



## UAS and SmallSat Weekly News

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### **AAM Leaders Grapple with Traditional Aerospace Issues** Graham Warwick January 27, 2023



*Eve's eVTOL vehicle is focused on short-range urban air mobility.*

Over the past year, the differentiation between leaders in the nascent advanced air mobility field has come into sharp focus, the consequence of differing technical choices, business approaches and operational aspirations.

The dozen or so companies vying to be the electric vertical-takeoff-and-landing (eVTOL) market survivors are on one level all in a race, but on another level, they are all running on different paths. Archer Aviation and Joby Aviation, for example, may be direct competitors pursuing the same air-taxi market, but they are distinctly different companies.

Joby's complex vehicle and vertical integration led to delays last year and pushed service entry back into 2025 from 2024. With a simpler vehicle and experienced suppliers, Archer stuck to its plan to launch service in 2025.

They will not be first to cross the finish line. EHang expects to gain certification of its autonomous two-seat EH216-S early this year, but the Chinese process is opaque and will not set a global standard. Approval of Volocopter's piloted two-seat VoloCity, now expected in 2024, likely will be the milestone as the first certification under the European Union Aviation Safety Agency's Special Condition for VTOL. <https://aviationweek.com/aerospace/advanced-air-mobility/aam-leaders-grapple-traditional-aerospace-issues>

### **Manassas company to develop short takeoff, landing aircraft for Air Force**

JANUARY 26, 2023 KATHERINE SCHULTE Electra developing \$85M prototype that can operate in soccer field-sized spaces



Manassas-based aerospace company Electra.aero Inc. has received a Strategic Funding Increase award from the U.S. Air Force's AFWERX arm that secures up to **\$85 million** for development of a prototype electric short takeoff and landing (eSTOL) aircraft.

The award, announced Thursday, secures funding between private investments, government funding and matching Small Business



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Innovation Research funding for the development, testing and evaluation of a full-scale pre-production prototype. AFWERX is a technology directorate of the Air Force Research Laboratory that teams technology developers with Air Force and Space Force personnel.

The company's eSTOL is designed to operate in spaces the size of a soccer field and can fly missions including cargo logistics, executive transport and humanitarian assistance and disaster response in urban remote areas. Electra plans to test a two-seat piloted eSTOL demonstrator aircraft at the Manassas Airport Electra facility in the spring, and the award will accelerate Electra's development of a commercial **nine-passenger** eSTOL product aircraft that would support Air Force missions of interest. [https://www.virginiabusiness.com/article/manassas-company-to-develop-short-takeoff-landing-aircraft-for-air-force/?oly\\_enc\\_id=8242C5862912F2S](https://www.virginiabusiness.com/article/manassas-company-to-develop-short-takeoff-landing-aircraft-for-air-force/?oly_enc_id=8242C5862912F2S)

## BFT and US AFRL Successfully Complete Ground Testing for Unmanned Fury Vehicle

January 27, 2023 Military News



Blue Force Technologies (BFT) has successfully completed a ground test for its Fury uncrewed aircraft which is being developed under the US Air Force Research Laboratory's Bandit program. The test, which was conducted in collaboration with AFRL, validated the performance of the aircraft's revolutionary carbon fiber composite propulsion flow-path system.

According to BFT President Scott Bledsoe, the proper integration of the propulsion flow-path is the most critical design aspect for an uncrewed fighter like Fury. He stated, "It was crucial for us to demonstrate, prior to building flight-test aircraft, that we could correctly predict the interaction between the propulsion flow-path components and the Williams International engine."

