) bears a strong resemblance to an NFL football, which is no mistake. According to XDOWN, the shape of the 3.7-pound PSK allows users to hand-launch the kamikaze drone like a quarterback from practically any location and gives the weapon heightened accuracy.

XDOWN describes the PSK’s deployment process as simple: “Grab it – Switch it ON – Throw it.” The drone launches into operation within two seconds, much like a quarterback throwing a football.

The kamikaze drone has a 40+ miles range and can reach 135 knots speed.

In 1973, the US Army experimented with anti-tank grenades housed in Nerf footballs, leveraging soldiers’ familiarity with throwing footballs.

Nerf Football Grenade

XDOWN developed the PSK to enhance special operations forces’ ability to conduct high-value target (HVT) missions. The drone’s compact size, rapid deployment, and advanced swarm capabilities integrate seamlessly into mission planning, providing operatives with a tactical advantage in dynamic environments.

For counterterrorism operations, the PSK offers precision strike capabilities, reducing collateral damage in urban environments. Its ability to neutralize threats quickly while minimizing risks to civilians and infrastructure makes it a viable alternative to conventional strike methods.

Drones are becoming increasingly more important in military arsenals, and they are used extensively as weapons and for reconnaissance missions.

XDOWN, whose team is made up of military veterans, reported that the PSK is more cost-efficient than many drones, and it can be easily maintained and upgraded.

The PSK’s design allows it be utilized for a diverse range of tasks aside from simply engaging in electronic warfare, and the drone can conduct surveillance and reconnaissance operations thanks to thermal imaging.

Simply replacing the warhead container on the drone can allow the drone to transport food and medical kits to remote locations, conflict areas or disaster zones.

“This exceptional adaptability solidifies the PSK as a crucial asset for military operations, ready to handle any mission with confidence and efficiency,” XDOWN said in a press release.

Other highlights of the PSK include the ability to take out multiple aerial light threats with a single launch, real-time data exchange with command control and systems designed to enhance situational awareness and coordination.

“By complying with National Defense Authorization Act (NDAA) regulations, it showcases exceptional reliability and a steadfast commitment to upholding high defense standards,” XDOWN said.

**274 . Date: 06-02-2025MarketNordic Unmanned Files for BankruptcyURL: https://www.uasvision.com/2025/02/06/nordic-unmanned-files-for-bankruptcy/**

The board of directors of Nordic Unmanned ASA on 3. February 2025, resolved to file a petition for bankruptcy at Sør-Rogaland tingrett (Sør-Rogaland District Court).

The decision is based on the Company facing an immediate lack of liquidity, estimated to be in the amount of MEUR 4, mainly based on loss of bids assumed to be won, lack of expected funds for services delivered, additional unforeseen capex and financing needs in its subsidiaries. While the Company has sought to explore all realistic potential mitigating actions, this has unfortunately not led to the identification of any viable solution to the situation in time.

Questions regarding the further bankruptcy proceedings should be addressed to the bankruptcy trustee when appointed by Sør-Rogaland District Court.

This information is considered to be inside information pursuant to the EU Market Abuse Regulation (MAR) and subject to the disclosure requirements pursuant to Section 5-12 the Norwegian Securities Trading Act. The stock exchange announcement was published by Tarjei Lode, Chief Financial Officer in Nordic Unmanned ASA, at the time and date stated above in this announcement.

This information is subject to the disclosure requirements pursuant to section 5-12 of the Norwegian Securities Trading Act.

NU Group is a leading European provider of advanced, drones, sensors, AI-powered drone solutions, and UAS-agnostic drone-as-a-service operations. The company serves government agencies, Ministries of Defence, security clients, and corporate clients, offering cutting-edge technology solutions for a wide range of applications, including:

Founded in Norway in 2014, NU Group has offices in Sandnes (NO), Cranfield (UK), Hasselt (BE) and Arnsberg (GER). Nordic Unmanned ASA employs approx. 100 FTEs and is listed on Euronext Growth with the ticker NUMND.The Group’s operating history is 20 years based on AirRobot in Germany.

**275 . Date: 07-02-2025General - DatalinkOPTIMAS Starts European Project for Cybersecure Communications in Free Space with Collaboration of SchiebelURL: https://www.uasvision.com/2025/02/07/optimas-starts-european-project-for-cybersecure-communications-in-free-space-with-collaboration-of-schiebel/**

OPTIMAS, a European project led by “monodon by Navantia”, has begun with the aim of developing an advanced free-space optical communication system for multi-domain defence applications in collaboration with Schiebel.

OPTIMAS is an ambitious project that seeks to provide high-speed data transfer communications with an exceptional level of security, integrating cutting-edge encryption technologies, such as quantum key distribution (QKD).

OPTIMAS will mark a milestone in the development of airborne laser communication systems, providing secure and high-speed communications. It is designed to operate in satellite constellations with applications for space, air (drones), naval and ground units.

The project’s final demonstrator will focus on achieving high-speed, secure, bidirectional optical communications. It will enable advanced satellite pointing, acquisition and tracking capabilities in Low Earth Orbits (LEO). Application in Medium Earth Orbits (MEO) and Geostationary Orbits (GEO) will be also explored, expanding the scope and possibilities of the system.

OPTIMAS is a European consortium with Spanish leadership. It is a powerful group made up of 12 entities from 7 countries, highlighting a strong Spanish presence with 6 organizations involved. Among these, monodon by Navantia assumes the role of project coordinator, reaffirming Spain’s leadership in advanced defence and communications technologies. Schiebel’s CAMCOPTER S-100 will be the dedicated Unmanned Air System (UAS) for this project and the company is in charge of integrating a novel optical laser communication technology into the S-100, enabling the communication between the air segment and a satellite.

The project is developed within the framework of the 2023 work programme of the European Defence Fund (EDF), consolidating international cooperation in technological innovation for defence.

OPTIMAS is formed by:

OPTIMAS is positioned as a key project in the advancement of cyber-secure laser communications, consolidating European collaboration and the technological leadership of Schiebel in the field of multi-domain defence.

Project funded by the European Union.

**276 . Date: 11-02-2025MarketBaykar Achieved $1.8 BN in Exports in 2024URL: https://www.uasvision.com/2025/02/11/baykar-achieved-1-8-bn-in-exports-in-2024/**

Turkey’s Baykar achieved $1.8 billion in exports in 2024, with 90% of its total revenue coming from international sales—yet another milestone in its continued success.

Having self-financed all its projects since launching its UAV R&D program in 2003, Baykar has generated 83% of its total revenue from exports to date. In 2023, the company ranked among Turkey’s top 10 exporters, achieving $1.8 billion in exports—a milestone it successfully repeated in 2024, further cementing its resounding success.

Having single-handedly accounted for one-third of the Turkish defense and aerospace industry’s exports the previous year, the company’s 2024 exports represented a quarter of the industry’s total, helping Turkey maintain its position as the world’s top UCAV exporter.

Thanks to Baykar’s remarkable achievements, Turkey surpassed the United States, Israel, and China in UCAV exports. According to a September 2024 report by the Center for a New American Security (CNAS), Turkey now controls 65% of the global UAV export market. Baykar, which is three times larger than its closest U.S. competitor, has been the world’s leading UCAV company for four years and currently holds an estimated 60% market share on its own.

As the developer of Turkey’s indigenous UCAVs, Baykar continues to expand its global footprint as the largest UAV exporter in the world. 97.5% of Baykar’s current contracts come from exports.

To date, Baykar has delivered its Bayraktar TB2 and Bayraktar AKINCI UCAVs to 35 different countries. While the Bayraktar TB2 has entered the inventory of 34 nations worldwide, the Bayraktar AKINCI has made a significant impact with exports to 10 countries.

The Bayraktar TB2, Baykar’s indigenous and original platform, has successfully entered military inventories worldwide by outperforming global competitors in rigorous selection processes.

In 2023, Bayraktar TB2 was selected over U.S., European, and Chinese alternatives in a competitive process overseen by Kuwait’s Ministry of Defense.

Building on this success, Baykar expanded its presence across NATO and the European Union in 2024. Following an agreement with Croatia on November 19, 2024, Bayraktar TB2 is now in the inventories of six NATO allies and four EU member states.

2024 was a notably active year for Baykar’s exports and deliveries. Having delivered Bayraktar AKINCI aircraft to the United Arab Emirates in January, the company completed the delivery of Bayraktar TB2s to Romania in February. Following the export of various Bayraktar platforms to Albania, the Maldives, Poland, and Mali in the spring, the summer months were marked by deliveries to strategically significant nations such as Kenya, Pakistan, and Morocco.

Finally, Baykar signed an agreement with Croatia and completed deliveries to Kenya, Azerbaijan, and the UAE during the autumn and winter months.

**277 . Date: 12-02-2025M-Rotary - GeneralFinland’s Patria Introduces New Drone RangeURL: https://www.uasvision.com/2025/02/12/finlands-patria-introduces-new-drone-range/**

– Patria expanded its unmanned systems offering in the summer of 2024 by acquiring company Nordic Drones, a Finnish leading drone pilot trainer and manufacturer of drones designed for professional use. The acquisition is a milestone in promoting the export opportunities of the Finnish defense industry.

Patria has extensive experience and strong expertise in unmanned systems (UAS) and aviation. From design to maintenance and training, Patria’s expertise is at the forefront of Finnish drone technology development.

Patria SKY is a multi-mission long-range UAV system, designed in collaboration with professional security industry operators to meet the demanding needs of high-level security authorities. The advanced drone system has undergone rigorous manufacturing and maintenance inspections, receiving approval from Finnish authorities. Patria SKY is built to withstand challenging weather conditions.

Patria ONE is a versatile UAV with modular components and high safety standards. The modular design of Patria ONE allows for swappable radios, fiber optic control, swappable payloads (including explosives), swappable motor arms, and tether readiness. This flexibility makes it suitable for a wide range of missions. The UAV also features a three-step safety system for operator safety when handling explosive payloads. Patria ONE is easy to transport and can be fitted into a tactical backpack, making it highly portable.

The Patria GEO drone is designed for terrain mapping. With a flight time of up to 74 minutes, it can map over 100 hectares in a single flight, making it a quick and easy solution to visualize, measure, and model different kinds of targets.The Patria GEO drone is equipped with a 42Mpx camera, providing a ground sample distance size of 2 centimeters when imaging at 150 meters.

A national drone strategy has been prepared and published in Finland, with the core objective of ensuring the utilization of Finnish technological expertise to create new business opportunities and ensure societal security.

Patria contributes to achieving the goals of the national drone strategy by bringing together the strengths of innovative Finnish actors in the eALLIACE project and promoting European drone development through the ACTUS project.

Patria contributes to achieving strategic goals by bringing together the strengths of Finnish civil and defense sector actors in its eALLIANCE project. Patria also promotes European drone development and regulatory advancement through the ACTUS project (“Advanced capabilities & Certification for Tactical UAV Systems”) funded by the European Defence Fund.

**278 . Date: 12-02-2025Fixed Wing - Armed ISR / ISTAR - HALE - ContractIndian Navy Selects NewSpace for Unmanned WingmanURL: https://www.uasvision.com/2025/02/12/indian-navy-selects-newspace-for-unmanned-wingman/**

In what is easily the most significant deal between the Indian military and a local startup company, the Indian Navy has selected Bengaluru-based startup NewSpace Research & Technologies (NRT) to develop its Naval Collaborative Combat Air Vehicle (N-CCAV), an unmanned aircraft that will operate collaboratively with the navy’s MiG-29K and future Rafale-M fighter aircraft.

The N-CCAV is to be based on NRT’s Abhimanyu collaborative combat aircraft/loyal wingman concept. The contract includes a minimum purchase quantity (MPQ) for a specified number of systems that the Indian Navy has committed to procuring once the platform is ready. Development of the Abhimanyu lightweight jet-powered N-CCAV has begun at NRT.

Livefist can confirm that NRT was chosen by the Indian Navy under the Indian MoD’s Innovations for Defence Excellence (iDEX), a scheme launched by Indian Prime Minister Narendra Modi in 2018 aimed at harnessing leading edge private sector R&D to deliver focused advanced technologies to the Indian military. NRT was chosen from a group of Indian private sector contenders.

Render of Abhimanyu by NewSpace | Edits by Livefist

The Abhimanyu, a low-RCS (radar cross section) design, is expected to be a smaller and lighter platform compared to HAL’s Warrior, with a mandate to deliver manned-unmanned teaming missions with the Indian Navy’s combat aircraft. The two separate CCA developments will consolidate in the future, with Warrior for the IAF and Abhimanyu for the Indian Navy. It must be said, however, that while the Abhimanyu has the Indian Navy’s backing in the form of the contract that will be announced on Feb 10, the IAF is yet to throw its full weight behind HAL’s CATS Warrior.

The Indian military’s selection of these uncrewed platforms is comparable to the U.S. Air Force’s Collaborative Combat Aircraft (CCA) program that envisions a similar drone wingman. In April 2024, the USAF chose General Atomics and Anduril Industries to present their contending platforms for a final selection to be made by 2026.

The NRT Abhimanyu is being designed with modular architecture, making it adaptable for multiple roles, including surveillance, electronic warfare, and strike missions. Documents reviewed by Livefist suggest that NRT is developing the N-CCAV to be both cost-effective and expendable, with an emphasis on rapid production. This approach would enable the Indian Navy—and potentially other operators—to deploy the system in large numbers, complementing both current and future fighter fleets.

Render of Abhimanyu by NewSpace | Edits by Livefist

Project literature also highlights that these interconnected platforms can function as sensors, effectors, and command-and-control nodes, facilitating agile decision-making within a flexible, scalable operational framework. This structure is intended to seamlessly integrate emerging platforms, technologies, and operational concepts in the future.

“Unmanned wingmen and Collaborative Combat Aircraft (CCAs) are not intended to replace manned fighter jets but to serve as strategic force multipliers. These systems can help the Indian Air Force and Navy address squadron shortages, modernize operations cost-effectively, and strengthen defenses against peer adversaries like China.”

said an officer familiar with the agreement, emphasising that prioritising indigenous programs such as Warrior and Abhimanyu would drive AI innovation, enhance air combat capabilities, and enable India to close its capability gap while establishing itself as a leader in autonomous military technology.

The Abhimanyu’s continuous chine-line is visible in this view of the model on display at Aero India 2025 -Angad Singh

A half-scale replica of the Abhimanyu N-CCAV is on display at Aero India 2025, where the Indian Navy and NewSpace are expected to announce the deal.

**279 . Date: 17-02-2025Tethered - ISR / ISTAR - Mini - ContractElistair Gets $3M Contract for Small Tethered UAS from Allied Military ForceURL: https://www.uasvision.com/2025/02/17/elistair-gets-3m-contract-for-small-tethered-uas-from-allied-military-force/**

– Elistair, a global supplier of tethered unmanned aerial systems (UAS) for surveillance and reconnaissance, announced that it has been awarded a €3 million contract to supply tethered small UAS to an allied military force. This contract, secured in collaboration with the world-leading robotics and autonomous systems developer Milrem Robotics, involves the delivery of Khronos tethered small UAS, as well as initial spares, training, and support.

Milrem Robotics will supply the military vehicles that will be equipped with Elistair’s advanced UAS. Deliveries are set to begin in the second quarter of 2025.

Compact, fully automated and designed for integration onto moving vehicles, Khronos offers unmatched endurance and stability, providing real-time aerial intelligence and enhanced situational awareness even in GNSS denied environments. Its continuous operation capabilities make it an ideal solution for persistent surveillance, ensuring that mission-critical information is always available.

**280 . Date: 19-02-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - General - PlatformAeroVironment Announces JUMP 20-X at IDEX 2025URL: https://www.uasvision.com/2025/02/19/aerovironment-announces-jump-20-x-at-idex-2025/**

– AeroVironment has announced the launch of the JUMP 20-X, a next-generation, modular Group 3 uncrewed aircraft system (UAS) designed to meet the dynamic demands of modern warfare. Setting a new benchmark for autonomous maritime operations, the JUMP 20-X delivers unrivaled versatility, efficiency, and precision in contested and complex environments.

Unveiled at the 2025 International Defence Exhibition & Conference (IDEX), the JUMP 20-X is a vertical takeoff and landing (VTOL) medium uncrewed aircraft system (MUAS) engineered to revolutionize shipboard UAS operations. With an advanced heavy-fuel engine capable of running on multiple fuel types, JUMP 20-X enhances operational flexibility, simplifies refueling logistics, and ensures mission adaptability across diverse maritime and expeditionary environments.

Built for long-range, multi-domain operations, JUMP 20-X boasts an impressive 13-hour flight endurance and beyond-line-of-sight (BLOS) connectivity, ensuring persistent surveillance and strike capabilities far beyond the horizon. Its modular 30-pound multi-payload capacity is unmatched in its class, supporting a wide range of mission sets, including:

The JUMP 20-X is built on an open-architecture, payload-agnostic, radio-agnostic, and STANAG-compliant framework, ensuring rapid integration with existing military networks and emerging technologies. This future-proof design enables seamless interoperability across joint, allied, and coalition forces, allowing operators to adapt to evolving mission requirements in real time.

Model of the JUMP 20-X fixed-wing and VTOL UAS at IDEX 2025 in Abu Dhabi, 17 February 2025. Credit: John Hill/ Naval Technology

Designed for hands-free operation in highly complex environments, JUMP 20-X leverages AI-powered autonomy to ensure precise takeoff and landing—even on fast-moving ships in rough seas or under extreme conditions, day or night.

Additionally, AV’s cutting-edge SPOTR-Edge computer vision technology enables automated object detection and classification, enhancing situational awareness and tactical decision-making in real-time. From identifying hostile threats to tracking moving maritime and aerial assets, SPOTR-Edge provides unparalleled intelligence at the tactical edge.

Shane Hastings, AV’s vice president and general manager of Medium Uncrewed Aircraft Systems, emphasized the transformative impact of JUMP 20-X:

“The JUMP 20-X is more than a UAS—it’s a force multiplier that delivers the unmatched versatility, efficiency, and reliability modern operators’ demand. By combining cutting-edge autonomy, extended endurance, and a modular design, JUMP 20-X redefines what’s possible for maritime and expeditionary UAS operations in the most contested domains.”

**281 . Date: 19-02-2025PartnershipBaykar to Build Drone Factory in IndonesiaURL: https://www.uasvision.com/2025/02/19/baykar-to-build-drone-factory-in-indonesia/**

Baykar — an Istanbul-based private-owned firm specializing in unmanned aerial vehicles (UAV) — has partnered with Indonesian defense holding Republikorp to set up a joint venture for local drone production. The deal’s signing for this entity took place on the sidelines of Turkish President Recep Tayyip Erdogan’s talks with his Indonesian counterpart Prabowo Subianto at the Bogor Palace.

“We have agreed to ramp up joint production and defense industry cooperation,”

Prabowo told reporters shortly after the signing ceremony.

Earlier that day, Prabowo told Erdogan that he wanted to see Indonesian and Turkish companies establishing joint ventures. He said that Indonesia’s existing partnership with Turkish defense companies, including Baykar, is “already going well”.

A leaders’ joint statement document issued post-meeting wrote that Prabowo and Erdogan wanted to expand the current defense cooperation “beyond procurement”. “Both leaders … welcomed the establishment of a joint venture and representative offices for Turkish primary defense industry firms in Indonesia,” the document wrote.

The first collaboration was carried out between Baykar Makina and Republikorp to form a Joint Venture Company (JVC) that will focus on the production, assembly, and maintenance of UAVs in Indonesia. The main products to be localized are 60 units of the Medium-Altitude Long-Endurance (MALE) TB3 Bayraktar class UAVs and 9 units of the High-Altitude Long-Endurance (HALE) Akinci Bayraktar class.

Republikorp Chairman Norman Joesoef said that this collaboration aims to strengthen the aerospace industry and national defense independence.

“In addition to production, this collaboration opens up opportunities for research and development of UAV technology at the regional level,” he said on Thursday, February 13, 2025.