The test was carried out using advanced computational fluid dynamics (CFD) analysis with comprehensive resources from the US Army Engineer Research and Development Centre and AFRL. The aim of the test was to validate the analysis and further strengthen the team's confidence in using CFD tools for the remaining flight envelope portions. Additionally, the test allowed AFRL and BFT to gather high-fidelity data that can be used for validating computational methods. [https://uasweekly.com/2023/01/27/bft-and-us-afri-successfully-complete-ground-testing-for-unmanned-fury-vehicle/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=bft-and-us-afri-successfully-complete-ground-testing-for-unmanned-fury-vehicle&utm\\_term=2023-01-27](https://uasweekly.com/2023/01/27/bft-and-us-afri-successfully-complete-ground-testing-for-unmanned-fury-vehicle/?utm_source=rss&utm_medium=rss&utm_campaign=bft-and-us-afri-successfully-complete-ground-testing-for-unmanned-fury-vehicle&utm_term=2023-01-27)



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### Skyway and Siemens Partnership to Elevate Vertiport Operations to New Levels

January 27, 2023 News



Siemens and Skyway are working together to determine the electrical and digital infrastructure needed to support vertiport operations. Vertiports are hubs for VTOLs (vertical take-off and landing vehicles) such as air taxis and drones. The scope of collaboration involves both companies researching energy demands of vertiports and developing sustainable electrical supply, standard charging processes, and a system of systems to support aircraft operations.

A main objective of the collaborative effort is to develop vertiports. This includes researching, developing, planning, and being part of their construction and operation with each company bringing its own strength and experience to the effort. Skyway has vast knowledge of airspace mission planning and management, air traffic navigation, and unmanned aircraft operations, and Siemens has infrastructure expertise in electrification, vehicle charging, and facility operations.

In addition, Siemens and Skyway will collaborate on innovative ideas to standardize overall vertiport planning and design and reduce energy consumption.

[https://uasweekly.com/2023/01/27/skyway-and-siemens-partnership-to-elevate-vertiport-operations-to-new-levels/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=skyway-and-siemens-partnership-to-elevate-vertiport-operations-to-new-levels&utm\\_term=2023-01-27](https://uasweekly.com/2023/01/27/skyway-and-siemens-partnership-to-elevate-vertiport-operations-to-new-levels/?utm_source=rss&utm_medium=rss&utm_campaign=skyway-and-siemens-partnership-to-elevate-vertiport-operations-to-new-levels&utm_term=2023-01-27)

### uAvionix BVLOS approval with Choctaw Nation of Oklahoma is its second in two weeks

Bruce Crumley - Jan. 26th 2023



Drone avionics tech specialist [uAvionix has announced](#) its detect and avoid systems have received the second [Federal Aviation Administration](#) (FAA) authorization for [beyond visual line of sight](#) (BVLOS) drone flights in as many weeks, this time in partnership with the Choctaw Nation of Oklahoma (CNO).

Montana-based [uAvionix](#) said the CNO had received the [BVLOS approval](#) using the company's SkyLine software and SkyLink hardware on drones in the Choctaw Emerging Aviation Technology Center UAS Test Range. The FAA authorization was the second of the kind uAvionics



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tech was accorded, following a [similar all-clear](#) from the agency on January 9 for operations in North Dakota's statewide Vantis UAV network.

After demonstrating uAvionix's SkyLine command and control management platform, and detect and avoid sensors enabling pilots to electronically monitor airspaces around their drones to avert and craft in them, the FAA issued its authorization of [BVLOS operation](#) to the CNO as part of its [BEYOND program](#). <https://dronedj.com/2023/01/26/uavionix-bvlos-approval-with-choctaw-nation-of-oklahoma-is-its-second-in-two-weeks/>

### MIT's propeller innovation can make your drone less whiny Ishveena Singh Jan27,2023



Researchers at the Massachusetts Institute of Technology (MIT) have developed new low-noise propellers that can make current multirotor drones much less of an acoustic annoyance.

A team working at the MIT Lincoln Laboratory says it has come up with a closed-form propeller design that can significantly cut down the loud noise commonly associated with consumer drones. The configuration that the facility has gotten **patented** almost makes the propellers sound more like a rushing breeze rather than high-pitched buzzing — and it does so without sacrificing thrust.