CEO of Baykar Makina, Haluk Bayraktar, added that his party will contribute to technology transfer, training of experts, and integration of UAVs into the Indonesian defense ecosystem.

Baykar’s official website shows that it produces various types of UAVs, including the Bayraktar TB2, which the company claims can carry out “surgical-precision strikes”. Indonesian Air Force’s chief of staff Mohamad Tony Harjono had previously told reporters last August that the military was already eyeing the Bayraktar TB2.

President Recep Tayyip Erdoğan and Indonesia’s President Prabowo Subianto (2nd R) look on as Baykar CEO Haluk Bayraktar (L) and Republikorp founder Norman Joesoef (R) sign an agreement at the Presidential Palace, Bogor, West Java, Indonesia, Feb. 12, 2025. (AA Photo)

There are already some existing bilateral deals on arms production. As a case in point, state-run arms producer Pindad and its Turkish counterpart FNSS are jointly developing the medium tank Harimau. Last October, both companies announced that they had agreed to produce a Kaplan armored personnel carrier (APC) for the Indonesian army.

The Baykar-Republikorp joint venture’s agreement came out amid Indonesia’s military modernization plans. The Defense Ministry is also among the few government bodies that get exempted from Prabowo’s budget efficiency measures, meaning that the plans to upgrade defense systems would likely remain unaffected. Prabowo used to be Indonesia’s defense minister before taking office as president last October.

This marked Erdogan’s first visit to Indonesia since 2022. The Turkish leader at the time traveled to Bali to attend the G20 Summit.

**282 . Date: 19-02-2025H-Rotary - Armed ISR / ISTAR - MALE - General - PlatformEdge Group Unveils HT-750 Rotary-Wing UAV at IDEX 2025URL: https://www.uasvision.com/2025/02/19/edge-group-unveils-ht-750-rotary-wing-uav-at-idex-2025/**

The United Arab Emirates’ Edge Group unveiled its unmanned helicopter HT-750 at the International Defence Exhibition & Conference (IDEX) 2025 held in Abu Dhabi from 17 to 21 February.The 1:1 scale model of the HT-750 displayed at IDEX 2025 featured an exoskeleton frame, a modular pod, and a tail boom that terminates in a ‘T-tail’ with a two-blade tail rotor system.

The ANAVIA HT-750 is a high-technology rotary-wing unmanned heavy-lift aircraft featuring intelligence, surveillance, and reconnaissance (ISR) and cargo delivery capabilities

It features a modular mission profile, and is developed by Switzerland-based autonomous air systems maker Anavia, an Edge Group entity. Speaking to Janes , Ishan Sahgal, the founder and co-CEO of Anavia, said that conceptual design work for the HT-750 began in the fourth quarter (Q4) of 2023, with official development work starting in Q1 of 2024.

Jon Andri Jörg, founder and co-CEO, added that

“the core systems like propulsion, avionics, electrical, and mechanical systems of the HT-750 are built into the exoskeleton frame. With the highly modular pod system the UAV [unmanned aerial vehicle] can be adapted for specific mission roles such as intelligence, surveillance, reconnaissance (ISR), logistic missions, medical evacuation (medevac), and troop insertion”.

The fully autonomous UAV is powered by a single turboshaft engine, equipped with a 900 litre fuel capacity, and features a semi-rigid four-blade bearingless rotor system. In a medevac configuration, the HT-750 will be able to carry two stretchers in a side-by-side arrangement, Sahgal added.

**283 . Date: 20-02-2025GeneralAeroVironment Plans FreedomWerx Manufacturing Facility in Salt Lake CityURL: https://www.uasvision.com/2025/02/20/aerovironment-plans-freedomwerx-manufacturing-facility-in-salt-lake-city/**

– AeroVironment has announced the establishment of FreedomWerx, a state-of-the-art advanced manufacturing facility in Salt Lake City, Utah. The $42.25 million project is expected to create 500 jobs over the next five years.

As part of AV’s distributed production strategy, FreedomWerx strengthens the company’s capacity to ensure uninterrupted delivery of precision-strike autonomous systems to government and defense partners. Unlike single-location, hyperscale facilities, AV’s distributed production model enhances national security by ensuring resilient manufacturing and sustained delivery of mission-critical autonomous systems.

By maintaining multiple, strategically located production sites, AV mitigates risks from natural disasters, security threats, and geopolitical disruptions—fortifying supply chain resilience and operational readiness. This approach positions AV as a more reliable and sustainable defense partner, ensuring continuous support to the DoD and allied forces.

Located just minutes from Salt Lake City International Airport, the facility offers strategic access to key transportation hubs, optimizing logistics and supply chain efficiencies. AV anticipates creating more than 500 high-paying jobs, driving economic growth, and advancing Utah’s position as a leader in defense innovation and advanced manufacturing.

This announcement results from a collaborative effort between AV, the Governor’s Office of Economic Opportunity (GOEO), Utah Inland Port Authority (UIPA), and the Economic Development Corporation of Utah (EDCUtah).

“AeroVironment’s autonomous precision-strike systems have revolutionized modern warfare, providing warfighters with the ability to neutralize high-value threats with unprecedented accuracy while minimizing risk to friendly forces,” said Wahid Nawabi, AV chairman, president, and chief executive officer. “This facility represents a critical step in our mission to expand manufacturing capacity, ensuring our forces have the technological superiority needed to deter and, if necessary, decisively defeat adversaries.”

“Utah is the ideal hub for advancing aerospace and defense technologies that are vital to national security and economic growth,” said Ryan Starks, executive director of the Governor’s Office of Economic Opportunity. “Strategic investments like this create jobs, accelerate innovation, and reinforce Utah’s leadership in aerospace and defense. Supporting companies like AV strengthens our state’s economy while driving cutting-edge advancements in the industry.”

“We’re thrilled to welcome AV to Salt Lake City,” said Scott Cuthbertson, president of EDCUtah. “As a leading defense technology company, AV’s expansion will not only bring high-quality jobs to the region but will also further solidify Salt Lake City’s position as a premier hub for advanced manufacturing and defense innovation. We look forward to the long-term contributions they will make to our economy and community.”

“AV’s expansion is a testament to Utah’s growing leadership in advanced manufacturing and aerospace innovation,” said Ben Hart, executive director of UIPA. “By leveraging our strategic infrastructure and economic incentives, we are helping to create high-quality jobs and support a cutting-edge industry that is critical to both national security and technological advancement. We look forward to seeing AV thrive in Salt Lake City and contribute to Utah’s dynamic economy.”

AV anticipates FreedomWerx will begin production in the second half of 2025, further scaling the company’s manufacturing capacity to meet evolving defense requirements. This expansion is a strategic investment in next-generation autonomous capabilities, ensuring U.S. and allied forces remain equipped with advanced, precision-strike solutions built for modern conflicts. As the global threat landscape shifts, AV remains committed to unmatched innovation, agility, and battlefield superiority.

To support the project the Utah Governor’s Office of Economic Opportunity (GOEO) awarded AeroVironment a post-performance tax reduction under the Economic Development Tax Increment Financing (EDTIF) program.

Additionally, the Utah Inland Port Authority (UIPA) announced its approval of an incentive, stackable with one approved by GOEO. The incentive, approved by the UIPA board, allows a maximum of 10 percent of AV’s property tax liability to be rebated over 25 years.

“We’re thrilled to welcome AV to Salt Lake City,” added Scott Cuthbertson, president of EDCUtah. “As a leading defense technology company, AV’s expansion will not only bring high-quality jobs to the region but will also further solidify Salt Lake City’s position as a premier hub for advanced manufacturing and defense innovation. We look forward to the long-term contributions they will make to our economy and community.”

**284 . Date: 20-02-2025Fixed Wing - Loitering Munition - Small - GeneralRussia Starts Production of Turbofan-Powered Shahed-238 DronesURL: https://www.uasvision.com/2025/02/20/russia-starts-production-of-turbofan-powered-shahed-238-drones/**

According to Ukrainian intelligence, Russia has begun local production of Iranian Shahed-238 kamikaze drones, rebranded as Geran-3. The Ukrainians suggest that these drones are equipped with a twin-spool turbofan engine, giving them a range of up to 2,500 km and a top speed of 600 km/h.

This makes them extremely difficult to intercept for Ukraine’s mobile air defense teams, which rely on anti-aircraft machine guns and autocannons.

The first recorded use of the Shahed-238, likely a test launch, took place in January 2024, but no further strikes have been reported since. Leaked documents from Russia’s Alabuga SEZ industrial hub reveal plans for domestic production of various Shahed-238 variants.

The Shahed-238 kamikaze drone represents a significant evolution in Iran’s unmanned aerial vehicle [UAV] technology, particularly noted for its integration of a jet engine over traditional propeller systems.

Unveiled in November 2023 by the Islamic Revolutionary Guard Corps during an aerospace exhibition, this drone has sparked considerable interest due to its potential military applications and its implications for international security dynamics.

The Shahed-238 is essentially an advanced variant of the Shahed-136, which has been widely used in conflicts, particularly by Russian forces in Ukraine.

What sets the Shahed-238 apart is its turbojet propulsion system, which significantly boosts its speed and maneuverability compared to its piston-engine predecessors. The drone’s design is streamlined, maintaining a delta-wing shape but adapted for the increased airflow demands of jet propulsion.

This drone is powered by either the Toloue-10 or Toloue-13 micro-turbojet engines, which enable it to reach speeds of up to 500 km/h, although there are claims from Russian sources suggesting it can achieve speeds up to 800 km/h during a dive.

This substantial increase in speed over the Shahed-136, which tops out at about 180 km/h, poses a new challenge for air defense systems. However, this speed comes at the cost of reduced range and increased thermal signature, making it potentially more vulnerable to infrared-guided missiles.

Three distinct variants of the Shahed-238 have been observed, each tailored for different operational profiles. The first variant employs a basic GPS and GLONASS-based inertial navigation system, similar to that of the Shahed-136, primarily for striking fixed targets. This model focuses on cost-effectiveness, aiming to deliver precision strikes with minimal guidance technology.

The second variant introduces an electro-optical/infrared [EO/IR] camera system. This allows the drone to engage moving targets with greater accuracy, using either autonomous heat-seeking capabilities or operator-controlled guidance via video feed. This feature can significantly enhance its effectiveness against mobile military assets or in scenarios requiring last-minute target adjustments.

The third variant is equipped with a radar-detection system, intended for suppression of enemy air defenses [SEAD]. This model can detect, track, and attack radar installations or other electromagnetic signal sources, providing a strategic advantage in penetrating defended airspaces.

The Shahed-238’s use of Western components, despite international sanctions, is a notable aspect of its construction. Analysis of downed drones has revealed parts like the Czech-made PBS TJ150 turbojet engine, electronic chips from Intel and Texas Instruments, and satellite navigation components from Tallysman Wireless. This has raised questions about sanction evasion and the global supply chain’s role in military technology.

In terms of deployment, there’s unconfirmed evidence from early 2024 suggesting Russia used at least one Shahed-238 in an attack on Ukraine. However, the Ukrainian Air Force has been cautious in confirming these incidents, indicating a possible ongoing assessment of the drone’s capabilities and countermeasure development.

The Shahed-238’s introduction into active conflict zones could shift tactical approaches, given its speed, which challenges conventional anti-aircraft gun engagements, and its diverse guidance systems, which could overwhelm certain defense mechanisms.

Nonetheless, its higher production cost compared to the Shahed-136 might limit its deployment scale, leading to strategic considerations where quality might be prioritized over quantity.

Iran’s push towards such advanced drone technology, particularly in the context of the Shahed-238, underscores a broader trend of increasing reliance on UAVs for asymmetric warfare.

This development not only enhances Iran’s strategic capabilities but also raises the stakes in regional and global security discussions regarding drone proliferation and the need for effective counter-drone strategies.

**285 . Date: 21-02-2025PartnershipTrump, Modi Announce New US-India Autonomous Systems PartnershipURL: https://www.uasvision.com/2025/02/21/trump-modi-announce-new-us-india-autonomous-systems-partnership/**

The United States and India are launching a new Autonomous Systems Industry Alliance (ASIA) aimed at boosting co-development and co-production of maritime drones and counter-drone systems. The announcement was made in a joint statement issued by President Donald Trump and Prime Minister Shri Narendra Modi during Modi’s recent official visit to Washington.

Via the ASIA initiative, the two nations hope to “scale industry partnerships and production in the Indo-Pacific.”

The leaders highlighted a new partnership between Anduril and Mahindra Group focused on “advanced autonomous technologies to co-develop and co-produce state-of-the-art maritime systems and advanced AI-enabled counter Unmanned Aerial System (UAS) to strengthen regional security,” among other bilateral efforts.

DefenseScoop reached out to Anduril and Mahindra Group seeking additional information and comment.

“This collaboration between Anduril Industries and Mahindra Group represents a shared commitment to advancing technological innovation and expanding joint opportunities to further capabilities in the Indo-Pacific. Anduril and Mahindra will work together to provide advanced capacity to India, leveraging Anduril’s autonomous systems and advanced AI solutions, and software-defined hardware to enhance operational effectiveness across multiple domains,” Anduruil said in a statement. “The partnership is focused on counter-drone technology and maritime capabilities. We’re not sharing additional information beyond that at this point.”

The ASIA initiative falls under the new “U.S.-India COMPACT (Catalyzing Opportunities for Military Partnership, Accelerated Commerce & Technology) for the 21st Century” that was announced by Trump and Modi.

“The leaders … pledged to elevate military cooperation across all domains – air, land, sea, space, and cyberspace – through enhanced training, exercises, and operations, incorporating the latest technologies,” per the joint statement. They also promised to accelerate defense technology cooperation across space, air defense, missile, maritime and undersea technologies, and enhance logistics and intelligence sharing.

Trump and Modi are eyeing a broader, 10-year framework for the U.S.-India defense partnership. They announced their intent to open negotiations for a reciprocal defense procurement agreement and boost the supply of defense goods and services.

Pete Hegseth, Trump’s new secretary of defense, has said that the Pentagon should prioritize investments in AI, unmanned platforms and counter-drone systems.

“I think we have a unique opportunity to tap into industry, Silicon Valley, other” innovation hubs, Hegseth said last week during a town hall with troops at the Pentagon. “We also have some really fast-moving newer contractors that are willing to work, that have already put a lot of money into R&D that want to help us rapidly field these new systems that we’re going to need for fights in the future.”

**286 . Date: 25-02-2025M-Rotary - Loitering Munition - Mini - ContractNeros to Send 6,000 American-Made Drones to UkraineURL: https://www.uasvision.com/2025/02/25/neros-to-send-6000-american-made-drones-to-ukraine/**

U.S. company Neros has won a contract to deliver 6,000 FPV attack drones to Ukraine over 6 months, believed to be the highest rate for any U.S. producer ever. This is part of an international effort supplying drones to Ukraine. Making large numbers of FPVs fast has been challenging for U.S. producers, but it is core to Neros’ way of working.

“One of the first things we did when we started the company was go to Ukraine, and we were told that if we could not make 5,000 drones per month we were essentially useless,” Neros co-founder and CEO Soren Monroe-Anderson told me. “So we set out with this in mind.”

This stands in contrast to the Pentagon’s Replicator program, which was set a similar challenge of building large numbers of drones at speed, and aims to deliver just 3,000 drones over two years.

Making high-quality FPVs at scale is difficult. Doing it without using ubiquitous Chinese components looks almost impossible. But Monroe-Anderson and co-founder Olaf Hichwa know more about these drones than most. Both are former professional-level sports FPV pilots and their insights have driven the company’s success.

China dominates the drone market, with one company, Shenzhen-based DJI, producing an estimated 70% of all consumer drones. Both Ukraine and Russia now make FPV drones on a huge scale, each producing more than a million a year — but they do it largely with components imported from China.

Even now some U.S. makers rely on Chinese components. This caused embarrassment recently when deliveries by Skydio were impacted by an embargo by Chinese battery suppliers. That is the exactly sort of problem Neros has worked hard to avoid. (Incidentally, Neros is also on China’s sanction list).

“Historically, the hardest components to source outside of China have been motors and cameras,” says Monroe-Anderson. “For both we have worked closely with partners to scale up production lines outside of China.”

Neros has shown that cutting the Chinese out is feasible, though at a price.

“Unfortunately, there still exist a huge difference in cost and capability between Chinese and Western manufacturing for drone components,” says Monroe-Anderson.

At present, a U.S. made drone will be more expensive than its Chinese counterpart. But even the most challenging technology can be made domestically where there is the will.

“In a lot of ways, the ground control system is more complicated than the drone,” says Soren-Anderson. “We also build these in-house.”

Aggressive vertical integration means that Neros make all the key components themselves, so there is no reliance on third-party manufacturers.

Apart from China, the other problem is that, historically, small U.S military drones have been a boutique business, with contracts for small numbers.

“The largest U.S. drone companies are only setup to make a few thousand drones per year,” says Monroe-Anderson. “Any drone company that started before the full-scale invasion of Ukraine and has the DoD as their primary customer has never been handed a serious demand for large quantities, which means this was never instilled from the beginning in the design of the product and the factory.”

Existing suppliers have never created production lines for the sort of volumes that are now needed. This is why, for example, Anduril are building their ‘hyperscale’ new Arsenal 1 facility in Ohio.

The other issue is that the focus has been on what the military call ‘ISR’ – Intelligence, Surveillance, and Reconnaissance or scout drones. These are designed to be reusable and, as the military requires, they are built to the highest possible standards.

When these are converted into one-way attack drones, also known as loitering munitions, the result is a seriously expansive single-use item.

“You get something priced similar to traditional missile systems which blows up a ridiculously expensive set of components every time they are used,” says Monroe-Anderson. “It mainly comes down to the DoD’s willingness to pay for extremely expensive systems.”

Neros started with a clean sheet and with scalability in mind. Even in Ukraine, Soren -Anderson was struck by the lack of assembly-line style operations in the FPV industry, as well as the fact that even largest producers were using hobbyist-style drone configurations systems, which were not well suited for large-scale production.

“We’ve had the mandate of mass-manufacturing from day one of the company and built our product and factory around this,” says Soren Anderson. “We’ve done away with many of the hobbyist quirks of FPV drones to make a product that is more manufacturable while still being modular and repairable.”

The fruit of this design process is an FPV attack drone called Archer, an 8” FPV which “exceeds state of the art performance” (one senses Soren-Anderson’s competitive racing instinct at work) and carries a 2 kg/4.5-pound warhead to a range of over 20 kilometers/12 miles. It is supplied with two different batteries depending on the mission

Archer flies day and night, and in adverse weather conditions. It operates on multiple control frequencies and has a wide-band video transmitter. Radio-frequency jamming is the bane of drones and reportedly prevents a large proportion of FPVs from reaching their targets. It has been a particular challenge for US-made systems, like the Skydio drones which were reportedly vulnerable to jamming.

“Jamming is a problem for everyone, including us, but we have shown very strong results,” says Soren-Anderson. “Because we design all our radios ourselves and have been learning from what works in Ukraine for over a year, we are using a completely different setup than other US drone companies. This goes back to my point on not relying on other companies for core capabilities.”

The Ukraine contract does not include payloads. As with other FPVs, the Ukrainians will use their own locally-made warheads, but there are other options.

“Neros is working on purpose-built, lethal payloads with our partner, Kraken Kinetics,” says Monroe-Anderson. “We’ve seen that the system as a whole is much more performant when the drone and warhead are designed together, so we’ve put a large priority on this effort.”

All this highly capable technology sounds good. But can Neros tackle the other major issue of U.S. drones: prices which make them unaffordable in large numbers? Some have been known to cost more than their weight in gold.

“Archer is an order of magnitude cheaper than other small drones on the BlueUAS list,” says Soren-Anderson.

That means that Archer can be acquired in volume. The 6,000 for Ukraine are being bought by the International Drone Capability Coalition, which does not have the Pentagon’s drone budget. The low cost also simplifies training as users do not need to worry about crashing expensive hardware.