Named after their donut-like shape, MIT's quieter [toroidal propellers](#) consist of two blades looping together so that the tip of one blade curves back into the other. This closed-form structure minimizes the drag effects of swirling air tunnels (i.e., vortices) created at the tips of blades and strengthens the overall stiffness of the propeller. The result is that the acoustic signature of the propellers comes down considerably.

Researchers say that when they tested prototype toroidal propellers on DJI drones, they found thrust levels comparable to those of regular props at similar power levels. But reduced sound levels on the drones fitted with toroidal props meant they appeared **only half as annoying** as a regular drone. Or in other words, the drone sounded as if it were twice as far away.

<https://dronedj.com/2023/01/27/low-noise-drone-propeller-quiet/>





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### GAO's report on FAA drone integration strategy: You can do better Bruce Crumley - Jan. 27th 2023



The Government Accountability Office (GAO) has [delivered its report](#) on the [Federal Aviation Administration's](#) (FAA) efforts to integrate drones into the national airspace and its methods of processing requests for operations not covered by Part 107 rules. The main conclusions of the audit are the regulator needs to do better in both establishing and communicating a comprehensive strategy for broader UAV use and in defining a uniform procedure for issuing waivers.

In preparing its study, the GAO consulted [FAA](#) planning documents and internal reports on drone integration, and interviewed agency officials and participants in the regulator's [pilot programs](#). It also consulted 15 industry groups representing manufacturers, operators, and other stakeholders who'd partaken in FAA rule-making advisory committees.

The main message the GAO came away with is the drone integration strategy the [FAA presented as comprehensive remains incomplete, and that methods for considering](#) waiver requests vary considerably around the nation. It also stated existing content does not sufficiently map out goals, objectives, milestones, or evaluation of drone integration progress. <https://dronedj.com/2023/01/27/gaos-report-on-faa-drone-integration-strategy-you-can-do-better/#more-90546>

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### GO INSIDE A RADIOACTIVE WASTE STORAGE VAULT — WITH A DRONE, OF COURSE January 23, 2023 Sally French



Ever wonder what the inside of a radioactive waste storage vault looks like? You can go inside — via a drone, of course.

In what's believed to be a mission that's **the first of its kind**, the U.S. Department of Energy flew a drone within a high-level radioactive waste storage vault at the Idaho National Laboratory Site. The

drone at hand was the [Elios 3](#) made by Swiss-based drone-maker Flyability, which is a collision-tolerant drone equipped with a LiDAR sensor for indoor 3D mapping.



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And the drone did exactly that — 3D map a vault built in the 1960s to store radioactive waste. That map will be used to provide crucial information used to plan its removal. The vault is located at the Idaho Nuclear Technology and Engineering Center at the Idaho National Laboratory Site in eastern Idaho.

The mission was conducted in conjunction with DOE contractor Idaho Environmental Coalition, awarded a \$6.4 billion, 10-year contract in 2021 to manage cleanup operations.

<https://www.thedronegirl.com/2023/01/30/radioactive-waste-drone-flyability/>

### **GAO Urges FAA To Develop Proper Drone Integration Plan** Russ Niles January 30, 2023



The Government Accountability Office says the FAA is dragging its feet on integrating drones into the National Airspace System and confounding industry efforts to get their businesses off the ground. [In a report](#) published last week, the GAO says the agency needs to step up its efforts to create a comprehensive strategy for drones to keep company with existing air traffic. It also wants the FAA to better communicate its requirements to industry and reduce the internal agency confusion in applying and enforcing rules.

“GAO is making four recommendations, including that FAA: (1) develop a drone integration strategy that includes all elements of a comprehensive strategy and (2) evaluate its current documentation to identify options to more clearly communicate how applicants can satisfy drone operational request requirements and FAA’s process for reviewing and approving operational requests,” the GAO said in its report. <https://www.avweb.com/aviation-news/gao-urges-faa-to-develop-proper-drone-integration-plan/?MailingID=1209>

### **Port of Rotterdam launches U-space prototype project, opens Airspace Center**

January 29, 2023 Jenny Beechener



Coinciding with coming into force of EASA regulations concerning U-space, the Port of Rotterdam Authority is setting up the airspace for drone use with the opening of Airspace Center together with Uncrewed Traffic Management provider Airwayz. The Airport Center is located on 14th floor of the Port of Rotterdam Authority office.



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The Center will manage, in a test setup, the low airspace (VLL – Very Low-Level airspace) for drones above the Europoort and Maasvlakte area, both for manned and unmanned flights for the next two years using Airwayz UTM system.

In low airspace, air traffic control will be a completely digital process. This will now be tested together with software partner Airwayz. The Port of Rotterdam Authority is **among the first in Europe** to set up its own airspace and rules on this scale to steer drone traffic in the right direction. <https://www.unmannedairspace.info/uncategorized/port-of-rotterdam-launches-u-space-prototype-project-opens-airspace-center-to-manage-lower-airspace/>

### **French development agency to invest EUR40 million in drone operations center in Rwanda** January 29, 2023 Jenny Beechener



The government of Rwanda has secured a EUR37 million loan from the French Development Agency to transform more public services digitally and develop the country's drone industry says a [report](#) by UAS Vision.

The related agreement is also complemented with a EUR1.2 million grant to mobilize French expertise in project implementation.

Providing quality services and customer care across public and private sectors has been of priority as outlined under the economic transformation pillar of the National Strategy for Transformation (2017 – 2024). But more needs to be done in terms of necessary infrastructure.

Besides improving public services that are still hampered by old local computer networks at central and local administration levels, the loan will also help the country to tap into the potential for using geospatial data – information recorded in conjunction with geographic indicators.

The Minister indicated the loan will be used to finance the construction of a Drone Operations Centre of excellence in Huye District. <https://www.unmannedairspace.info/latest-news-and-information/french-development-agency-to-invest-eur40-million-in-drone-operations-centre-of-excellence/>





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### AMC Wants To Launch 100 UAVs From Single KC-135 Stratotanker January 27, 2023



The U.S. Air Force's Air Mobility Command (AMC) wants a plan within two months to launch 100 UAVs from a single aging KC-135 Stratotanker.

The short-term goal was one of several efforts outlined by AMC Commander Gen. Mike Minihan in an internal memorandum to commanders that was posted to multiple social media networks and confirmed by Aviation Week on Jan. 27.

The memorandum, the first of eight monthly orders from Minihan to commanders, outlines an aggressive timeline for the Air Force's mobility fleet to be prepared for a possible conflict with China in 2025. Minihan has set a goal of August 2023 for having AMC prepared for that conflict, to coincide with a massive exercise planned to take place across the Indo-

Pacific. <https://aviationweek.com/defense-space/aircraft-propulsion/amc-wants-launch-100-uavs-single-kc-135-stratotanker>

### Janus considering alternative missions after losing original ride Jeff Foust January 27, 2023



NASA's Janus smallsat *mission is in limbo* after it lost its original ride when the Psyche mission was delayed. It's also dealing with a problem with its propulsion system.

WASHINGTON — A NASA asteroid smallsat mission that lost its original ride to space is considering alternative missions while also accommodating performance issues with its propulsion system.

Janus was originally designed to fly two smallsats that would then fly by separate binary asteroid missions. The mission, part of a NASA planetary smallsat program called Small Innovative Missions for Planetary Exploration, or SIMPLEX, was set to launch as a secondary payload on the Falcon Heavy launch of Psyche in 2022.

However, [the delay of Psyche's launch to October 2023](#) meant that Janus could not fly its original trajectory to reach its original targets or others of scientific interest. NASA announced Nov. 18 that it had removed Janus from the Psyche launch to allow the mission to explore alternative missions.