There are plans for the future, but for now Neros is all about Archer.

“We are extremely focused on making the most capable and manufacturable FPV system in the Western world,” says Soren Anderson. “Aside from this contract from the IDCC, Archer was just made the first FPV drone added to the BlueUAS list. “

This is the list of drones approved for purchase by U.S, government agencies, set up due to the security concerns over Chinese models. There are already potential customers for Archer in the Marine Corps, Air Force, Army and Special Forces.

Monroe-Anderson is proud of Neros’ progress. But he knows there is a lot of catching up to do when Russia is already making so many drones.

“Our adversaries can produce millions of FPVs,” he says. “Right now, the US military is way behind most of the world in using FPV drones, and we want to fix this.”

**287 . Date: 25-02-2025General - PayloadQuantum Systems Integrates Acoustic Artillery Detection on DronesURL: https://www.uasvision.com/2025/02/25/quantum-systems-integrates-acoustic-artillery-detection-on-drones/**

The German drone manufacturer Quantum Systems says it is working on integrating a sound measurement function into its Twister, Vector and Reliant reconnaissance drone family in order to increase the drones’ ability to detect enemy artillery and mortar positions.

As a company spokesperson explained to hartpunkt when asked, this capability is currently still in the prototype phase. The aim is to have the system ready for series production in summer 2025, at which point the sensor, which weighs just a few grams and is the size of a forefinger, could be installed in the entire Quantum Systems reconnaissance drone family.

According to Quantum Systems, the sensor was developed by the Polish manufacturer Weles Acoustics, which recently became a wholly owned subsidiary of Quantum Systems.

According to the company spokesperson, the sensor should be able to locate artillery and mortar shots at a distance of up to 15 km. The detection accuracy is specified as 85 lines (5 degrees) at 5 km, which is perfectly adequate for the purpose of rough detection. The aim of the sensor integration is to locate the rough direction of the shot in order to then be able to precisely locate the enemy firing position using the drone’s reconnaissance optics.

In a first step, this activity is still carried out manually by the drone pilot. According to the spokesperson, however, Quantum Systems is working on automating the functionality so that the drone’s optronics are automatically swiveled in the direction from which the shot was detected. In addition, the system should be able to recognize and classify the acoustic signature of the shot using artificial intelligence in the future. The drone would then be able to determine not only the direction of the shot, but also the type of shot – i.e. artillery or mortar.

A Ukrainian-made Vector reconnaissance drone. Photo – Quantum-Systems

The integration of a sound measurement location capability on a tactical reconnaissance drone is suitable for significantly increasing the ability for reactive artillery counteraction.

Counter battery artillery counteraction is the ability to locate enemy artillery and mortar positions and forces and to combat them using one’s own artillery fire. In this context, a distinction is made between active and reactive artillery counteraction: In reactive combat, the enemy fire is located using technical aids – for example sound measurement teams, radar or reconnaissance drones – and tracked back and responded to as quickly as possible with one’s own fire on the located position. In active artillery counteraction, attempts are made to locate the enemy artillery using various reconnaissance means such as drones or reconnaissance forces before they reach the firing position and start firing fire commands.

Since the system can also be integrated into small tactical reconnaissance drones such as the Twister, which are usually not used by the artillery but by the combat troops, the combat troops could expand the sensor network of the artillery troops in the future and thus make a significant contribution to reactive artillery combat. The combat against enemy mortar forces through the organic fire support capability of the infantry (mortar platoon) could also be raised to a new, previously unseen level using this system approach.

**288 . Date: 26-02-2025MarketBoeing Looks to Offload InsituURL: https://www.uasvision.com/2025/02/26/boeing-looks-to-offload-insitu/**

– Boeing has hired an adviser to sell its defense subsidiary Insitu, a maker of small, long-range military drones, Bloomberg News reported, citing people familiar with the matter. The aviation giant seeks to shed non-core assets and focus on its commercial and defense businesses.

Insitu is drawing interest from private equity firms and corporate buyers, and could be valued at about $500 million in a sale, according to Jefferies analysts cited by Bloomberg News.

Boeing in 2008 acquired Insitu, which makes drones such as the ScanEagle surveillance and reconnaissance device. Ukraine’s military uses Insitu’s drones in war against Russia.

A spokeswoman for Boeing declined to comment on Insitu.

Amid efforts to increase cash flow and pay down debt, Boeing (BA) is looking for assets to sell, including its defense unit’s autonomous systems businesses. Boeing (BA) last year tested buyer interest in its Orca drone submarines before deciding to hold onto the business.

**289 . Date: 26-02-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - General - ArmamentV-BAT Drones to be Equipped with Ukrainian Laser-Guided MunitionsURL: https://www.uasvision.com/2025/02/26/v-bat-drones-to-be-equipped-with-ukrainian-laser-guided-munitions/**

The American drone manufacturer Shield AI is looking for partners in Ukraine among manufacturers of laser-guided munitions to equip its V-BAT drone.

James Lithgow, director of Shield AI, told Militarnyi about this at the Defense Tech Innovation Forum 2025 exhibition.

“The drone can carry a combat payload, and it is already working in the United States. We are still looking for partners in Ukraine who produce laser-guided munitions to integrate them with V-BAT. We are working closely with Ukrainian partners. With all due respect, I cannot tell you who they are, but we are working with them,” he said.

He also added that the company, in addition to its permanent office in Kyiv, has opened a R&D and provides trainings for drone operators.

According to him, these drones have already been successfully used deep in the occupied territories, confirming their maximum range of 150 km. During such missions, the primary objective is to gather targeting data on enemy air defense and electronic warfare systems.

Optical sensors of the V-BAT drone at the Defense Tech Innovation Forum 2025 exhibition – Militarnyi

The drone itself does not require a repeater but can function as one for other strike-capable systems. According to the company’s director, they plan to supply such repeaters to Ukraine soon.

On January 12, 2025, it became known that the Ukrainian Defense Forces received new Shield AI MQ-35A V-BAT drones

At the time, it was reported that V-BAT had already conducted its first autonomous reconnaissance mission on the Ukrainian front lines. The drone weighs 56.5 kg, of which up to 11 kg is the payload. It can stay in the air for up to 10 hours.

**290 . Date: 04-03-2025Fixed Wing - Armed ISR / ISTAR - MALE - ContractGA-ASI Gets $32M Logistics Support Contract for NetherlandsURL: https://www.uasvision.com/2025/03/04/ga-asi-gets-32m-logistics-support-contract-for-netherlands/**

– General Atomics Aeronautical Systems Inc., Poway, California, has been awarded a not-to-exceed $31,655,451 modification (P00027) as an undefinitized contract action to previously awarded (FA8689-22-C-2014) for Royal Netherlands Air Force contractor logistics support services.

The modification brings the total cumulative face value of the contract to $92,498,910. The work will be performed in Poway, California; the Netherlands; and Romania; and is expected to be completed by Nov. 30, 2025.

This contract involves Foreign Military Sales (FMS) to the Netherlands. FMS funds in the amount of $11,452,772 are being obligated at the time of award.

The Air Force Life Cycle Management Center, Wright Patterson Air Force Base, Ohio, is the contracting activity.

**291 . Date: 04-03-2025AcquisitionGeneral Atomics Acquires North Point DefenseURL: https://www.uasvision.com/2025/03/04/general-atomics-acquires-north-point-defense/**

– General Atomics has announced the strategic acquisition of North Point Defense, Inc. (NPD), a leading provider of Signals Intelligence (SIGINT) exploitation software and sensor integration, by General Atomics Integrated Intelligence, Inc. (GA-III), formerly known as General Atomics Commonwealth Computer Research, Inc.

This acquisition enhances GA’s capabilities in the rapidly evolving SIGINT field, positioning the company to deliver advanced ISR solutions for air, sea, ground, and space platforms.

From concept to deployment, NPD delivers AI/ML-based autonomous signal processing and data dissemination solutions providing real-time actionable intelligence, supporting tactical and national mission priorities.

“Joining GA represents an incredible opportunity to enhance our impact in delivering cutting-edge SIGINT solutions in support of national and tactical users,” said Bruce Benenati, President of NPD. “As part of a mission-focused organization with a proven track-record in tactical intelligence across the DoD and IC, we can accelerate innovation and deployment at scale. The integration gives our team access to unmatched operational expertise, resources, and a broader customer base. Together, we are poised to deliver even greater capabilities to those who depend on us in the field.”

GA-III is committed to providing a comprehensive suite of “out-of-the-box” hardware and software tools to meet mission requirements and expand the innovative intelligence capabilities within the GA group of companies.

“The integration of NPD technologies into a division of GA-III is a strategic shift, enhancing GA’s ability to innovate rapidly and provide greater value to customers with end-to-end ISR solutions that are more efficient, effective, and technologically advanced.”

said Brian Ralston, President of GA-III.

Baird served as the exclusive financial adviser and Miles & Stockbridge acted as legal counsel to North Point Defense on the transaction.

About General Atomics and General Atomics Integrated Intelligence

General Atomics is a defense and diversified technologies company, founded in 1955 as a division of General Dynamics and acquired by the Blue family in 1986. GA and affiliates operate on five continents, and produce unmanned aircraft and airborne sensor systems, satellite surveillance, high power laser, hypervelocity projectile, and power conversion systems. GA is a leader in nuclear fusion research, next-generation nuclear fission and advanced materials technologies. The company occupies 8+ million square feet of engineering, laboratory and manufacturing facilities and comprises over 13,000 employees.

GA-III’s capabilities include spatio-temporal data management, advanced analytics, visualization tools, and computer vision, alongside AI/ML-enabled automated target recognition services. These capabilities support a wide range of national, tactical, and commercial/international applications, leveraging both commercial cloud and edge-based computing solutions and are fully integrated with GA Aeronautical Systems’ unmanned aircraft and airborne sensor systems.

**292 . Date: 05-03-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - SoftwareBayraktar TB2T-AI UCAV Powered by Articial Intelligence and a Turbo EngineURL: https://www.uasvision.com/2025/03/05/bayraktar-tb2t-ai-ucav-powered-by-articial-intelligence-and-a-turbo-engine/**

The latest version of Bayraktar TB2, Turkey’s first-ever indigenous unmanned combat aerial vehicle (UCAV), marks nothing short of the aircraft’s rebirth—now equipped with a turbo engine and advanced artificial intelligence. The next-generation Bayraktar TB2T-AI, set to tilt the balance of power on the battlefield with its superior altitude, high speed, and AI-powered smart flight capabilities, has officially taken to the skies with a series of successful test flights.

Indigenously developed by Baykar as Turkey’s first-ever unmanned combat aerial vehicle (UCAV), the Bayraktar TB2 is set to break new ground on the battlefield with its latest iteration—now equipped with a turbo engine and advanced artificial intelligence systems.

The next-generation Bayraktar TB2T-AI, currently undergoing successful flight tests in Keşan, will further cement its position as the world’s leading aircraft in its class, offering superior altitude, high-speed performance, and AI-powered smart flight capabilities.

Equipped with a turbo engine, the Bayraktar TB2T-AI can climb to 30,000+ feet in under 30 minutes. During test flights in Keşan, the next-generation indigenous UCAV surpassed its own altitude record, reaching 30,318 feet. By ascending faster and sustaining high altitudes longer than existing UAVs, the Bayraktar TB2T-AI has gained a decisive edge in the air, achieving a top speed of 160 knots (300 km/h). With its enhanced maximum takeoff weight and expanded payload capacity, the aircraft is set to operate more effectively and for longer durations on the battlefield.

The Bayraktar TB2T-AI UCAV brings superior autonomous capabilities to air warfare with three integrated next-generation AI computers. Additionally, the new indigenous UCAV has gained the ability to conduct terrain-referenced visual cruise flights, ensuring operational resilience even in the face of electronic warfare threats. Powered by advanced artificial intelligence systems, the aircraft utilizes visual navigation to recognize terrain and orient itself. It can also analyze targets for detection and identification, as well as perform fully autonomous takeoff and landing by visually recognizing runways. Moreover, with dynamic route planning, the TB2T-AI can autonomously determine the most optimal flight paths, enhancing its efficiency and adaptability in complex operational environments.

Set to become a game changer on the battlefield, the Bayraktar TB2T-AI UCAV has what it takes to overcome any challenge. In the event of a mid-flight emergency, its AI-supported systems enable the aircraft to automatically return to base. With this advanced capability, the Bayraktar TB2T-AI takes resilience and operational safety on the battlefield to the highest level.

Having entered Türkiye’s military inventory in 2014, the Bayraktar TB2 UCAV has achieved an impressive 93% localization rate and continues to serve on a global scale. In December 2024, it reached a historic milestone, surpassing one million flight hours—cementing its status as the longest-flying indigenous aircraft in Turkish aviation history. Bayraktar TB2s are currently in service with the Turkish Armed Forces, the National Intelligence Organization (MIT), the Gendarmerie General Command, the Turkish National Police, and the Coast Guard Command. Additionally, they support the Directorate General of Forestry in the fight against forest fires.

The Bayraktar TB2, which holds some of the most significant records in Turkish aviation history, previously set the national altitude record at 27,030 feet. Additionally, on July 16, 2019, the indigenous UCAV set another record, remaining airborne for 27 hours and 3 minutes during a demo flight in Kuwait—despite extreme heat and sandstorms.

The Bayraktar TB2, Türkiye’s indigenous UCAV, which has pioneered numerous firsts in Turkish aviation history, once again made history on May 31, 2024, by successfully performing an autonomous barrel roll maneuver during test flights—becoming the first and only UCAV in the world to achieve this feat. The barrel roll, a critical evasive maneuver used by fighter jets, had never been successfully executed by any UCAV until now.

In addition to playing a key role in Turkey’s fight against terrorism, Bayraktar TB2 UCAVs have proven their effectiveness through superior performance in international operations. Deployed across the globe, these indigenous aircraft have played a crucial role in conflicts in Libya, Ukraine, Mali, and Burkina Faso—as well as in the liberation of Karabakh, ending three decades of occupation.

Baykar’s indigenous and original product, the Bayraktar TB2 UCAV, has successfully entered the inventories of countries worldwide by proving itself in competitive selection processes. In recent years, it outperformed rivals from the United States, Europe, and China in a competitive evaluation overseen by Kuwait’s Ministry of Defense, securing a major export agreement. This achievement not only solidified Baykar’s global impact but also expanded its presence across NATO and the European Union in 2024. With the signing of an agreement with Croatia on November 19, 2024, the Bayraktar TB2 officially entered the inventories of six NATO allies and four EU member states.

In addition to their security-related missions, indigenous UCAVs play a crucial role in civilian operations—from responding to natural disasters like earthquakes and floods to search-and-rescue efforts, monitoring irregular migration, and combating wildfires. After providing critical support in the aftermath of the 6.8-magnitude earthquake in Sivrice, Elazığ on January 24, 2020, Bayraktar TB2 UAVs played a vital role following the February 6, 2023, earthquakes in Kahramanmaraş. Over the course of the mission, 42 Bayraktar TB2s—including eight equipped with the Baykar Rapid Mapping Pod—flew a total of 2,417 hours and six minutes, contributing to disaster response and relief efforts. Moreover, Bayraktar TB2 UAVs played a crucial role in wildfire prevention and response, detecting a total of 4,091 wildfires between 2020 and 2024 in the fight against forest fires.

Having self-financed all its projects since its establishment, Baykar has generated 83% of its revenue from exports since launching its UAV R&D program in 2003. In 2023, the company’s exports reached $1.8 billion, making it one of Turkey’s top ten exporters across all sectors. As the largest company in the global unmanned aerial vehicle export market, Baykar sustained its success in 2024, once again achieving $1.8 billion in exports and generating 90% of its revenue from exports.

Recognized with the Champions of Export Award, Baykar led the defense and aviation sector in exports in 2021, 2022, and 2023 according to the Defense Industry Agency (SSB) and the Turkish Exporters Assembly (TIM). Having single-handedly accounted for one-third of the industry’s exports the previous year, the company accounted for a quarter of all defense and aviation exports in 2024—elevating Turkey to leadership in the global UCAV export market.

97.5% of Baykar’s existing contracts stem from exports. To date, the company has signed export agreements with 34 countries for the Bayraktar TB2 UCAV and 11 countries for the Bayraktar AKINCI UCAV—36 nations altogether.

**293 . Date: 06-03-2025General - NavigationUkrainian Drones Use Vermeer Optical Navigation SystemURL: https://www.uasvision.com/2025/03/06/ukrainian-drones-use-vermeer-optical-navigation-system/**

The American company Vermeer is integrating its optical navigation systems into Ukrainian strike and reconnaissance drones. This was announced at the Defense Innovation Forum 2025 by the company’s founder and CEO, Brian Streem.

The system is a compact module containing day and night cameras, a computing unit, and a hard disk with preloaded detailed 3D terrain maps.

The maps are based on high-quality satellite imagery provided by third-party contractors. The system is also equipped with inertial navigation. Vermeer’s optical navigation systems can be adapted to any aerial platform, regardless of its purpose, and operate at different altitudes. Thanks to this technology, the drone does not depend on GPS, which makes it invulnerable to spoofing.

According to Brian Streem, the system is already integrated into 40-50 drones.

Militarnyi has previously reported that the Portuguese company TEKEVER, a manufacturer of unmanned aerial vehicles, is modernizing its products, taking into account the experience of a full-scale war in Ukraine.

According to the company’s representative, AR3 and AR5 complexes are actively used in Ukraine, which are constantly being improved thanks to feedback from Ukrainian specialists.

According to him, the situation on the Russian-Ukrainian front is the most difficult in the history of electronic warfare (EW).

This has become an incentive to develop new technological solutions that increase the resistance of drones to enemy electronic warfare, GPS jamming and spoofing.

**294 . Date: 07-03-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Small - General - PlatformChina’s New EV390 eVTOl Drone for Long-Endurance MissionsURL: https://www.uasvision.com/2025/03/07/chinas-new-ev390-evtol-drone-for-long-endurance-missions/**

At IDEX 2025, Shenzhen-based Chinese company V-UAV introduced the EV390, also known as the Flashman EV390, a fully electric vertical takeoff and landing (VTOL) unmanned aerial vehicle (UAV) designed for long-endurance missions.

The UAV features a modular structure, enabling disassembly into six parts for storage in two flight cases. The fuselage case measures 158x66x76 cm, while the tail components are stored in a separate 96x55x65 cm case. The aircraft is built using carbon fiber and glass fiber, with a wingspan of 3,914 mm, a length of 1,899 mm, and a height of 750 mm.

The UAV operates on four 6S 30,000mAh lithium-ion batteries, delivering a maximum flight time of 3.5 hours without a payload. When carrying its full payload of 10 kg, flight endurance is reduced to approximately 1.5 hours. The battery system supports up to 600 recharge cycles and is recharged using the UP600+ charger, which has two 600W channels for simultaneous charging of two batteries in under an hour. The UAV has a maximum takeoff weight (MTOW) of 35 kg, a top speed of 37 m/s (130 km/h), and a cruising speed of 23 m/s (83 km/h). It climbs at 4 m/s, descends at 5 m/s, and operates up to an altitude of 4,500 meters AMSL. It is capable of operating in wind speeds of up to 12 m/s.

Designed for rapid deployment, the EV390 can be assembled in under two minutes using quick connectors. It operates with the VTX30 ground control station, which provides long-range data and video transmission. The UAV uses an open-source autopilot system and supports multiple flight controllers, including the V-UAV V7 Pro, CUAV V7+, and Cube Orange+. It has automated functions such as program control, 3D coordinate autonomous flight, target tracking, emergency return, and fixed-point circling. It can also incorporate a “Follow-me” function, which enables autonomous tracking and mission planning with a high-precision GPS module.