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At a Jan. 25 meeting of NASA's Small Bodies Assessment Group, Dan Scheeres, principal investigator for Janus at the University of Colorado, said Psyche's new trajectory with the 2023 launch was unsuitable for Janus. The spacecraft would end up going well into the main asteroid belt, sharply reducing the power available from its solar arrays. <https://spacenews.com/janus-considering-alternative-missions-after-losing-original-ride/>

### Percepto Regulations for Automated Drones to Monitor Electric Power Stations in Canada January 30, 2023 News



Percepto, in partnership with Rocky Mountain Unmanned Systems and their GM Kevin Toderla, announced today that Transport Canada has approved Ontario Power Generation (OPG) to operate Percepto's drone-in-a-box solution Beyond Visual Line of Sight (BVLOS) at McConnell Lake Control Dam without a visual observer on site, making this **the first such approval in Canada**. The Percepto Air Max autonomous drone-in-a-box has been granted a BVLOS Special Flight Operations Certificate (SFOC) to perform remote inspections in a pilot project starting this month.

This groundbreaking development lays the foundation for similar automated BVLOS SFOCs for other Percepto customers in Canada and enables OPG to remotely and frequently inspect their power facility with actionable insights, and potentially centralize drone-in-a-box fleet operations at multiple sites. Percepto recently achieved a **nationwide BVLOS waiver in the U.S.**, allowing qualified customers to immediately gain actionable insights from remotely operated drones. [https://uasweekly.com/2023/01/30/percepto-pioneers-groundbreaking-regulations-for-using-automated-drones-to-monitor-electric-power-stations-in-canada/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=percepto-pioneers-groundbreaking-regulations-for-using-automated-drones-to-monitor-electric-power-stations-in-canada&utm\\_term=2023-01-30](https://uasweekly.com/2023/01/30/percepto-pioneers-groundbreaking-regulations-for-using-automated-drones-to-monitor-electric-power-stations-in-canada/?utm_source=rss&utm_medium=rss&utm_campaign=percepto-pioneers-groundbreaking-regulations-for-using-automated-drones-to-monitor-electric-power-stations-in-canada&utm_term=2023-01-30)

### Archer, Joby remain confident in launching eVTOL air taxi services in 2025

AARON KARP | JANUARY 27, 2023

Archer Aviation and Joby Aviation executives reiterated ambitious schedules for bringing their eVTOL aircraft to market, but also acknowledged challenges to achieving plans to enter air taxi service in 2025.



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The California advanced air mobility developers have among the fastest timelines to certify eVTOLs, and both received [proposed airworthiness criteria](#) from the U.S. Federal Aviation Administration in late 2022, a key milestone toward certification.

Speaking this week at the Vertical Flight Society's eVTOL Symposium in Mesa, Arizona, Archer CEO Adam Goldstein and Joby head of product Eric Allison said their companies are on track for [FAA type certification in 2024](#) and [entry into service in 2025](#).

"That sounds very aggressive," Goldstein conceded. "It is aggressive. But from a technology roadmap perspective, Archer will be ready. We're progressing very well with the FAA."

[Archer's Midnight eVTOL](#) is designed as a four-passenger, piloted aircraft with a range of up to 100 miles (160 kilometers) and maximum speeds of up to 150 miles per hour (240 kilometers per hour). <https://verticalmag.com/news/archer-joby-remain-confident-in-launching-evtol-air-taxi-services-in-2025/>

**Skyports adds Pyka heavy payload delivery drones to its fleet** Bruce Crumley - Jan. 30th 2023



Skyports announced the agreement on Monday, saying its Skyports Drone Services unit would begin using Oakland, California-based Pyka's Pelican Cargo drone, whose **175-plus kilogram** payload capacity and 1.85 x 3-meter freight volume will offer increased delivery capabilities. The company currently relies on a fleet of smaller UAVs for its transport work, including Australian partner Swoop Aero's Kookaburra.