The EV390’s payload bay accommodates various mission requirements. It supports a maximum payload of 10 kg and is compatible with multiple sensor options. These include A30TR-50 or U30TIRM-HD cameras for border patrol and inspection, A0305 3D oblique cameras or GS-100C LiDAR sensors for mapping and surveys, and a drop box system for search and rescue or package delivery. The UAV is rated with an IP54 protection grade and operates in temperatures ranging from -20°C to 60°C. It has an operational range of up to 150 km. The system is delivered with two flight cases for transport.

Fully electric VTOL (eVTOL) drones use electric propulsion, minimizing moving parts and lowering maintenance needs compared to internal combustion-powered aircraft. Their vertical takeoff and landing capability allows operation in confined areas without the need for runways. Electric motors produce less noise than conventional engines, making them suitable for operations in populated or noise-sensitive areas. The use of electric power eliminates direct carbon emissions during flight. Some eVTOL designs use distributed propulsion with multiple smaller propellers, providing redundancy in case of motor failure.

China’s eVTOL drone sector is driven by policies promoting the “low-altitude economy,” covering aerial logistics, urban air mobility, and emergency response below 1,000 meters. Government initiatives have relaxed airspace regulations and provided financial incentives to encourage manufacturers to develop and test new eVTOL models. By 2030, up to 100,000 eVTOLs could be deployed for air taxis, cargo transport, and personal mobility.

Chinese manufacturers gain from lower labor costs and a regulatory framework enabling faster development and production than in many other countries. Cost advantages and flexible payment terms make Chinese drones an option for countries with budget constraints. Investments in battery technology, electric propulsion, and artificial intelligence contribute to the expansion of this sector.

Moreover, China’s integration of civilian and military manufacturing facilitates the development of new unmanned aerial vehicles for different applications.

**295 . Date: 10-03-2025MarketShield AI Valued at $5.3 BN After New Investment RoundURL: https://www.uasvision.com/2025/03/10/shield-ai-valued-at-5-3-bn-after-new-investment-round/**

Defense startup Shield AI has finalized a deal to raise $240 million from investors at a valuation of $5.3 billion — a funding round that adds billions to the company’s valuation, and underscores Silicon Valley investors’ interest in drones, autonomy and national security technology.

The San Diego-based startup plans to use the cash infusion to expand its software offerings. Variations of Shield AI’s Hivemind software can pilot autonomous vehicles as well as help companies build their own autonomous drones, robots and other systems.

Investors in the deal include aerospace and defense company L3Harris Technologies Inc. and South Korean aerospace company Hanwha Aerospace Co. — along with Andreessen Horowitz, US Innovative Technology and Washington Harbour. Bloomberg Beta, the venture capital arm of Bloomberg LP, is also an investor. Some details of the round were previously reported by the Information.

– Latham & Watkins LLP represented Shield AI in the funding round with a team led by partners Nima Movahedi, Kristen Grannis, and Haim Zaltzman, with associates Jack McKay and Christopher Siino. Advice was also provided on certain regulatory matters by partners Kyle Jefcoat and Patrick English.

Shield AI is most famous for its drone, called V-BAT, capable of vertical takeoff and landing. One is prominently displayed in its San Diego offices. But going forward, the company wants to be known for its software.

“This next phase is really about working with the small and medium businesses” that want to operate autonomous hardware across air, land or sea, Shield AI co-founder Brandon Tseng said. “We’ve spent a decade and $1 billion-plus building this.”

Shield AI was founded by Tseng, a former Navy Seal, and his brother Ryan Tseng, an engineer and former technical lead at Qualcomm Inc., who is now the startup’s chief executive officer. Shield AI is one of dozens of defense startups to emerge in recent years with enthusiastic backing from venture capitalists. Investors have poured record amounts into AI, space weapons and other defense technologies, hoping the Pentagon will increase its tech spending as modern warfare evolves.

ShieldAI’s Hivemind software aims to make it easier for more developers and businesses to create autonomous hardware. The company’s tools can also help pilot autonomous vehicles ranging from one-way attack drones to F-16s, and support swarming operations. Shield says its software can allow vehicles to execute complex missions autonomously, including when GPS and communications are jammed.

Brandon Tseng said interest from investors, including defense contractors and VCs, has recently surged — adding that the company turned down “massive checks” and that the current round was oversubscribed.

“Physical AI is the next thing and we are mobilized against it,” he said. “Shield AI aspires to service the autonomous needs for the defense sector, like Palantir services its intelligence needs.”

Tseng added that the company expects to close an additional round from other strategic investors in coming weeks that would be slightly smaller but would be “significant.”

**296 . Date: 11-03-2025Fixed Wing - Loitering Munition - Mini - ContractAnduril UK Gets £30M Loitering Munitions Contract for Ukraine from UK GovernmentURL: https://www.uasvision.com/2025/03/11/anduril-uk-gets-30m-loitering-munitions-contract-for-ukraine-from-uk-government/**

UK Defence Secretary John Healey MP visited Anduril, the firm supplying the drones, in Washington D.C. ahead of a meeting with his US counterpart Pete Hegseth at the Pentagon on March 6. The deal follows a meeting of world leaders in London last week, when the Prime Minister and allies agreed it was essential that military support continues for Ukraine to put the country in the strongest possible position for peace as it continues to defend itself from Russian aggression.

The new contracts, totalling nearly £30 million and backed by the International Fund for Ukraine, will result in Anduril UK supplying cutting-edge Altius 600m and Altius 700m drones – known as loitering munitions – that are designed to monitor an area before striking targets that enter it.

The Defence Secretary visited Anduril yesterday, where he spoke with a number of American and British staff. Founded in California, Anduril continues to invest significantly in the UK with a large footprint across the country and plans to rapidly scale, in line with the Government’s commitment to keeping the nation safe while providing highly skilled jobs.

Securing a lasting peace in Ukraine and strengthening bonds between NATO allies set to top the agenda when the Defence Secretary meets with his US counterpart today.

The visit follows Prime Minister Keir Starmer meeting the US President last week, and John Healey MP will hail the unparalleled depth of the UK’s special relationship with the US – the UK’s closest security ally – as both nations continue to collaborate to bolster security and support economic growth.

The meeting follows the recent decision by the UK Government to raise defence spending to 2.5% of GDP by April 2027 – the biggest sustained uplift since the Cold War. National security is a foundation of our Plan for Change, and the Prime Minister and Defence Secretary have said that Europe needs to take a greater responsibility for its security, and that defence can be an engine for economic growth.

Defence Secretary, John Healey MP, said:

We are determined to achieve a secure, lasting peace in Ukraine, which means putting Ukraine in the strongest possible position to prevent any return to Russian aggression.

The UK has already provided more than 10,000 drones to Ukraine’s Armed Forces, which have proved vital in disrupting Russian troop advances and targeting positions behind the frontline.

With a £2.26 billion loan from seized Russian assets, plus £1.6 billion worth of air defence missiles announced for Ukraine in the last week, the UK is continuing to show leadership in securing a lasting peace for Ukraine.

The work with Anduril UK been led by Defence Equipment & Support – the procurement arm of the MOD – on behalf of the UK-administered International Fund for Ukraine (IFU). The fund now stands at more than £1.3 billion worth of pledges from 10 other countries, of which the UK has contributed £500 million.

Ukraine’s armed forces will take delivery of the drones, launchers and spare parts over the coming months.

Dr Rich Drake, MD of Anduril UK and Europe said:

Anduril UK is proud to partner with the UK Government, working hand in glove to deliver vital capabilities for the UK and its Allies. Our focus on developing and deploying technology where and when it’s needed is at the core of everything we do – from the rapid delivery of Altius to Ukraine to the expansion of our presence here in the UK. We look forward to strengthening our partnership with the Ministry of Defence to protect our nation and our allies.

In January, it was announced that 30,000 drones will be sent to Ukraine by the international Drone Capability Coalition, co-led by the UK and Latvia.

Since July 2024, the Government has provided over £5.26 billion in military aid and financial support to Ukraine, including a £3 billion annual military aid and a £2.26 billion loan for military spending.

The British and US Armed Forces operate in close alignment around the world, from the long-standing global coalition to combat Daesh in the Middle East to joint maritime security patrols in the Indo-Pacific.

The Defence Secretary’s visit to Washington D.C. comes as the UK receives the last of an order of 50 of the latest generation AH-64E attack helicopters for the British Army, the most advanced attack helicopter in the world. The helicopter was handed over this week at the Boeing site in Arizona under a programme that supports more than 300 UK jobs, helping to grow the UK economy – underscoring defence as an engine for driving economic growth.

The visit also comes at the conclusion of the 50th occurrence of Exercise Red Flag in Nevada, a joint exercise with the UK, United States and Australia. The training is designed to test equally matched air forces in a realistic combat scenario and involves more than 3,000 military personnel in high-intensity training, such as dogfighting, air-policing and practicing bombing runs, at Nellis Air Force Base.

**297 . Date: 12-03-2025Fixed Wing - Armed ISR / ISTAR - HALE - General - PlatformGeneral Atomics Ready to Produce up to 18 CCAs per MonthURL: https://www.uasvision.com/2025/03/12/general-atomics-ready-to-produce-up-to-18-ccas-per-month/**

– General Atomics Aeronautical Systems, Inc. will be ready to mass-produce its collaborative combat aircraft prototype after first flight this summer, its president said – soon after Air Force leaders debuted a new designation for such robot wingmen.

“With the factory we’ve got, we could easily go up to 12 to 18 a month—today. You have to ramp into that,” but the company could reach that rate “without buying a whole bunch of new buildings and capitalizing a bunch,”

said General Atomics Aeronautical Systems president Dave Alexander.

The company—along with Anduril, the other competitor building “increment one” of the Air Force’s Collaborative Combat Aircraft program—are readying their drones ahead of first flight this summer. Afterward, the Air Force will decide whether to build one or both of the companies’ offerings.

“We’ve already built the prototype, and we’re building the productionized-airplane now. So right at first flight, we are leaning forward, and we’re going into production. We don’t have to redesign, we have to tool up, or any of that. It’s ready to go,”

Alexander told Defense One on the sidelines of the AFA Warfare Symposium.

General Atomics’s CCA is a version of its Gambit family of aircraft that borrows much from its XQ-67 aircraft, which was developed through the Air Force’s secretive Off-Board Sensing Station program and flew last year.

In 2019, the company known for its Predator and Reaper drones reached a production peak of around eight and a half aircraft per month. Today, it’s down to about three and half per month, Alexander said, so the company will need to ready its 5-million-square-foot facility in California to mass-produce CCAs.

While General Atomics has the space needed, Alexander said they’re waiting on more funding before they finish building out the production lines. The CCA program is expected to fare well in future budget requests, as it was one of the programs exempted from Defense Secretary Pete Hegseth’s 8% funding shift.

“We will lean forward and help bridge some of those gaps. We’re happy to see that we were exempt from that 8% but I think we need to lean forward more. And so we’re helping the customer bring, I would say speed to ramp, but more like speed to capability out there,” he said.

**298 . Date: 13-03-2025MarketUkraine’s Defense Forces to Receive 200,000 Unmanned Systems per Month in 2025URL: https://www.uasvision.com/2025/03/13/ukraines-defense-forces-to-receive-200000-unmanned-systems-per-month-in-2025/**

In 2025, the supply of unmanned systems to Ukraine’s Defense Forces reached approximately 200,000 units per month, with a significant increase in the delivery of FPV drones, according to First Deputy Minister of Defense Ivan Havryliuk.

“If we look at unmanned systems, especially FPV drones used in combat, we started the first quarter of 2024 with a supply of 20,000 units per month. Currently, this figure has risen to 200,000 per month and continues to grow,”

the official stated.

The deputy minister clarified that this supply is not limited to FPV drones but includes the full range of unmanned aerial vehicles (UAVs), including those received through international assistance.

Havryliuk also highlighted efforts to introduce ground-based robotic systems for logistics, mining and demining operations, and casualty evacuation. The exposure of soldiers in open and high-risk areas has driven the implementation of these technologies to reduce combat vulnerability.

In October 2024, the Ministry of Defense announced that, in coordination with the Ministry of Digital Transformation, it had procured 1.6 million UAVs of various types, with a total investment exceeding 114 billion hryvnias (~USD 2.73 billion). Of these, 1.28 million units had already been delivered, while an additional 366,940 drones were scheduled for delivery by the end of the year.

By 2025, the Ministry of Defense had already contracted 155,205 UAVs, valued at USD 770 million. At the end of 2024, Defense Minister Rustem Umierov reported that 96.2% of the drones used by Ukraine’s Defense Forces were domestically produced. Specifically, more than 1.5 million FPV drones had been manufactured.

In January 2025, Minister of Strategic Industries Herman Smetanin announced the delivery of over 30,000 bomber drones to Ukraine’s Defense Forces throughout 2024.

In October 2024, President Volodymyr Zelensky stated at the Second International Defense Industries Forum that Ukraine had already developed the capacity to produce up to 4 million drones per year. A month later, he announced that in 2025, at least 30,000 long-range drones were projected for production.

**299 . Date: 17-03-2025Fixed Wing - ISR / ISTAR - HALE - ContractUS Navy Orders Two Additional Northrop Grumman MQ-4C Triton Drones for $267MURL: https://www.uasvision.com/2025/03/17/us-navy-orders-two-additional-northrop-grumman-mq-4c-triton-drones-for-267m/**

The United States Department of Defense has announced a contract with Northrop Grumman for the purchase of two additional MQ-4C Triton unmanned aerial vehicles. The agreement, valued at USD 267.2 million, will see the aircraft delivered to the US Navy’s maritime aviation fleet by October 2028.

The contract includes full funding at the time of signing, covering not only the production of the two MQ-4C Triton drones but also a spare parts package worth $1.4 million for Australia. These drones are part of the seventh production series, further expanding the fleet of high-altitude, long-endurance (HALE) aircraft.

To date, Northrop Grumman has delivered approximately 28 MQ-4C Triton drones, leading to the announcement of initial operational capability in August 2023. The U.S. Navy has also begun supplying the aircraft to its first international customer, Australia, as part of an export programme.

The MQ-4C Triton is designed to support continuous intelligence, surveillance, and reconnaissance (ISR) operations, maintaining five reconnaissance orbits worldwide on a 24/7 basis. These operations will be facilitated by both domestic and overseas airbases, ensuring global operational reach for the U.S. Navy.

Ultimately, the U.S. Navy aims to acquire a total of 68 MQ-4C Triton aircraft to enhance its maritime patrol capabilities. The drones will complement the manned Boeing P-8A Poseidon aircraft, providing a comprehensive aerial surveillance network for monitoring and securing maritime regions.

**300 . Date: 19-03-2025Fixed Wing - ISR / ISTAR - MALE - Safety​Heron Destroys $14M Parked South Korean Surion Helicopter on LandingURL: https://www.uasvision.com/2025/03/19/landing-uav-destroys-14m-parked-south-korean-surion-helicopter/**

A South Korean army helicopter was destroyed when an unmanned air vehicle crashed into it while attempting to land. The accident occurred on 17 March at an army base in Yangju, when the Israel Aerospace Industries Heron UAV crashed into a Korea Aerospace Industries KUH-1 Surion utility helicopter.

According to the Army Ground Operations Command, around 1 p.m. Monday at a military airfield in Yangju, Gyeonggi Province, a military drone collided with a parked helicopter during landing, sparking a fire.

“There were no casualties from the fire,” the command said, adding that the cause of the incident and the full extent of the damage are under investigation. The fire was extinguished in about 20 minutes.

The Army dismissed the possibility of North Korean involvement in the incident, such as electronic jamming.

The helicopter was identified as a KUH-1 Surion, valued at 18.5 billion won ($14 million), while the drone was identified as a Heron, an Israeli-made reconnaissance uncrewed aerial vehicle, according to military sources.

The helicopter was fully fueled at the time, and both aircraft were completely destroyed in the blaze.

The Heron, which measures 8.5 meters in length and 16.6 meters in wingspan, is a medium-altitude UAV capable of monitoring ground targets from an altitude of 10 kilometers. The South Korean military adopted the drone in 2013 at a cost of 3 billion won ($2 million) per unit.

The unit believed to be involved — based on the location of the incident — is the 209th Aviation Battalion under the 11th Aviation Group of the 1st Corps, which was established in 2018. The 11th Aviation Group initially operated KUH-1 helicopters but has since expanded its operations to include UAVs.

The Heron was involved in similar incidents while attempting to land in 2018 and 2024, with the military at the time also denying any external interference. However, given these past incidents, it remains unclear whether the Army conducted sufficient safety checks before deploying the drone.

The Army has yet to disclose who was operating the drone at the time of the crash. Currently, officers, non-commissioned officers, and enlisted personnel are all authorized to operate uncrewed aerial vehicles.

The incident came just 11 days after two South Korean Air Force KF-16 fighter jets mistakenly dropped bombs on a civilian area during the Freedom Shield exercise, an annual joint military drill with the United States, leaving 29 people injured.

The pilots responsible for the bombing had entered incorrect coordinates and failed to follow in-flight verification procedures.

Both pilots have been charged by military prosecutors with professional negligence resulting in injury.

**301 . Date: 20-03-2025Fixed Wing - ISR / ISTAR - Mini - ContractBattlefield Experience and Advanced Software Build Better DronesURL: https://www.uasvision.com/2025/03/20/battlefield-experience-and-advanced-software-build-better-drones/**

Lithuanian company Granta Autonomy has delivered hundreds of FPV attack drones to Ukraine with more to come under a €1 million contract. These are the new GA-10FPV-AI model, with advanced communications and lock-on-target capability. Unlike others, Granta Autonomy is no new start-up but has been preparing for a drone war for more than ten years.

“Even in 2014 it was already obvious that drones would create a difference,”

says CEO and co-founder Gediminas Guoba, who explained how their success comes from a keen focus on smarter software and manufacturability.

The Vilnius-based outfit is one of the few foreign companies to produce highly capable drones able to survive the intense electronic warfare environment, and to do it at low cost. The U.S. equivalents tend to be both astronomically expensive and vulnerable to jamming. The challenges of price and jamming which can be met – but only with an appreciation battlefield conditions.

Guoba’s journey started in 2014 with the Russian invasion and occupation of Crimea. Russian aggression was a direct threat not just to Ukraine but to the Baltic states. A civilian without military experience, Guoba had no trouble identifying the technology which would have the biggest impact. He and co-founder Laurynas Litvinas set up Granta Autonomy company to produce an asymmetric weapon which would help Lithuania counter an invasion by much larger Russian forces. Ten years on that vision has been fully validated as small drones have become the most important weapons on the battlefield, doing twice as much damage as all other weapons put together.

Granta Autonomy founders founder Gediminas Guoba (right) and Laurynas Litvinas

And while hardware matters, the important part is the software.

“The hardware in FPVs is all at least ten years old,” says Guoba. “The difference is in the software. The autopilot is all software, the communications capabilities to beat jammers are software, the optical lock on target is software. Software is the key, especially when it comes to autonomy. You can have two drones with the same hardware but software can give them completely different capabilities.”

Smart communications are an obvious example.

“Our GA-10FPV-AI attack drone employs a unique anti-jamming approach,” says Guoba. “Instead of seeking alternative frequencies, it powers through the jammed signal.”

He compares this to talking against loud background noise. If someone has difficulty hearing you, you speak louder and more slowl. Granta’s anti-jamming approach switches to a lower bit rate.

Guoba says that in tests in Ukraine, even when their drones’ communication frequency was known, electronic warfare operators using a powerful 2.5-kilowatt jammer could do nothing against them. In operations against the Russians, their Hornet XR was the only drone able to operate in regions of intense jamming.

Software is also the key to navigation in jammed environments. GPS and other satellite navigation systems are widely jammed or spoofed, sending drones in the wrong direction. Granta Autonomy have developed vision-based navigation which, combined with other sensors, allows drones to compare scenery with stored maps and find their way with high precision without a satellite signal.

After the 2022 invasion, Granta Autonomy drones were quickly sent into action, but Guoba says the feedback from Ukraine did not give a full idea of how the drones were performing. The only way was for the developers to go to the front and fly drones themselves. It was an eye-opening experience.,

“For sure, it was surprising,” says Guoba.