"Having a fully electric, autonomous, heavy-lift cargo drone in our fleet is a real gamechanger," said Skyports Drone Services director, Alex Brown. "To date, we've been focused on operations with smaller, high value payloads. The introduction of the Pelican Cargo brings new capabilities and means we can now fly significant volumes of cargo long distances, connecting communities in remote areas and providing a regular, robust form of transport in and out of hard-to-reach areas. Importantly, we're doing this now – this isn't future gazing, it's a ready-to-go service." <https://dronedj.com/2023/01/30/skyports-adds-pyka-heavy-payload-delivery-drones-to-its-fleet/>



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### FAA Part 135 Certification clears Flytrex for US drone delivery expansion Bruce Crumley - Jan. 30th 2023



Drone delivery company [Flytrex](#) will soon be moving to expand its South Carolina and Texas operations across other US states, after it received [Federal Aviation Administration](#) (FAA) Part 135 Certification to offer unscheduled, on-demand aerial services through its longtime partner, Causey Aviation Unmanned (CAU).

In earning the [FAA's Part 135 Certification](#) through its partnership with CAU, [Flytrex](#) may now not only broaden its geographical range of operation, but also diversify the kinds of goods its [drones deliver](#) from [current food](#) and retail payloads to virtually any product a UAV can tote. As a result, the company is already studying plans to scale its existing networks to cover up 82 million households across the US.

In getting the [FAA green light](#) to provide long-range drone delivery services for a full range of products, Flytrex **joins a select group** of [UAV transporters](#) made up thus far of Amazon Prime Air, Alphabet's Wing, UPS, and Zipline. <https://dronedj.com/2023/01/30/faa-part-135-certification-clears-flytrex-for-us-drone-delivery-expansion/#more-90584>

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### Flytrex, Causey Aviation Unmanned Win Air Carrier Certification for Drone Delivery Miriam McNabb January 30, 2023



Today, drone delivery Flytrex has announced their long-time partner Causey Aviation Unmanned has been granted Part 135 Certification.

The approval means that the companies will be able to expand their drone delivery service nationwide in the U.S.

The FAA's [Standard Part 135 Air Carrier Certification](#) is the means that the FAA uses to certify commercial drone delivery services. The process is adapted from the certification process for small commercial manned aircraft operations, says the FAA:



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*[Applicants] must use [FAA's existing Part 135 certification process](#), some of which FAA has adapted for drone operations by granting exemptions for rules that don't apply to drones, such as the requirement to carry the flight manuals on board the aircraft.*

Perhaps most importantly, Part 135 certification is the only path for commercial drone delivery beyond visual line of sight. The process is rigorous: only four other companies, including Alphabet's Wing, UPS, Zipline and Amazon Prime Air have been granted a Part 135 Certification. <https://dronelife.com/2023/01/30/flytrex-causey-aviation-unmanned-win-part-135-air-carrier-certification-for-long-range-on-demand-commercial-drone-delivery/>

### **AUTEL EVO MAX 4T DRONE LAUNCHES AT CES 2023** January 9, 2023 Sally French



Though Autel says the EVO Max 4T is good for "prosumer" applications, this is really more of an enterprise drone given the depth of the technology powering it. Among its key features are omnidirectional obstacle avoidance and tri-anti interference capability (RFI/EMI/GPS), accurate navigation without GPS and three cameras.

It can fly for 42 minutes at altitudes as high as **23,000 feet**. Pricing varies based on a few factors including configuration and dealer but will run somewhere in the **\$7,000 to \$9,000** range, an Autel company spokesperson told The Drone Girl. This drone comes with an incredible three cameras. They are a telephoto camera, a 50MP wide-angle camera, and a thermal camera.

The 48MP telephoto camera comes with 10x optical zoom, 160x digital zoom, and a 1/2" CMOS sensor. It has a f/2.8 – f/4.8 aperture. The wide-angle camera offers 50MP with a 1/1.28" CMOS sensor and 3840×2160 video resolution. It has a 4.5mm focal length and f/1.9 aperture. That infrared camera comes with a 640×512 resolution and 1.2km ranging distance. It has a 13mm focal length. All of it is powered by a laser rangefinder with 1.2km ranging distance and ±1m ranging precision. Images can be transmitted as far as **12.4 miles**.