The continuous artillery fire and bombing, and the number of Russian drones , meant that even survival was challenging. The threat of being spotted and targeted was ever-present.

“I don’t remember a single time when there was not an enemy ISR [intelligence, surveillance, reconnaissance] drone above us,” says Guoba.

This experience made the team think hard about tactics and technology for drones to take off and land without their operators being detected, and how to extract operators as quickly as possible.

“There were many different situations I wouldn’t even think drone operations were possible, but to people there they are just everyday things that they need to deal with,” says Guoba.

Other factors included electronic warfare, both from Russian and from Ukrainian forces, and co-ordination with air defence so their drones were not brought down by friendly fire.

“Participation, doing those missions as the front lines, that is absolutely different compared to working in military ranges and on exercises,” says Guoba.

He says when talking to other suppliers he is very aware of the difference between those who have battlefield experience, and those who have only seen conflict from a distance. The ones with experience do not assume that everything will work, for example that communications will be available. They know that everything can and does fail.

“It changes your mindset,” says Guoba.

The AI system that allows an operator to lock on to a target is a relatively recent feature. This counters short-range jamming and improves the hit rate. Earlier systems from other suppliers in Ukraine were not always reliable, but Guoba says the software has developed rapidly.

“Staying locked on is more or less a solved problem,” says Guoba. “The algorithms to track objects have improved a lot in the past year.”

Guoba says that while there are many solutions around in this field, how well they work depends on how good your AI engineers are. He says their team is very strong when it comes to cramming the maximum capability into limited processing power. Their next challenge is a targeting system which will not just lock on to an object and follow it, but which will select an exact impact point.

I see terminal guidance becoming more and more smart, we want to be more precise what we are targeting,” says Guoba “I don’t just want to hit anywhere on a building, I want to hit the third window along on the second story.”

When attacking a truck, for example, an FPV might know to go around the front and target the engine or the cabin. Against a tank, it would know to attack the turret rear where the armor is thinnest and a hit from a small warhead will destroy it instantly. Skilled FPV pilots can do this with practice, but automation would mean even a novice pilot could destroy targets with ease.

“We are working on how to help the operator to define terminal guidance,” says Guoba.

Software is important, but it needs abundant, low-cost hardware. Affordability has been vital to the success of small drones. Guoba notes that in Ukraine, nothing can move, day or night, in a six-mile zone between the lines without being targeted by drones. This is only possible because the drones are available in huge numbers, unlike, for example, costly anti-tank missiles.

“It is not enough to design,” says Guoba “It is very, very, very important to think from the first step how you will make it.”

He notes that, for example, drones designed to launch from a cannister, like the U.S. Switchblade, are likely challenging to build at low cost due to the complexity of the launch process and the need for pop-out wings or rotors. The Switchblade 300 costs over $50,000 a shot, many times more than Granta’s FPVs. The Bolt-M, perhaps the nearest direct U.S. equivalent to Granta’s FPV, is something over over ten times as costly and carries a warhead half as big.

“We make everything as simple as possible,” says Guoba.

Granta Autonomy do not source components from China. While many Russian and Ukrainian drone makers use Chinese parts, this creates a supply chain dependency. It also means supporting Chinese industry rather than building a local base.

“We source everything locally,” says Guoba. “For most things – PCBs, magnets, motors – there is no problem. For others, we have been helping to grow partners developing one or more components.”

The giant Chinese drone maker DJI, who control 70% of the world’s consumer drone market, will be difficult to match in terms of economies of scale and vertical integration. But even if it costs a little more, a local drone industry is important for national security.

“They are huge and amazing,” says Guoba, “It will be hard to copy what they do. But at least we need to go that way and build those technologies.”

Granta is currently shipping GA-10FPV-AI attack drones. These carry a larger payload than early FPVs – up to 3 kilos /6.6 pounds — and the combination of jam-resistant communications and terminal guidance gives a high chance of scoring a hit at ranges of up to 20 kilometers/ 12 miles. This will improve as the AI is steadily upgraded.

The GA-10FPV-AI has advanced anti-jamming, lock-on-target capability, carries a 6.6 pound warhead, and can hit targets 12 miles away

Ukrainian forces also operate Granta’s Hornet XR drone. This is a fixed wing reconnaissance aircraft with a three-hour flight time which can carry out completely autonomous missions at ranges of up to 100 miles. Not needing to communicate with an operator makes it difficult to detect and impossible to jam. This enables precision strikes at distant targets by weapons such as HiMARS.

However, Guoba says they are also looking at other types of drones. In particular they would like to use the same sort of autonomy seen in the Horney XR for a strategic attack.

Small drone technology is moving fast, and the Baltic states have embraced it fully while other countries have been hesitating and wavering. Similarly, small companies have been able to produce efficient, affordable products while larger firms have failed to deliver.

In a year’s time, Granta Autonomy‘s product line may look completely different. But by concentrating on software development and manufacturing processes which will be applicable however drones evolve, the company is in a strong position to drive the evolutionary process rather than following it.

**302 . Date: 20-03-2025Fixed Wing - Armed ISR / ISTAR - MALE - GeneralRobot Tug Could Save MQ-9 Reaper Maintainers Time, Money, and RiskURL: https://www.uasvision.com/2025/03/20/robot-tug-could-save-mq-9-reaper-maintainers-time-money-and-risk/**

A prototype aircraft tug being tested out at Holloman Air Force Base, N.M., could save MQ-9 Reaper maintainers time and money and cut down on safety risks on the flightline.

The TowFLEXX is a remote-controlled, electric tug that has a smaller logistical footprint and takes up less space than old-school aircraft towing systems, which often involved specialized tractors or a gas-powered truck and a towbar. A smaller footprint would help with Agile Combat Employment, the Air Force strategy of dispersing teams of Airmen to smaller or austere air bases to complicate targeting for near-peer adversaries such as Russia and China.

“Typically you would take up two or three pallet positions with the older version of a tow vehicle,” Tech. Sgt. Dwane Parmelee, with the Holloman-based 49th Component Maintenance Squadron, told Air & Space Forces Magazine. “This would take up one pallet position at most, and you can still stack bags and stuff on top of it, so you’re really getting a dual-purpose pallet position there.”

While other Air Force bases also use TowFLEXX, the prototype at Holloman are special. Unlike their counterparts, the TF3 variant is equipped with a Light and Detection Range (LiDAR) collision avoidance system which spots obstacles and automatically stops the tug. That means fewer Airmen have to be on hand to supervise a towing operation.

Under the old system, towing a Reaper might take five to six Airmen, Parmelee explained: one to operate the towing vehicle, three or more wing and tail walkers to make sure the 66-foot-wide, 36-foot-long aircraft doesn’t hit anything, and a supervisor overseeing the operation. With the TF3, that number falls to just the vehicle operator and two wing walkers, which frees up maintainers to do other tasks.

“Every hour we save an Airman from doing a job that technology can do, that’s saving us time and it’s saving us money,” said Senior Master Sgt. Joseph Anger, quality assurance superintendent for the 49th Maintenance Group. “We’re looking at saving over 3,000 hours per year just towing the MQ-9 alone at Holloman.”

That would more than make up for the TowFLEXX’s price tag—between $50,000 and $90,000, depending on the variant—at a time when many Air Force bases have too few maintainers to sustain an aging fleet of aircraft. Besides cost-savings, the LiDAR-equipped TF3s could also increase flightline safety by preventing collisions.

“Humans, we’re really good, but we could be working an eight-hour shift in the rain or something like that and something happens,” Anger said.

At a recent demonstration, the TF3 avoided engineers from Evitado Technologies, the company that built the LiDAR anti-collision system, who served as obstacles in the tug’s path. Some maintainers “were shocked by the LiDAR system’s ability to identify obstacles inches away from the aircraft and then shut down,” Anger said.

“Everyone was amazed,” he said. “They were coming up like ‘hey, what else can we put this on?’”

Members of Holloman, TowFLEXX Miltech and Evitado conduct an MQ-9 Reaper towing demonstration at Holloman Air Force Base, New Mexico, Feb. 27, 2025. (U.S. Air Force photo by Senior Airman Isaiah Pedrazzini)

Also impressive was the tug’s maneuverability: without a towbar expanding its turning radius, the TowFLEXX spun the Reaper in circles in place, which could help Airmen store more aircraft and equipment in tighter spaces. And while the older TowFLEXX models had just one motor, the TF3 has two, which means it can tow heavier aircraft.

In 2023, there was “an upward trend” in ground mishaps involving maintenance, aircraft towing, and other flight line work, Maj. Gen. Sean M. Choquette, the Air Force Chief of Safety, said in October. TF3 may be able to help with that.

“You have a 360-degree view of the aircraft and any obstructions,” said Parmelee. “Therefore your mishap prevention is going to improve astronomically.”

Anger sees a future where the LiDAR-equipped TowFLEXX can tow an aircraft completely autonomously.

“My overall goal is to have these TowFLEXXes just pull up to the aircraft, connect to the aircraft, and then tows without anyone being there,” he said.

Tobias Strobl, TowFLEXX Miltech chief executive officer, left, and Alex Shickling,TowFLEXX president, middle, conducts a prototype demonstration for U.S. Air Force Chief Master Sgt. Andrew Stokes, 49th Maintenance Group senior enlisted leader, at Holloman Air Force Base, New Mexico, Feb. 27, 2025. (U.S. Air Force photo by Senior Airman Isaiah Pedrazzini)

Perhaps just as helpful as the TowFLEXX is the story of how the TF3 prototype got to Holloman. Anger has a history of liaising between flightlines and tech companies to make Airmen’s jobs easier. A key tool for doing that is AFWERX, an Air Force program that provides funding and technical expertise to support grassroots solutions to Air Force and Space Force challenges.

Through AFWERX, Anger learned how to access small business innovation research contracts, which helped him “push a lot more ‘outside-the-box’ thinking,” and he encouraged other Airmen to do the same.

AFWERX is there “to help the innovator at the wing level, or even at the squadron level or below, come up with grassroots innovations,” he said.

Anger had worked with Evitado in the past, which helped spark the idea to partner with TowFLEXX. Now he wants to move fast to get the project through the “Valley of Death,” the transition period between prototype and scaled-up production where many ideas fizzle out.

More cash from the Strategic Funding and Tactical Funding programs should help with that; Anger said those funding buckets and support from leadership has helped more projects get out of the valley.

“Hopefully in the near future we could be replacing the older systems with this new autonomous system,” Anger said.

“The more Airmen have a voice in innovation, the better,” the senior master sergeant said. “We have a lot of great technology that we’re working on, and we’re going to be able to save money, save time, and improve quality of life for Airmen.”

**303 . Date: 24-03-2025Fixed Wing - Armed ISR / ISTAR - HALE - General - PlatformKratos Reveals Secret Hypersonic Drone ProgramURL: https://www.uasvision.com/2025/03/24/kratos-reveals-secret-hypersonic-drone-program/**

Kratos is developing a hypersonic drone, adding to a growing portfolio of high-speed vehicles, CEO Eric DeMarco told Aviation Week in a March 18 interview.

All further details of the project—including the design, performance and schedule—cannot yet be released, DeMarco said.

The mystery vehicle can be supported by the Hypersonic System Indiana Payload Integration Facility (IPIF) that the company broke ground on in Crane, Indiana, on March 18.

Asked if the IPIF would support only payloads for hypersonic glide vehicles powered by solid rocket motors, DeMarco said vehicles with air-breathing propulsion technologies also are possible.

DeMarco previously has hinted at interest by Kratos in turbine-based hypersonic propulsion. In a 2019 press release announcing the acquisition of Florida Turbine Technologies (now Kratos Turbine Technologies, or KTT), DeMarco included a cryptic statement.

“Beyond traditional turbojet and turbofan engines, we are also focused on developing advanced, affordable engines for a new class of hypersonic propulsion system,” DeMarco said.

DeMarco has never elaborated on that statement. However, as its name implies, KTT specializes in air-breathing, turbine-based propulsion systems, not the solid rocket motors that boost hypersonic glide vehicles to hypersonic speed.

Kratos already has built a hypersonic portfolio with a pair of hypersonic glide vehicles called Erinyes and Dark Fury. Both can be powered by Kratos’ new Zeus rocket, an offshoot from the company’s Oriole sounding rocket.

Hypersonic technology—and air-breathing propulsion in particular—remains mainly at the developmental stage in the U.S. industrial base, with the operational Lockheed Martin/Leidos Long Range Hypersonic Weapon for the U.S. Army being the sole exception.

Despite the advanced nature of the technology, Kratos remains committed to avoid crossing the “bleeding-edge” of capability in new products. The company prefers to work on fixed-price contracts, and the risk of overruns with inventing new technology are too high for Kratos, with its $1.1 billion of annual sales, to bear.

“Bleeding edge—something that’s never been done before—those are the types of fixed-price contracts that we tend to stay away from because it’s never been done before,” DeMarco said at the McAleese Defense Programs Conference outside Washington on March 18. “We don’t have the size or the scale like a Boeing to be able to absorb and get the thing done for an amount of money. That’s just crazy. We just can’t do it.”

**304 . Date: 25-03-2025H-Rotary - Armed ISR / ISTAR - Tactical - RegulationChina Certifies First Unmanned HelicopterURL: https://www.uasvision.com/2025/03/25/china-certifies-first-unmanned-helicopter/**

The TD550D coaxial unmanned helicopter system has received its type certificate from the Civil Aviation Administration of China (CAAC), the first of its kind to have obtained such certification in China, its developer said last week.

Its certification fills a gap in China’s airworthiness certification for unmanned helicopter systems, setting a reference standard for future unmanned helicopter certifications, said Tian Gangyin, CEO of the helicopter’s developer United Aircraft.

The system’s airworthiness certification process began in late 2023. To ensure the aircraft’s safety and reliability, the company conducted testing and verification across multiple areas, including the rotor system, power system, avionics and flight control. The process involved 29 compliance verification tests and more than 2,600 preliminary test flights.

According to the company, the TD550D boasts high payload capacity, long endurance, and strong high-altitude performance, making it well-suited for complex environments such as plateaus and islands.

The helicopter has a maximum takeoff weight of 640 kg at sea level and 550 kg at an altitude of 5,000 meters. Its maximum payload capacity reaches 200 kg at sea level and 120 kg at 5,000 meters, demonstrating its versatility in high-altitude operations.

The aircraft, designed for applications in emergency rescue, firefighting, and smart logistics, features emergency return, automatic landing, and forced landing capabilities in critical situations.

The certification comes as the drone industry in China is entering a stage of rapid growth. According to Yang Jincai, chairman of Shenzhen Unmanned Aerial Vehicle Industry Association, the number of drone operating companies nationwide has surpassed 20,000, with an annual output value reaching approximately 210 billion yuan (about 29.26 billion U.S. dollars), reflecting a 39.5-percent increase over the previous year.

As a major hub for the industry, Shenzhen is home to nearly 2,000 drone companies, contributing 107 billion yuan in output value for 2024, representing a 12-percent growth rate.

**305 . Date: 26-03-2025RegulationUK Civil Aviation Authority to Oversee Safety Standards for DronesURL: https://www.uasvision.com/2025/03/26/uk-civil-aviation-authority-to-oversee-safety-standards-for-drones/**

The UK Civil Aviation Authority will take on a new role to monitor and enforce new product standards for drones in the UK, improving safety and supporting the sector’s further growth.

On Monday 17 March 2025, the Chancellor of the Exchequer, Rachel Reeves, named the UK Civil Aviation Authority (CAA) as the UK’s drone Market Surveillance Authority (MSA).

From 1 January 2026, drones operating in the Open Category – which covers low-risk drone flights and leisure activities – will be subject to product standards under a framework known as ‘Class Marking’, improving the safety and security of the sector.

The MSA will be responsible for ensuring required standards for drones are met by manufacturers, as well as importers and distributors, and intervening when there is non-compliance. It means drone users will have more confidence that drones they purchase are safe and comply with safety standards.

Sophie O’Sullivan, Director of Future of Flight at the UK Civil Aviation Authority, said:

“This is a really important role to assist in our work regulating and enabling the expanding drone sector.

As drones become more commonplace in everyday life, protecting public safety and interest is critical. These new powers will help us continue to uphold the highest safety standards across the industry.”

Drones or Remotely Piloted Aircraft Systems (RPAS) in the ‘Open’ Category – low risk flying with RPAS that weigh less than 25kg) – will be subject to the product standards from 1 January 2026. The Class Marking framework for Open Category product standards is based on retained EU law.

The UK Civil Aviation Authority has been appointed by the Department for Transport (DfT) to take on the role of the Market Surveillance Authority (MSA), which will be responsible for:

The UK Civil Aviation Authority is recruiting specialists with the skills and experience to ensure the sector has the necessary management, oversight and approvals in place.

**306 . Date: 28-03-2025General10 Ukrainian Drone Makers to WatchURL: https://www.uasvision.com/2025/03/28/10-ukrainian-drone-makers-to-watch/**

In the three years since Russia launched its full-scale invasion, Ukraine has almost certainly become the largest producer of drones in the Western-aligned world. Early workshop tinkering on mainly commercial Chinese drones evolved into steadily more professional and massive production of domestic unmanned aerial systems (UAVs). The industry’s rapid growth has given Ukraine a fighting chance against a much bigger enemy, making drones a source of national pride.

Details on the drone industry and its producers are hard to come by. Russia constantly targets weapons factories and even drone executives personally. But some drone makers are already clearly big businesses.

Based on knowledge both publicly and privately sourced, the Kyiv Independent has assembled a list of makers ranging from mass-produced first-person view (FPV) drones to highly secretive deep-strike UAVs that we believe to be the biggest game in town.

Going forward, many of these drone makers hope to sell their wares abroad once export controls are lifted, or the war comes to an end. Those looking to sell abroad are keen to headline non-lethal drone models like intelligence, surveillance, and reconnaissance (ISR) or cargo drones, which face fewer restrictions than those more clearly designed to blow things up.

Here are 10 of Ukraine’s drone makers to look out for, in no particular order:

Taking its name from a paradise in pre-Christian Slavic mythology, Vyriy produces what one long-time drone pilot describes as the best FPV he’s ever worked with, the Molfar. The small and cheap Molfar has been in use since at least the start of 2023. For massive FPV makers, what’s tricky is producing swarms that function reliably. By reputation, Vyriy manages as well as anyone.

The firm is working to onshore production but cites a continued financial dependence on Chinese components that afflicts the drone industry worldwide.

Notably, Vyriy’s drones operate on low-frequency channels. Prior to 2022, most drones ran on 2.4 or 5.8 gigahertz (GHz) communications. Those channels are easily jammed by Russian electronic warfare systems at the front, so many operators, including Vyriy, have lowered their frequencies to under 1 GHz, which transfers less data but goes further and is harder to both jam and detect

Despite keeping a lower profile among its fellow major Ukrainian drone makers, Skyfall has brought production to a massive scale since launching in June 2022.

Skyfall’s most beloved model is the Vampire, which first became famous under the name Russian soldiers have for it, the Baba Yaga, named for a fairytale witch. The moniker is due to the drone’s ability to run night missions, particularly while bearing payloads of up to 15 kilograms — over five times the standard for FPVs.

One of Skyfall’s biggest selling points is nocturnal navigation. It’s a feature largely enabled by thermal cameras like those produced by Ukrainian company Oko (which means “eye” in Ukrainian), and one that has proved especially effective as many Russian units reportedly lack night-vision goggles.

In drone footage from a Shrike — Skyfall’s smaller FPV model — shared with the Kyiv Independent by a Ukrainian drone pilot, a Russian truck stands out clearly from the treeline it is hiding inside before the Shrike hurtles into its grill before the signal turns to static.

Data from government contracts show the Shrikes selling for a little over Hr 13,000 in 2024, or about $320, making them some of the cheapest quadcopters being purchased en masse inside of Ukraine.

TAF is possibly the largest-scale manufacturer of FPV drones in Ukraine today, producing some 40,000 drones per month. Its output is valued at over $1 billion per year, according to Forbes Ukraine.

TAF’s drones are fairly standard cheap quadrocopters that flock over the front line in Ukraine. TAF emerged from a charity fund run by now-CEO Oleksandr Yakovenko, which was already producing drone parts to be assembled by soldiers by early 2023. TAF’s surge in production over the past year has been quite stunning.

If true, 40,000 a month would account for about a third of the 1.5 million drones that the Defense Ministry said Ukrainian makers shipped to the frontline in 2024. One billion dollars in orders would be a similarly massive fraction of Ukraine’s total drone budget — approximately $2.5 billion in 2025, not including money that individual brigades raise in donations.

By many accounts the archetypical Ukrainian drone maker, UkrSpecSystems dates back to 2014, when it was founded in response to Russia’s initial annexation of Crimea and invasion of Donbas

UkrSpecSystems has produced many models over the years, but almost exclusively of the highly engineered repeated-use variety — specifically intelligence, surveillance, and reconnaissance.

The Shark is a long-range ISR drone that largely set the standard for the genre within Ukraine. The “People’s Drone,” or PD-2, is similar but can carry cargo up to 8 kilograms — in theory, anything including a few artillery shells — with a range of up to 1,300 kilometers.

Athlon Avia is another firm that dates back to 2014. Its bread-and-butter model is the Furia, a long-range recon drone that the firm began exporting abroad prior to Russia’s full-scale invasion. They were selling the Furia for just over $100,000 in 2022, per the accounting of local charity Come Back Alive.

The most recent Furia model is a massive ISR drone that resembles a white manta ray and is specially designed to scout targets from up high for Ukrainian artillery.

Far cheaper is Athlon Avia’s Hrim, also known as Silent Thunder, which is a smaller kamikaze drone that remains more intricate than the average FPV drone of its class as it depends on a reusable quadcopter for liftoff.

Another of the founding fathers of what would become Ukraine’s wartime drone boom, UkrJet shares some overlap in leadership with UkrSpec.

Unlike UkrSpec, UkrJet is most famous for its actual explosive models. Its Bobr, or “Beaver,” was the first of Ukraine’s major deep-strike drones, flying up to 1,000 kilometers inside of Russia.

UkrJet is a project of Oleksandr Chendekov, who a competitor referred to as “the father of the Ukrainian drone.” Chendekov was chief technology officer at UkrSpec, UkrJet, and today, at Airlogix. Registered in 2021, UkrJet started public production of its attack drones in 2022, in the months following Russia’s full-scale invasion.

Terminal Autonomy is a relatively low-profile, internationally owned, Ukraine-based firm that nonetheless ships upwards of 1,000 of its AQ 100s and an unknown number of its deep-strike AQ 400s each monthAt $30,000 and a range of 750 kilometers, the AQ 400s are likely the cheapest long-distance strike drones on the market. To cut costs, their drones are made of plywood.

AQ 400 Scythe kamikaze drones in an undisclosed location in Dec. 2023

The similarly wooden AQ 100s are kamikaze drones, likewise designed to be deployed en masse, affordably. In addition to wooden frames, their fixed-wing design means they only need a single motor, unlike quadrocopters which, while more maneuverable, require four.

The largest traditional aircraft maker in Ukraine, Antonov is often overlooked in considerations of drone manufacturers. Given its standing ties to Ukraine’s government-owned weapons makers, it had little reason to advertise.

Among drones, Antonov is most notable for its “Lyuty” drone, a long-range model roughly analogous to the Iranian-made Shaheds that Russia sends into Ukraine nightly. Ukraine’s long-range strike drones are typically tightly held secrets within Ukraine’s drone programs. But Russian sources frequently identify Lyuty drones as those striking local oil infrastructure.

Long a government-owned defense manufacturer, Antonov formally transitioned into a private holding in April 2024. Its ties to Ukraine’s Soviet-descended, state-owned defense conglomerate, UkrOboronProm, remain well-established. The pricing on a single Lyuty comes in at just under $200,000 a unit.

Airlogix is a large-scale drone maker that has seen massive growth since the start of Russia’s full-scale invasion.

Pre-2022, Airlogix launched with a hefty cargo drone. After Russia’s invasion, they militarized their production. Their GOR model is an ISR drone that boasts four-hour flight times and sells for some $200,000 a piece, founder and CEO Vitalii Kolesnichenko told the Kyiv Independent.

Kolesnichenko says Airlogix has quintupled sales of the GOR in the past year, reaching 500 units shipped in 2024, which adds up to about $100 million.

Other sources say that Airlogix is also working on a deep-strike drone, but Kolesnichenko would not comment on details.

Raybird is a hyper-advanced ISR drone whose latest models boast max flight times of 28 hours.

A Raybird system, which includes three separate drones, sells for over $1 million a piece. Total battlefield usage remains a mystery as military acquisitions are secret, but public records show Ukrainian emergency responders buying at least five of those systems since the start of the full-scale invasion.

Skyeton opened up production in Slovakia earlier in 2024 to escape wartime controls on Ukrainian military and dual-use equipment. The firm at the time claimed that the Ukrainian military was only contracting 50 of their drones annually, lamenting that internal production could have reached 100.

**307 . Date: 28-03-2025General - NavigationMAXAR Launches Raptor Drone Software to Beat GPS JammersURL: https://www.uasvision.com/2025/03/28/maxar-launches-raptor-drone-software-to-beat-gps-jammers/**

– Maxar Intelligence, a provider of secure, precise geospatial insights, has launched Raptor, a powerful software suite that enables autonomous drones to navigate and extract accurate ground coordinates in the absence of GPS. This technology transforms the resilience and reliability of unmanned systems, enabling autonomy at scale across warfighting, humanitarian and commercial operations for customers across the world.

Designed for lightweight integration with any autonomous platform, Raptor products use only a drone’s native camera and Maxar’s 90 million-plus sq km of global 3D terrain data to help the platform navigate with extreme precision and extract accurate ground coordinates in real-time without GPS. Raptor can also operate at night and in low-terrain environments. No additional hardware required.

“By eliminating reliance on GPS, Raptor software unlocks the full potential of autonomous systems—from powering truly joint multi-domain operations as part of a digital battlefield to large-scale delivery systems in urban areas where knowing the precise coordinates of your drop-off location is critical to getting the job done,” said Peter Wilczynski, Chief Product Officer at Maxar Intelligence. “Raptor will change the game for customers across the defense and commercial sectors. This software uses Maxar’s unique 3D global terrain data to ensure that autonomous systems get the job done no matter how much GPS interference they face.”

The Raptor suite of software solutions includes:

This image shows how Raptor Guide enables an autonomous system to navigate with precision even without GPS. The green line represents the drone’s true location in the real world on a specific flight path. The red line shows the location information sent by the drone without GPS and without using Guide. The yellow line shows the location information sent by the drone when using Raptor Guide without GPS. You can see it delivers a far more accurate reading with Raptor Guide, which would ensure that the platform is navigating with more precision.

This image shows a drone’s full motion video feed overlaid against Maxar’s highly accurate 3D terrain data, representing the real-time data fusion that’s happening with Raptor Sync. Every coordinate in the drone’s field of view is correlated with its exact position in the real-world with a demonstrated accuracy of within 3 meters of its real-world position

This image shows the Raptor Ace software in action. On the left, the operator sees the live feed from the drone’s native camera. On the right, they see Maxar’s 3D global terrain data. The operator is able to use these two views to select and extract highly accurate coordinates for objects on the ground with a demonstrated accuracy of within 3 meters of its real-world position

Raptor represents a fundamentally new solution on the market, providing significant advantages over most visual-based navigation alternatives:

**308 . Date: 01-04-2025M-Rotary - Cargo - Tactical - GeneralUS Marine Corps Leverages Cargo Drone to Resupply Troops on the BattlefieldURL: https://www.uasvision.com/2025/04/01/us-marine-corps-leverages-cargo-drone-to-resupply-troops-on-the-battlefield/**

The U.S. Marine Corps is actively integrating unmanned aerial systems into its logistics operations, with the T150/TRV150 cargo drone emerging as a pivotal asset in enhancing battlefield resupply capabilities.

The TRV150 is a versatile, electric vertical take-off and landing (eVTOL) drone designed for autonomous or remote-controlled delivery of essential supplies such as food, water, medical equipment, and ammunition directly to frontline units. It boasts a cruise speed of 108 km/h (67 mph), a maximum range of 70 km (43 miles), and can carry payloads up to 68 kg (150 lbs). Equipped with eight propellers and electric motors powered by easily replaceable batteries, the drone ensures quick turnaround times for continuous operations. Its fixed skid landing gear and redundant avionics enhance safety and reliability. Notably, the TRV150 has demonstrated operational effectiveness across diverse environments, including rain, gusty winds, deserts, and Arctic conditions. Its compact, foldable design allows for transport in a medium-sized protective case, facilitating ease of deployment by a single operator.

The strategic deployment of cargo drones like the TRV150 addresses the inherent risks associated with traditional resupply methods involving manned trucks or helicopters, which are vulnerable to enemy attacks. By employing unmanned systems, the Marine Corps enhances operational efficiency and reduces personnel exposure to danger. The TRV150 can operate autonomously via waypoint navigation or under remote control, delivering supplies day or night. Cargo can be unloaded upon landing or air-dropped during flight, providing tactical flexibility.

The Marine Corps’ commitment to integrating unmanned logistics is evident in its plan to equip all logistics battalions with Tactical Resupply Unmanned Aircraft Systems (TRUAS) by 2028, allocating three to six drones per unit. This initiative aligns with the broader objective of creating lighter, more agile units capable of rapid response in dynamic combat scenarios. The TRV150’s development stems from Malloy Aeronautics’ earlier hoverbike concepts, which evolved into practical unmanned cargo delivery systems. In April 2023, Malloy Aeronautics and SURVICE Engineering secured a production contract with the U.S. Navy and Marine Corps to produce nearly 200 TRV drones, following their success in the Tactical Resupply Unmanned Aircraft System (TRUAS) fly-off competition at Yuma Proving Ground in 2019.

The U.S. Army is also exploring heavy-lift vertical takeoff and landing (HVTOL) cargo drones capable of carrying at least 800 lbs over 100 miles. Contracts have been awarded to teams like Near Earth Autonomy-Kaman and Piasecki Aircraft to demonstrate such unmanned aerial vehicles (UAVs). Additionally, companies like Kaman Air Vehicles are developing autonomous medium-lift logistics UAVs, such as the KARGO UAV, designed to carry up to 800 pounds in austere environments.

The adoption of cargo drones represents a transformative shift in military logistics, offering rapid, flexible, and secure delivery of supplies while minimizing risks to personnel. As these systems continue to evolve, they are poised to become integral components of modern military operations, enhancing the effectiveness and safety of forces in diverse operational theaters.

**309 . Date: 03-04-2025Armed ISR / ISTAR - HALE - MarketGeneral Atomics Planning Modular Family of Unmanned FightersURL: https://www.uasvision.com/2025/04/03/general-atomics-planning-modular-family-of-unmanned-fighters/**

California-based General Atomics Aeronautical Systems is a finalist in the US Air Force’s (USAF’s) Collaborative Combat Aircraft (CCA) Increment 1 contest to produce the service’s first uncrewed fighter – with that new family of aircraft recently bestowed the designation “FQ” by the Pentagon.

The race to deliver the first operational uncrewed fighter jet is heating up, with competing visions for both the aircraft themselves and models for industrial production now starting to take shape.

Speaking to FlightGlobal at the recent Avalon air show in Geelong, Australia, GA-ASI laid out key details for its CCA – dubbed YFQ-42A by the USAF – and the company’s strategy for assembling the jets in large numbers.

“This is arguably the most modular aircraft we’ve ever built, and intentionally so,”

says C. Mark Brinkley, director of strategic communications at GA-ASI.

The uncrewed aircraft manufacturer has been delivering combat capable platforms for some three decades, including mainstays such as the MQ-9A Reaper and trailblazing MQ-1 Predator, which revolutionised modern warfare.

While Brinkley says the company’s previous designs were generally tailored for the specific role of medium-altitude surveillance and air-to-ground strike, the new GA-ASI CCA is being designed “from the beginning with modularity and with the future in mind”.

What that means in practical terms is building not just a new aircraft, but also designing an entire production system to support it.

Brinkley says GA-ASI took inspiration from the automotive sector, where seemingly disparate vehicles often use core components that are common to one another, and in some cases even share production lines.

“They design so that those sub-components can turn left and be a pick-up truck, and turn right and be an SUV,” he notes.

In aerospace terms, that means a central CCA core that will represent 70-80% of any GA-ASI fighter. The remaining 20-30% of each aircraft will come in the form of payload packages and required modifications for missions including air superiority, air-to-ground strike, electronic warfare or intelligence, surveillance and reconnaissance.

For now, that core will come in the form the of the XQ-67 Onboard Sensing Station, which General Atomics revealed in 2024.

General Atomics XQ-67A OBSS

Brinkley says the YFQ-42A shares 80% commonality with the XQ-67, with the gap owing to the addition of armaments and an air-to-air combat role for the CCA type.

“When you look at our centralised core concept and our ability to pivot from one platform to the next for mission sets, it’s not like anything that you’re seeing in any of the other offerings,” Brinkley says.

“They are building airplanes and we are building a war fighting concept,” he adds.

Although his remarks were not specifically directed, the commentary appears targeted at Anduril, GA-ASI’s primary rival in the CCA Increment 1 competition.

The start-up entrant into the defence industry began life as a developer of autonomy software, subsequently building out a product line of hardware that includes small UAVs, submersibles and the Fury autonomous jet – a derivative of which was selected by the USAF to be the YFQ-44A competitive prototype for CCA Increment 1.

A full-scale model of that aircraft was on display at Avalon, its first such appearance overseas.

General Atomics unveiled a scale model of the company’s offering for the US Air Force’s Collaborative Combat Aircraft Increment 1 at the 2024 Air & Space Forces Association Air Space Cyber conference. A similar display is planned for the 2025 Paris air show in June

Anduril has made so-called “hyperscale” production the core of its pitch, seeking to deliver thousands of autonomous systems per year across its various product lines. Less is known about the Fury aircraft itself, although Anduril officials have touted a focus on commercially available components and minimal maintenance needs.

“Design for simplicity, design for low maintenance, design for low sustainment [needs] has to be on the drawing board at the very beginning,”

said Andrew Van Timmeren, Anduril’s senior director of air dominance systems, at the Air & Space Forces Association Warfare Symposium in March.

Presumably, such high volume production will require a larger degree of design standardisation than is being pursued by GA-ASI, with its modular core approach.

Brinkley says his company already boasts the ability to assemble 18 production representative CCA aircraft per month, using existing GA-ASI industrial capacity. The company has some 5 million square feet of manufacturing space available to expand production beyond that current level of 216 CCAs annually.

Other design approaches being taken by GA-ASI include a modular propulsion system. Brinkley says the company’s CCA common core will currently accommodate 13 different commercially available jet engines.

One of those engines will propel the YFQ-42A on its first sortie later this year. The USAF says it expects to log the initial flight of the two YFQ prototypes sometime in the North American summer.

General Atomics began flying the XQ-67 Onboard Sensing Station uncrewed jet in 2024. That design shares 80% commonality with the company’s YFQ-42A build, currently in development for the US Air Force’s Collaborative Combat Aircraft programme – US Air Force

The summer months will also see the first overseas appearance of the GA-ASI CCA design, which Brinkley says will take place at the Paris air show in June. A model of the type was previously displayed at the 2024 Air Space Cyber conference near Washington, DC.

The appearance of the two YFQ designs at international air shows indicates the potentially significant overseas business opportunities for both GA-ASI and Anduril, regardless of which firm prevails in the initial CCA contest.

Washington has left open the possibility of exporting the first generation of CCAs through the USA’s Foreign Military Sales system, which supplies governments across the world with armaments.

Australia is poised to offer an early sales opportunity, with the head of capabilities for the Royal Australian Air Force saying at Avalon he plans to deliver a report to Canberra by the end of this year outlining options for uncrewed fighter procurement.

Such a list will almost certainly include the Boeing MQ-28 Ghost Bat – designed and assembled locally in Australia – but will likely also feature the exportable CCA designs being matured by the USAF.

Brinkley notes GA-ASI is very comfortable with the US export process, already supplying military aircraft to numerous overseas customers.

As a starting point, he says the company expects to offer the YFQ-42A configuration, which was previously confirmed by the USAF to be focused on air-to-air combat, but will use its modular core concept to offer a range of other capabilities.

“We’re not doing this for the first time,” Brinkley says. “This is not full of risk. This is risk that’s been bought down over 30 years,”

he adds, referencing the company’s track record of delivering reliable uncrewed combat aircraft.

**310 . Date: 04-04-2025GeneralBaykar Starts Training Employees for Ukraine Drone PlantURL: https://www.uasvision.com/2025/04/04/baykar-starts-training-employees-for-ukraine-drone-plant/**

Turkey’s Baykar has begun training future employees for a drone manufacturing plant under construction in Ukraine, a move that signals confidence in the war-torn nation’s industrial future despite ongoing hostilities.

Haluk Bayraktar, the company’s chief executive, shared details of the initiative in a recent interview with Ukrinform, a Ukrainian state news agency, underscoring the firm’s commitment to a $100 million investment in the country.

The training program, already underway in Turkey, involves students and professionals from Ukraine, laying the groundwork for a factory that could produce up to 120 combat drones annually once operational.

The training effort includes 20 students from the Kyiv Aviation Institute and 14 Ukrainian professionals, all of whom are honing their skills at Baykar’s facilities in Turkey. The program, which spans at least nine months, is designed to prepare a skilled workforce capable of operating the new plant as soon as conditions allow.

“We’re expecting another group to join during this period,” Bayraktar told Ukrinform. “Our goal is to train personnel in advance, so we’re ready to launch production when the time comes.”

The executive’s remarks reflect a strategic approach, blending optimism with pragmatism as Baykar navigates the complexities of establishing a foothold in a conflict zone.

Baykar, renowned for its Bayraktar TB2 combat drones that have proven pivotal in Ukraine’s defense against Russia, is pressing ahead with its Ukrainian ventures despite the war’s uncertainties. The company has already ordered machinery and equipment for the facility, a step that Bayraktar described as evidence of progress

“We’ve secured the necessary technology and tools,” he said. “We’re moving forward with hope for a just peace, and we’d like to start production as soon as possible after that. We’re very close to being ready.”

His words suggest a calculated bet on Ukraine’s resilience, even as Russian forces continue their assault into the conflict’s fourth year.

The factory, one of three projects Baykar is funding in Ukraine with its $100 million investment, broke ground prior to February 2024, when Bayraktar projected a 12-month timeline for construction. By early 2025, he anticipated, the physical structure would be complete, paving the way for the installation of specialized equipment.

The plant’s capacity—estimated at 120 drones per year—remains flexible, with Baykar yet to finalize whether it will produce the battle-tested TB2 model or its newer, more advanced successor, the TB3. This ambiguity reflects the company’s adaptability, tailoring its output to Ukraine’s evolving military needs.

The Bayraktar TB2, a medium-altitude, long-endurance unmanned aerial vehicle, gained global attention for its role in Ukraine’s early resistance to Russia’s 2022 invasion. Armed with laser-guided bombs, the TB2 can loiter for up to 27 hours, striking targets with precision from altitudes exceeding 25,000 feet.

Its successor, the TB3, builds on this foundation with enhanced features: larger dimensions, a higher payload capacity, and foldable wings designed for deployment from naval vessels like aircraft carriers or amphibious assault ships. Unveiled in 2023, the TB3 completed its first carrier-based takeoff and landing tests aboard Turkey’s TCG Anadolu, hinting at its potential to diversify Ukraine’s drone arsenal if selected for production.

Baykar’s investment in Ukraine dates back to a pre-war partnership that deepened after Russia’s aggression began. In 2021, Ukraine purchased dozens of TB2 drones, integrating them into its air force with devastating effect against Russian armor and supply lines. The relationship solidified further in August 2022, when Baykar announced plans to build a manufacturing facility near Kyiv, a decision bolstered by Turkey’s neutral yet supportive stance toward Ukraine.

Despite the invasion’s escalation, Bayraktar has remained steadfast.

“The war hasn’t derailed us,” he said in February 2024, addressing concerns about the project’s viability. “Our plans are on track, and nothing will stop them.”

The training program in Turkey marks a proactive step toward realizing this vision. The Kyiv Aviation Institute, a prestigious institution with roots in Soviet-era aerospace engineering, provides a steady pipeline of talent, while the 14 professionals—likely experienced technicians or managers—bring practical expertise.

Baykar’s facilities, located near Istanbul, offer state-of-the-art simulators, workshops, and live testing grounds, immersing trainees in the intricacies of drone assembly and operation.

“This is about building capacity from the ground up,” said Ahmet Yılmaz, a Turkish defense analyst familiar with Baykar’s operations, in a recent interview. “They’re not just sending drones—they’re transferring knowledge.”

The factory’s construction, meanwhile, has progressed despite logistical challenges posed by the war. Located in an undisclosed area near Kyiv, the site benefits from Ukraine’s existing industrial infrastructure, though security concerns have slowed some phases.

Ukrainian officials, speaking anonymously due to the sensitivity of military projects, confirmed in late 2024 that Baykar had coordinated with local authorities to safeguard the facility from Russian airstrikes. The company’s $100 million investment also includes a research center and a service hub, though the factory remains the centerpiece, promising jobs and technological advancement in a nation desperate for both.

Turkey’s role as a mediator in the Russia-Ukraine conflict adds complexity to Baykar’s endeavor. Ankara has supplied Ukraine with weapons while maintaining trade ties with Moscow, a balancing act that has drawn scrutiny. Baykar, a private firm led by brothers Haluk and Selçuk Bayraktar—sons-in-law of Turkish President Recep Tayyip Erdoğan—operates with tacit government backing, yet insists its Ukrainian projects are commercially driven.

“This is a business decision, not a political one,” Haluk Bayraktar told reporters in 2023, deflecting claims of geopolitical maneuvering. Still, the TB2’s success against Russian forces has elevated Turkey’s defense industry, with exports surging 70% since 2022, according to the Turkish Exporters Assembly.

For Ukraine, the factory represents more than drones—it’s a lifeline to self-sufficiency. Kyiv has leaned heavily on Western aid, receiving over $50 billion in military support from the United States alone since 2022. Yet domestic production remains a priority as foreign supplies fluctuate.

“Baykar’s investment is a vote of confidence,” said Oleksandr Danylyuk, a former Ukrainian defense official, in a statement last month. “It’s about reducing reliance on imports and building our own capabilities.”

The plant’s output, whether TB2s or TB3s, could bolster Ukraine’s ability to strike Russian targets deep behind the front lines, a tactic that has kept Moscow’s forces on edge.

Uncertainty lingers over when production can begin. Russia’s relentless bombardment, including a March 1, 2025, claim of downing six U.S.-made JDAM bombs, underscores the fragility of Ukraine’s industrial zones.

Baykar’s timeline hinges on a ceasefire or at least a stabilization of the conflict, outcomes that remain elusive as fighting intensifies in the east. “We’re preparing for peace, but we’re realistic,” Bayraktar acknowledged in his Ukrinform interview. “The moment conditions allow, we’ll move in.”

Skeptics question whether Baykar can deliver under such pressure. “The factory’s a bold idea, but war doesn’t respect schedules,” noted Michael Kofman, a Russia expert at the Carnegie Endowment, in a recent analysis.

“Equipment can sit idle if the front line creeps closer.”

Others see the training program as a hedge against this risk, ensuring a workforce is ready regardless of delays. Baykar’s track record—delivering TB2s to over 20 countries since 2018—lends credence to its resolve, though Ukraine’s volatile landscape tests even the most determined players.

As Baykar trains its Ukrainian recruits and installs machinery thousands of miles away, the project stands as a testament to ambition amid adversity. Whether producing TB2s that have already reshaped the battlefield or TB3s poised to redefine naval drone warfare, the factory could alter Ukraine’s military calculus.

For now, Haluk Bayraktar’s vision rests on a fragile hope: that peace, or at least a pause, will unlock the potential of a partnership forged in war’s shadow.

**311 . Date: 04-04-2025Fixed Wing - Armed ISR / ISTAR - MALE - PartnershipKorea’s Hanwha Aerospace Partners with GA-ASI on Gray Eagle STOL UAVURL: https://www.uasvision.com/2025/04/04/koreas-hanwha-aerospace-partners-with-ga-asi-on-gray-eagle-stol-uav/**

– Hanwha Aerospace announced on 2 April that it is partnering General Atomics Aeronautical Systems, Inc to develop and manufacture unmanned aircraft systems for the global defence market.

The company stated that it plans to invest more than ₩750 billion (US$513 million) in development and production facilities for the latter’s Gray Eagle short take-off and landing (STOL)-capable Gray Eagle air vehicle and UAS engines. It will also build research and development, and production infrastructure in South Korea as well as with GA-ASI in the US.

The companies aim to achieve first flight of the jointly developed UAS in early 2027, it added.

“Hanwha Aerospace views unmanned systems as a strategic pillar for the future of defence,”

said Kim Dong Kwan, Vice Chairman of Hanwha Group.

“Through our collaboration with GA-ASI, we aim to strengthen sovereign defense capabilities, expand Korea’s presence in the global UAS market, and contribute to a more robust ROK-US alliance,”

added Kim.

The collaboration follows a successful flight demonstration in 2024 when the companies launched a Gray Eagle from the Republic of Korea Navy (RoKN) amphibious landing ship ROKS Dokdo and landed at a ground facility.

The RoKN noted in a social media post that the Gray Eagle and its various support systems were loaded on Dokdo on 4 November, where it was assembled on board the ship before its 12 November flight. The air vehicle used the vessel’s aircraft elevators to access the flight deck, and also conducted a simulated landing operation during its hour-long flight.

GA-ASI earlier stated that South Korea’s Ministry of National Defense is evaluating the Gray Eagle for its ability to meet its emerging military requirements.

We’re excited to extend and deepen our business relationship with Hanwha,” said GA-ASI CEO Linden Blue, who supervised the at-sea demonstration. “Our test flight with Gray Eagle STOL was well-received by the Republic of Korea Navy and we know Hanwha is ready to invest to grow a UAS business with GA-ASI in Korea and the US.”

**312 . Date: 09-04-2025Cargo - RequirementUK Royal Navy Turns to Drones to Support Carrier Task Group MissionURL: https://www.uasvision.com/2025/04/09/uk-royal-navy-turns-to-drones-to-support-carrier-task-group-mission/**

For the first time a fleet of drones will fly crucial supplies between ships of the UK Carrier Strike Group when it deploys to the Indo-Pacific later this month.

Alongside its F35B stealth jets and naval helicopters, flagship HMS Prince of Wales’ air group will also consist of nine powerful octo-copters for remotely moving items – food, packages from home and engineering parts – around the task group on its mission east.

The trial of the new systems alongside crewed aircraft is intended to free up the more expensive helicopters to focus on their primary role of protecting the task force from danger on its mission to the Far East.

Drone specialist 700X Naval Air Squadron from Royal Navy Air Station Culdrose is embarking a team of 12 sailors to operate nine air systems, initially from three ships in the group to test the capability.

Lieutenant Matt Parfitt, a drone flight commander with 700X NAS, said:

“There is a statistic from previous carrier strike deployments that shows 95 per cent of stores transferred weigh less than 50kg. They could be anything from parcels from home to a vital engineering part.

In the past we’d have used a helicopter if a part was urgently needed on another ship. This time we’re going to use a remotely-piloted, uncrewed system instead. We are aware that we’re trialling new things and, because it’s not been done before on this scale, the eyes of the fleet will be on us.”

With eight rotor blades – each around two feet in length – an endurance of between 20 to 40 minutes, top speed of 60mph, and able to lift up to 68kg, the Malloy T-150 is not just your average drone.

It needs a team of two, one remote pilot and a second to monitor the drone’s command unit, and can be flown manually or autonomously to designated waypoints with an underslung cargo.

The rapid change and use of drone technology is driving the Royal Navy to adapt new systems and practices at record speed. Changes that would normally take years were now being done in months.

Built by private company Malloy, the new drones were created as a result of a research and development project led by the Ministry of Defence to accelerate its use of new technology.

700X Naval Air Squadron on board HMS Prince of Wales flying the Malloy Drone

Lieutenant Parfitt added:

“We only got these Malloy systems last August. Since then we’ve had to learn how to fly and maintain them and how to integrate them into the crewed aviation space. That’s an awful lot of regulations and documentation that has to be done, which is a lot of work for us as we prepare to deploy.

These systems have only really been used over land before, so we’re also having to understand how we can operate and maintain them in the maritime environment.

Everybody is working at maximum speed to get everything ready. It has been challenging and difficult, but that’s also exciting too. This is exactly the sort of thing we joined the navy to do, and certainly why we joined this squadron.”

Another example of how 700X NAS is pushing the boundaries of naval practice is in its diverse membership, drawing sailors from different branches of the navy to build a corps of dedicated and qualified drone personnel.

Able Rate Michael Page joined the navy as a naval airman aircraft handler, and has now retrained as a remote pilot, qualified to fly and supervise others on Malloy and small fixed-wing Puma drones.

“It’s a lot different from being an aircraft handler,” he said. “You’ve got a lot more responsibility in this role and they don’t just need to look at your rank, instead they look at your level of skill too.

“It’s been really good. I’ve enjoy going on all types of ships and I’ve already been deployed to the Far East, west Africa and the Caribbean.”

**313 . Date: 10-04-2025Hybrid Rotary / Fixed Wing - ISR / ISTAR - Mini - General - PlatformBrazil’s XMobots Unveils Nauru 100D UAVURL: https://www.uasvision.com/2025/04/10/brazils-xmobots-unveils-nauru-100d-uav/**

Brazil’s XMobots has unveiled a new battery-powered electrical vertical take-off and landing (eVTOL) unmanned aerial vehicle (UAV), the Nauru 100D, intended to perform surveillance and combat missions. The Nauru 100D was unveiled at the LAAD Defence & Security expo in Rio de Janeiro, Brazil, on 30 March.

CEO of XMobots Giovani Amianti told Janes on 2 April that

“production [has] already commenced with a test lot of 20 systems”, and that the company had already begun to receive orders. Future production, Amianti said, “will be determined by future orders”.

Nauru 100D is designed to be manportable, with a weight of 9 kg and a length of 2.1 m. The system is transported in two cases, one for the vehicle and the other for the control system and payloads. The UAV has a maximum flight endurance of around two hours, a range of 30 km, and an operational height ceiling of around 400 ft (120 m). It can carry up to 1.5 kg of payload, including weapons, although Amianti declined to discuss lethal payloads.

**314 . Date: 17-04-2025Fixed Wing - ISR / ISTAR - Small - General - Engine / PowersourceChinese Hydrogen Drone Sets 30-Hour Non-Stop Domestic Flight RecordURL: https://www.uasvision.com/2025/04/17/chinese-hydrogen-drone-sets-30-hour-non-stop-domestic-flight-record/**

A 50-kilogram hydrogen-powered unmanned aerial vehicle developed by China recently completed a 30-hour continuous flight, setting a new domestic record for similar types of aircraft and reaching an internationally leading level in terms of endurance.

The drone, jointly developed by the Chengdu Aircraft Industrial Group Co (CAIG) under the Aviation Industry Corporation of China (AVIC), a state-owned aerospace and defense conglomerate, and Tsinghua University, achieved a breakthrough in the integrated design technology of flight, propulsion and control systems based on the output characteristics of hydrogen fuel cells, AVIC said in a statement.

According to AVIC’s release, during takeoff, the aircraft innovatively adopted an autonomous integrated vehicle-mounted release method with an unmanned system consisting of an unmanned ground vehicle and an unmanned aerial vehicle. This system successfully demonstrated and validated its operational capabilities under non-standard runway conditions.

During its flight, the drone equipped with an electro-optical payload is capable of effective ground patrol and surveillance.

Meanwhile, by using a 5G onboard module and public network resources, the drone can transmit in real time the telemetry data and mission payload images to a remote platform, achieving dynamic remote monitoring, says the statement.

This collaborative model combined with front-end inspection and back-end decision-making demonstrates great potential in areas such as emergency communications, environmental monitoring and border patrol. During natural disaster rescue missions, drones can remain airborne for extended periods and provide real-time imagery of affected areas. In terms of smart city management, they, combined with AI algorithms, can automatically identify violations and trigger response procedures, according to some industrial insiders.

Industry insiders added that compared with traditional lithium battery-powered drones, hydrogen energy systems offer higher energy density, longer endurance and zero carbon emissions – perfectly aligning with the needs of green aviation development. The achievement of 30-hour continuous flight capability means that this drone can cover a wider operational range and perform more complex tasks, providing essential hardware support for the expansion of low-altitude economy application scenarios.

A 50-kilogram hydrogen-powered drone, developed by AVIC Chengdu and Tsinghua University

Besides, the technical approach for aircraft hydrogen fuel cells differs significantly from hydrogen fuel cells used in automobiles, Shi Xin, an expert from the State Key Laboratory of Catalysis under Dalian Institute of Chemical Physics, Chinese Academy of Sciences, told the Global Times on Wednesday. He noted that the design of aircraft hydrogen fuel cells focuses on lightweight, high energy density, long endurance and performance in ultra-low temperatures.

Major global producers of hydrogen-powered drones include South Korean Doosan Mobility Innovation, UK’s ISS Aerospace, Japan’s Drone Works, and Israel’s Heven drones. The US’ AeroVironment company successfully built and tested the world’s first liquid hydrogen-powered drone in 2005.

Attracted by the promising market prospects, several Chinese companies have already entered the research, development and production of the hydrogen-powered drone industry, experts said.

CAIG believes that the 50kg-class hydrogen-powered drone will enhance the application scenarios of hydrogen-powered drones in the low-altitude economy, and play a positive role in advancing new business models in low-altitude economy and green aviation, according to the statement.

**315 . Date: 17-04-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - ArmamentMQ-9B Shown with Airborne Laser at Sea Air Space 2025URL: https://www.uasvision.com/2025/04/17/mq-9b-shown-with-airborne-laser-at-sea-air-space-2025/**

General Atomics is pushing forward with several new technologies shown at Sea Air Space 2025, including, for the first time, a display of a new podded air-to-air laser system on their MQ-9B platform.

A new airborne laser pod, seen in detail at Sea Air Space, is being pitched as a solution for fleet defense against one-way attack drones. The capability is separate from previous efforts by the Department of Defense to put lasers on aircraft.

The new laser is part of the General Atomics Laser Weapon Systems portfolio, centering around the scalable High Energy Laser (HEL) Weapon System. The laser is in the 25kW class and scalable to 300kW in both pulsed and continuous wave systems, capable of operating in all environments.

“The system’s large optical aperture and efficient cooling offers significant reductions in size and weight to suit air, land and sea-based platforms.”

– GENERAL ATOMICS

The General Atomics booth at Sea Air Space featured a display of an MQ-9 with an underwing laser pod firing at several ‘Shahed’ style one-way attack drones approaching a surface warship. The pod holds a 25kW distributed gain laser with a large ram air intake for cooling, alongside an ultra-high power density battery system.

The airborne laser concept uses distributed gain technology to enable airborne operations with tight size, weight, and power (SWaP) constraints. Distributed gain allows for efficient cooling and beam generation that can handle the requirements of flight and constraints that an aircraft poses to onboard systems.

A closeup of the underwing laser featured at General Atomic’s booth at Sea Air Space. Note the large intake behind the aperture on the underside of the pod. Photo – Carter Johnston

An airborne laser is not new to the General Atomics laser portfolio. Development of an unspecified airborne laser dates back several years. Since 2021, the company has been pitching its laser weapons as efficient and small enough to suit airborne platforms.

A Breaking Defense interview with then-vice president for laser and electro-optic (LEO) systems Michael Perry outlined the company’s intentions for its laser weapons portfolio, mentioning that the company could put lasers on aircraft—with plans to do so in coming years.

A General Atomics press release from 2024 features a different underwing pod onboard a U.S. Air Force F-15C Eagle – General Atomics press release

In 2025, the podded laser concept is being brought to the MQ-9 family. General Atomics has experience with stabilizing narrow laser beams for its UAS platforms and has demonstrated its capability with the Laser Airborne Communication (LAC)-12 Terminal. LAC-12 is able to transmit and receive laser-delivered communications over long distances with a successful test between two aircraft completed in 2022.

A previous cancelled effort, the Self-protect High Energy Laser Demonstrator (SHiELD) program, had Boeing, Lockheed Martin, and Northrop Grumman as prime contractors. SHiELD looked to develop and field an airborne laser demonstrator for 4th generation aircraft like the F-16 and F-15. It was cancelled in 2024 without any flight tests. The General Atomics effort shown at Sea Air Space 2025 is unrelated to the SHiELD program.

The General Atomics display emphasizes the role of an airborne laser in fleet defense, for a specific application in counter-drone missions. Photo – Carter Johnston

**316 . Date: 17-04-2025Fixed Wing - Cargo - N/A - GeneralUkraine Tests Drone ‘Motherships’URL: https://www.uasvision.com/2025/04/17/ukraine-tests-drone-motherships/**

Ukraine is fielding carrier drones or motherships to transport FPVs to the target area before launching them. Russian forces reported these as far back as November 2023, and last month Russian news agency TASS stated that Ukraine was carrying out FPV attacks 25 miles or more behind the lines in seven regions, suggesting that use is becoming widespread.

The commander of the Typhoon drone unit of the National Guard of Ukraine, who goes by the callsign ‘Michael’, told me that carrier operations still very much under development.

“It’s a combination of using existing technologies and continuously refining them based on operational feedback,” says Michael. “It’s about optimizing what we already have while layering in new enhancements where needed.”

FPV drone on fixed wing aircraft type mothership – UNITED24

There are parallels with the learning curve on traditional floating aircraft carriers. The Chinese Navy officially commissioned its first aircraft carrier, the Liaoning, in 2012. It took four years of trials and training — and a number of accidents – before the was declared combat ready. The Chinese already had a navy and an air force, but flying aircraft from ships required a whole new skill set for both. New military operations take practice to perfect, and learning under field conditions is harder.

While a single FPV strike may be simple, a carrier with one or more FPVs is more complex and involved more people and hardware. The carrier remains in the area to act as a flying radio relay for the FPV and Michael says they would not fly a reusable carrier drone against a low value target.

“If something goes wrong, we risk losing not just the FPV, but the entire system,” says Michael

Ukraine has displayed drone carriers include both fixed wing and multi-rotor types, carrying one, two, four or six FPVs. More might look better, but it brings complications.

“If we’re using analog video transmission, for example, each drone must operate on a different frequency to avoid signal interference,” says Michael, “Managing multiple video feeds, control links, and power systems adds significant complexity, especially under field conditions. It requires precise coordination and a reliable communication infrastructure to ensure everything works smoothly in practice.”

So the carrier with a single drone supplied to Birds of Magyar may be preferable to something bigger.

Multicopter drone carrier with FPV – UNITED24

The choice between fixed wing or rotary carrier also involves tradeoffs.

“When it comes to rotary-wing carrier drones, the main disadvantage is their relatively low operational altitude — typically around 300–400 meters,” says Michael. “At this height, they are vulnerable to a wide range of threats including small arms fire, other drones, and electronic warfare such as jamming.”

Russia routinely flies interceptor drones against Ukrainian multicopter Baba Yaga night bombers, and a rotary drone carrier would be a prime target.

“Fixed-wing carrier drones, on the other hand, operate at much higher altitudes,” says Michael. This avoid some threats, only to run into others. “At these altitudes, they become more visible to enemy radar and are more likely to be targeted by anti-aircraft systems.”

Either way, carrier missions must be carefully planned around Russian air defences.

“In many combat zones, the airspace is protected by a mix of electronic warfare tools and radar systems,” says Michael. “Successful use of such systems requires detailed intelligence to identify gaps in enemy air defence coverage.”

Michael says his Typhoon unit is starting to focus on one particular attack mode for carriers.

“From our perspective, the most promising use case at the moment is integrating a ‘lock-on-target’ feature, which would allow for more autonomous and precise deployment of FPV drones from the carrier platform,” says Michael.

In this approach the carrier stands off at a safe distance from jammers and the FPVs fly in, lock on and engage well-protected targets. Michael previously described his units’ work with automated target lock systems for FPVs. Once locked on these are immune to jammers and are a limited but useful way of assisting human pilots.

“Implementing this capability requires additional technical development and system integration, so it’s still a work in progress,” says Michael.

There are real benefits in prospect though. Apart from extending range, carrier drones eliminate problems like radio shadow and shorten the time between detecting a target and engaging it. They also open up the possibility of multiple coordinated strikes against long-range targets.

Meanwhile, interceptor operators are reportedly using drone carriers to get FPVs into action rapidly against high-altitude targets. A carrier can patrol at altitude and the FPVs are only launched when needed.

Simply possessing FPV carriers makes the enemy’s life more difficult, even if they are rarely used.

“Even if a mission is not cost-effective in purely tactical terms, the psychological impact of a successful carrier drone strike — especially deep behind enemy lines — can be significant,” says Michael.

**317 . Date: 22-04-2025Fixed Wing - Loitering Munition - N/A - ContractModini Gets UK MOD £4.5m Precision Strike Drone ContractURL: https://www.uasvision.com/2025/04/22/modini-gets-uk-mod-4-5m-precision-strike-drone-contract/**

The UK Ministry of Defence has formally awarded a £4.5 million contract to Modini Limited for the delivery of One Way Effector (OWE) systems under a two-year, single-source arrangement intended to support Project ASGARD and upcoming operational deployments.

According to the contract award notice published on 17 April 2025, the agreement was concluded on 20 February 2025, with delivery timelines aligning to the MOD’s requirement for operational readiness ahead of Operation CABRIT in summer 2025.

OWEs—unmanned combat aerial vehicles designed for single-use strike or reconnaissance missions—form a key part of a broader capability enhancement under Project ASGARD, a network-enabled, software-defined reconnaissance and strike framework. The goal is to provide “any sensor to any effector” decision-making superiority on the battlefield through rapid and scalable integration of effectors and digital decision tools.

The MOD previously published a voluntary transparency notice in December 2024 outlining its intention to proceed with the contract via negotiated procedure without prior publication, citing technical exclusivity and urgent delivery requirements.

The contract was awarded through the Human Machine Teaming (HMT) Framework, with MOD citing that “only Modini could meet the required performance specifications and tight delivery schedule” for the required payload weight, speed, range, and terrain-following capabilities.

The notice stated:

“There is strict technical impracticality for a supplier other than the chosen supplier to achieve the Authority’s technical requirements… only Modini could reach the Authority’s strict and necessary deadlines for production and delivery of the hardware.”

The initial contract value is £4.5 million (excluding VAT), with options for further procurement of additional effectors and spares anticipated. A prior estimate suggested the overall value for the OWE component of Project ASGARD could reach £7.5 million, depending on evolving operational needs.

Modini Limited, based in Pewsey, is an SME and has been identified as the sole contractor for this stage of the programme. The company’s ability to rapidly meet demanding specifications has made it a key partner for near-term strike drone delivery, though MOD clarified this deal “will not define longer-term OWE solutions for the UK.”

In this context, OWE systems refer to advanced unmanned aerial vehicles (UAVs) designed to deliver precision strikes with the ability to operate autonomously and strike specific targets with high accuracy. This contract, set for a 24-month period, will support Operation CABRIT, a key NATO mission, and is part of a broader effort to develop a software-defined, network-enabled system for the UK Armed Forces.

Op Cabrit is a UK-led NATO operation based in Estonia. It is part of NATO’s enhanced Forward Presence (eFP) initiative in the Baltic region. The operation involves the deployment of British Army personnel and equipment, primarily focused on providing a deterrent against potential aggression, strengthening NATO’s defensive posture, and enhancing security in the region, particularly in response to concerns about Russian influence.

The One Way Effector systems will be procured through the Human Machine Teaming (HMT) Framework, with Modini selected due to its ability to meet the MOD’s stringent technical requirements.

The MOD noted previously that “it was identified that only Modini could reach the Authority’s strict and necessary deadlines for production and delivery of the hardware for Spring 2025 and be deployed on Op CABRIT in Summer 2025.” This makes Modini the sole supplier able to deliver on the MOD’s demanding criteria, which include payload weight, scalability, range, maximum speed, and terrain-following capabilities.

Project ASGARD is an initiative designed to provide the UK with enhanced decision support and operational execution across land, air, and maritime domains.

The project is divided into three main areas, or ‘tents’, which include “Effectors,” “Digital Innovation,” and “Enhanced C4 ISTAR & Networks.” The procurement of the OWE systems falls under Tent 1, Effectors, which focuses on increasing the range and effectiveness of kinetic effects, particularly in support of brigade and divisional deep battles. This initiative seeks to integrate “all appropriate effector capabilities with in-theatre communications and data exchange systems” to ensure seamless operational execution.

The MOD also clarified that while the OWE systems will be crucial to meeting the UK’s near-term defence needs, they will not define the technical solutions for the MOD’s longer-term OWE-based capability requirements. This aligns with the broader aim of enhancing the UK’s military capabilities, reinforcing its commitment to cutting-edge technology and operational readiness in modern warfare.

The MOD’s Defence Equipment & Support (DE&S) team is managing the contract, with Modini’s proven expertise ensuring that the OWE systems will meet the necessary performance standards and be ready for deployment by mid-2025.

“Project ASGARD is intended to meet a specific, near-term capability need and will not define technical solutions for the UK MOD’s longer-term OWE-based capability requirements,” the MOD noted in the official award announcement.

**318 . Date: 22-04-2025Fixed Wing - Armed ISR / ISTAR - MALE - General - ArmamentMQ-1C Gray Eagle Tests Hellfire MissilesURL: https://www.uasvision.com/2025/04/22/mq-1c-gray-eagle-tests-hellfire-missiles/**

The MQ-1C Gray Eagle unmanned aerial system has used the AGM-114L Longbow Hellfire missile, in conjunction with its onboard radar, to shoot down a drone in live-fire tests, General Atomics Aeronautical Systems has confirmed to TWZ. While there is currently a major drive in the development of different counter-UAS systems involving kinetic and non-kinetic solutions, using the Gray Eagle to bring down drones using Hellfire missiles is a new and intriguing development.

GA-ASI has “demonstrated live-fire takedown using Longbow Hellfire from Gray Eagle to eliminate a small UAS,” C. Mark Brinkley, a company spokesman, told TWZ. Arming the adaptable Gray Eagle with Hellfire missiles is not the only counter-UAS option that GA-ASI is currently pursuing with this platform.

A Hellfire-armed MQ-1C Gray Eagle operating out of Dugway Proving Ground, Utah. U.S. Army

“Additionally, our company-funded, live-fire demo of podded miniguns from Gray Eagle STOL (Short Takeoff and Landing) conducted last year offers another interesting and affordable kinetic option for counter-UAS operations,” Brinkley added. “These flying trash cans simply aren’t built to withstand incoming 7.62mm rounds, and the miniguns could offer other armed overwatch options not previously explored.”

This is a reference to the Dillon Aero DAP-6 Minigun pods, a weapon system that has been live-fire tested from the GA-ASI Mojave demonstrator drone at the U.S. Army’s Yuma Proving Ground.

General Atomics’ Brinkley said the company plans to unveil a new kinetic option for Gray Eagle STOL “in the next few months that would further lower the price tag for C-UAS response, while also increasing accuracy and flexibility.” It’s unclear if this is a reference to the aforementioned Longbow Hellfire, although the reference to reduced costs would seem to point to another, cheaper option, perhaps a laser-guided rocket.

As well as kinetic and non-kinetic means of bringing down hostile drones, GA-ASI has also adapted onboard sensors to allow its drones to detect, track, and then engage the UAS in the first place.

“We have conducted numerous flight tests using our Lynx and EagleEye radar systems for target acquisition and tracking of small UAS,” Brinkley confirmed.

The EagleEye synthetic aperture radar can detect and track ground targets out to 50 miles and maritime targets out to 124 miles, although its capability against aerial threats is not presently known. However, with a new active electronically scanned array (AESA) antenna and associated software for EagleEye being developed, this will further increase its range and add to its multi-mode performance.

These flight tests are especially significant in that they have utilized the proprietary GA-ASI radars in an air-to-air mode to provide detection, including in the critical look-down mode, and onboard weapons cueing.

**319 . Date: 23-04-2025PartnershipDoosan Enerbility and Korean Air to Co-Develop Unmanned Jet AircraftURL: https://www.uasvision.com/2025/04/23/doosan-enerbility-and-korean-air-to-co-develop-unmanned-jet-aircraft/**

Korean Air announced on the 16th that it has signed a memorandum of understanding (MOU) with Doosan Enerbility to collaborate on developing aviation engine technology and unmanned aerial systems.

The signing ceremony held at Doosan Enerbility’s headquarters in Changwon was attended by Kim Kyung-nam, head of the Korean Air Aircraft Technology Research Institute, and Ko Min-seok, head of GT development at Doosan Enerbility.

Korean Air will be responsible for the development of aircraft systems, while Doosan Enerbility will take on the development of aviation engines. The two companies plan to focus on cooperative development of engines ranging from 5,000 to 15,000 pounds force (lbf) for medium-to-large unmanned aerial systems, such as low-observable fighters and multipurpose stealth drones, as well as 100 to 1,000 lbf engines for small unmanned aerial systems like collaborative combat aircraft (CCA).

Korean Air stated that it plans to achieve domestic development of advanced aviation engines and establish a competitive unmanned aerial system through this agreement. With countries such as the United States strictly limiting the export of technology possessed by engine manufacturing nations, the importance of early domestic production of aviation engines is increasing.

Kim Kyung-nam, head of the Korean Air Aircraft Technology Research Institute, noted, “The market for gas turbine engines for aircraft has long been monopolized by only a few advanced countries, and domestic production of engines is essential to strengthen the international competitiveness of domestic aircraft. We will continue to maintain close cooperation with domestic engine development companies, including Doosan Enerbility.”

**320 . Date: 28-04-2025General - DatalinkNASA’s Airborne Laser Communication TestbedURL: https://www.uasvision.com/2025/04/28/nasas-airborne-laser-communication-testbed/**

The Airborne Laser Communication Testbed (ALCT) is a research platform in high-data-rate communication systems designed to complement existing aeronautical radio frequency (RF) communications.

This innovative technology offers several distinct advantages: exceptional data transmission rates, resistance to jamming, enhanced physical security, and low probability of interception/detection (LPI/LPD). Notably, it operates independently of RF spectrum allocations, requiring clear line of sight (LOS) to establish a link within its operational range.

The system’s reliability has been extensively validated through three comprehensive flight campaigns, accumulating over 50 hours of operational link-time across aircraft platforms – including the DHC-6 Twin Otter and PC-12 – with ground station operations centered at NASA Glenn Research Center’s hangar facility.

Photo of NASA’s PC-12 with the Airborne Laser Communication Testbed installed – NASA

Recent developments of the ALCT have provided practical approaches to critical aerospace communication challenges. Through rigorous flight testing conducted between 2019 and early 2025, research teams have successfully demonstrated the system’s capability to maintain high-speed data transmission across significant distances in both air-to-ground and preliminary air-to-air configurations.

This advanced laser communication technology has proven its viability as a powerful complement to conventional RF systems, showing promise for both manned and unmanned aircraft operations.

The ALCT’s ability to sustain gigabit-class data rates at distances up to 60km slant path, while maintaining operational links at even greater ranges, marks a significant advancement in aeronautical communication capabilities. A particularly noteworthy achievement has been the successful implementation of air-to-air tracking, validated through retroreflector testing.

These innovations hold special significance for urban air mobility applications and address the growing demand for reliable, high-bandwidth communication solutions in increasingly congested airspace environments..

**321 . Date: 30-04-2025AcquisitionMBDA Invests in UK’s Hydra DronesURL: https://www.uasvision.com/2025/04/30/mbda-invests-in-uks-hydra-drones/**

– MBDA, a strategic partner to the UK Ministry of Defence (MOD) for complex weapons, has invested in Hydra Drones, a British unmanned aerial vehicle (UAV) SME.

This is one of the first investments by MBDA in a British SME and a step towards future defence partnerships. It also reflects the essential nature of SME and major defence company collaborations under the UK’s defence industrial strategy.

The investment secures the continued development of the Hydra 400 heavy lift drone, which is capable of carrying an array of payloads including casualty evacuation pods, cargo or weapon systems.

With the investment, MBDA becomes a shareholder, bringing together the proven innovation of both Hybrid Drones Ltd and MBDA into an effective partnership to integrate MBDA effectors, and demonstrating its commitment to supporting national cutting-edge defence technologies.

Dr Stephen Prior, CEO of Hybrid Drones Ltd, said:

“While our original collaboration with MBDA was a great validation of our agile and innovative technological approach, this further investment in our business means more than just financial backing. It allows us to meaningfully contribute to national defence capabilities while keeping our high-skilled workforce local.

“In light of an increasing need to invest in our indigenous technological development and to be less reliant on international suppliers, it is exactly partnerships such as the one between us and MBDA that can help create a nimble, resilient national defence supply chain that we are proud to be a part of. We look forward to continuing our partnership as we aim to make Hydra the heavy lift hybrid UAV of choice in defence, as well as other sectors.”

Suzanne Jude, Director of UK Sales and Business Development at MBDA, commented on the investment, saying:

“Innovation and delivering sovereign capabilities are part of the DNA of MBDA. Having worked in partnership with Hybrid Drones Ltd, our investment is a natural next step in our continued collaboration. By supporting agile, pioneering SMEs such as Hybrid Drones, we’re not just investing in a product, but in the future of defence ecosystems, strengthening competitive advantage in an increasingly complex global defence landscape.”

The Hydra 400 is a new generation of heavy lift UAV using a hybrid of electric rotors and single spool jet turbines for lift and propulsion. Compact and portable, Hydra can be transported in the back of a flatbed truck and assembled ready for flight in minutes. Hydra is configurable as fully electric or as a hybrid using two, four or six jets.

The British Army’s Warfighting Experiment, which conducts live trials of emerging military technologies, provided a crucial framework for Hydra Drones to collaborate with MBDA, the UK MoD’s strategic partner for complex weapons.

“We owe a great deal to the Army’s Land Industrial Strategy for our successful collaboration with MBDA”, Dr Stephen Prior commented further. “Long-term collaboration between the Army and industry is vital to the work we do, and as a home-grown UK SME, this kind of innovative industrial partnership is exactly what will help position Britain at the forefront of advanced defence technologies.”

**322 . Date: 30-04-2025M-Rotary - Cargo - MALE - AcquisitionPiasecki Aircraft Acquires Kaman Air Vehicles’ KARGO UAV ProgramURL: https://www.uasvision.com/2025/04/30/piasecki-aircraft-acquires-kaman-air-vehicles-kargo-uav-program/**

– Piasecki Aircraft Corporation has announced the acquisition of Kaman Air Vehicles‘ KARGO UAV program, expanding its portfolio of vertical lift and cargo UAS solutions. KARGO UAV is a medium-lift, autonomous unmanned aerial vehicle that has been demonstrated to both the U.S. Marine Corps and U.S. Army for its cargo VTOL capabilities, with successful autonomous lift and flight testing under military evaluation programs.

Designed for operations in contested and remote environments, KARGO UAV has completed initial military contracts and is poised to disrupt both defense and commercial cargo transport.

KARGO UAV is a dual-use system built for agile logistics-whether in combat zones or remote commercial operations. Engineered for versatility, it features a compact footprint, allowing for easy transport and rapid deployment in austere environments. KARGO UAV is optimized for autonomous operations, utilizing advanced flight controls and modular payload integration. The system is designed to meet the needs of the Department of Defense and commercial customers that demand affordable and reliable logistics support. Its robust construction, adaptability, and small logistical footprint position it as a key solution for augmenting efficiency in remote and tactical settings.

KARGO UAV recently demonstrated autonomous cargo lift for the U.S. Army and completed fully autonomous flight testing using Near Earth Autonomy’s Peregrine system. With an initial $12 million award from the U.S. Marine Corps Marine Corps Autonomous Resupply Vehicle – Expeditionary Logistics Program (MARV-EL), two full-scale prototypes, and demand projected to exceed 300 aircraft, Piasecki aims to accelerate development testing, towards a production variant to meet growing demand from both military and commercial customers.

The addition of Kaman’s advanced UAV technology aligns seamlessly with Piasecki’s existing rotorcraft portfolio, enhancing its ability to deliver cutting-edge cargo transport solutions to both military and commercial sectors. Piasecki will acquire all intellectual property and assets associated with the program and will relocate all R&D and operational activities to Piasecki’s state-of-the-art Heliplex facility in Coatesville, Pennsylvania.

“This acquisition is a perfect fit for Piasecki’s long-term vision for a family of autonomous VTOL UAS solutions to address a diverse range of customer mission requirements in both government and commercial markets,” said John Piasecki, CEO of Piasecki Aircraft Corporation. “Kaman’s KARGO UAV program has already achieved significant milestones. With our VTOL expertise, world-class Heliplex, and deep industry partnerships, we are positioned to accelerate KARGO’s transition from prototype to production. Piasecki has adopted a family of systems approach to the cargo UAS market that offers greater scalability and adaptability than single-platform strategies.”

“This was a strategic decision to ensure that Kaman’s impressive UAV technology finds a home where it can thrive,” said Ross Sealfon, President and CEO of Kaman Corporation. “Piasecki’s reputation for innovation and commercialization in vertical flight solutions makes them the ideal company to take KARGO UAV to market.”

**323 . Date: 01-05-2025PartnershipBaykar and Leonardo Partnership Officially Exchanged at Turkey – Italy Intergovernmental SummitURL: https://www.uasvision.com/2025/05/01/baykar-and-leonardo-partnership-officially-exchanged-at-turkey-italy-intergovernmental-summit/**

The strategic cooperation agreement signed in March between Baykar, the leading company in the global UCAV market, and Leonardo, one of the world’s largest defence companies, was officially exchanged today at a ceremony held as part of the 4th Türkiye-Italy Intergovernmental Summit in Rome. The ceremony at Villa Pamphili Residence took place in the presence of President Recep Tayyip Erdoğan and Italian Prime Minister Giorgia Meloni.

At the ceremony, the agreement documents concerning the memorandum of understanding signed on March 6, 2025, in Rome — aimed at combining the two companies’ capabilities in high technology — were mutually exchanged by Baykar Chairman Selçuk Bayraktar and Leonardo CEO and General Manager Roberto Cingolani.

The agreement, signed last month and officially exchanged today, brings together Baykar’s battle-proven unmanned platforms and superiority in artificial intelligence technologies with Leonardo’s expertise in mission systems, payload design, and European aviation certifications. The joint venture to be established by Baykar and Leonardo aims to seize opportunities in the European unmanned aerial vehicle market.

The strategic cooperation between the two companies covers not only unmanned aerial vehicles but also areas such as electronic systems, payloads, C4I (Command, Control, Communications, Computers, and Intelligence), artificial intelligence, and integrated mission systems. Baykar and Leonardo aim to create synergy in European and international markets by ensuring the seamless integration of multi-domain ecosystems. The joint venture is poised to operate at several facilities across Italy –Ronchi dei Legionari, Torino, Roma Tiburtina, and Nerviano.