<https://www.thedronegirl.com/2023/01/09/autel-evo-max-4t-drone-launches-at-ces-2023/>

### **Ukraine's \$540 million drone budget highlights UAVs' critical role in defense efforts** Bruce Crumley - Jan. 31st 2023

[Ukraine](#) is doubling down on its deployment of drones in its efforts to oust invading [Russian forces](#), pledging nearly half a billion dollars' worth of spending for the production and [procurement of UAVs](#) – many to be made by domestic companies.





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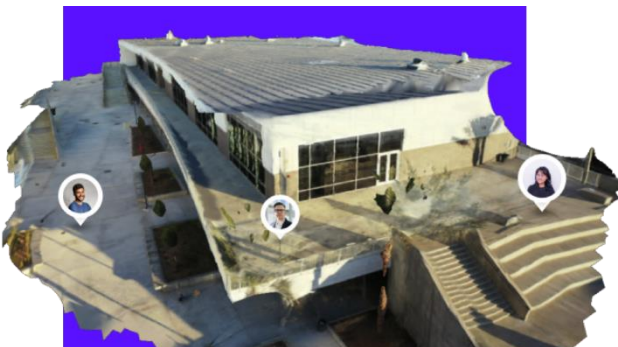


Given the critical, albeit unexpected role both military and [consumer drones](#) have played in allowing [Ukraine to resist](#) a nearly year-long invasion that Moscow strategists thought would be over in just days, the \$541 million 2023 budget for UAVs shouldn't be surprising. That commitment was initially revealed by the country's Defense Ministry in a [social media post](#), saying it aimed to meet "the needs and requests of the Ukrainian army."

Despite the abundance of foreign-made drones that have poured into [Ukraine by supporters](#) from abroad since Russia invaded last February 24, the funding announcement noted moves are already afoot to ensure a portion of new UAVs covered by the spending are produced by [domestic companies](#). To that end, it said 16 contracts had already been signed between government agencies and local manufacturers, and a total of 75 bids have been made by Ukrainian firms seeking security clearance and production approval of [new craft for the military](#).

In addition to increasing the supply and speeding the flow of [drones to Ukraine's forces](#), the new UAV spending is partly designed to avert what Defense Minister Oleksii Reznikov warned earlier this month could be the loss of national security independence in becoming entirely dependent on material supplied by [foreign allies](#). <https://dronedj.com/2023/01/31/ukraines-540-million-drone-budget-highlights-uavs-critical-role-in-defense-efforts/>

**Using drone 3D models to track team members during live missions** Ishveena Singh - Jan. 31st 2023



One-click reality capture platform SkyeBrowse has launched a new situational awareness tool that allows for real-time tracking of team members within a drone 3D model. In other words, you create a 2D or 3D model of an area in less than five minutes using a single drone video, and participating

members can plot their GPS coordinates onto that model in real time.



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SkyeBrowse's new offering, [TacBrowse](#), is a public safety tool that aims to give tactical teams live, actionable intelligence during missions. It builds upon the company's proprietary technology which uses videogrammetry to create [instant 3D models from drone videos](#).

First, an officer flies a SkyeBrowse or WideBrowse mission with a DJI or Autel drone to create a 3D model with the SkyeBrowse app. Then, an incident commander uploads the model of the incident scene to the TacBrowse web application. And finally, the ground team signs into the TacBrowse mobile app to transmit their GPS location. The team members appear as dots on the 2D map or 3D model, giving the incident commander full situational awareness in real time.

In addition to real-time location tracking, incident commanders can also annotate the drone model with notes and measurements. On the web browser, anyone signed into the session can view the slope map between two points. They can also virtually place themselves in the model with the perspective tool from the profile panel for complete situational awareness.

SkyeBrowse cofounder and CEO Bobby Ouyang says the new tool can be availed as a premium service for **\$39 per person per month**. <https://dronedj.com/2023/01/31/tacbrowse-drone-track-team-members/>

**1Feb23**

**FIVE DRONE COMPANIES NOW SHARE THIS ONE THING IN COMMON** January 31, 2023 Sally French



At first there were four and now there are five. That is, five companies that are now approved to conduct drone deliveries under a Standard Part 135 Air Carrier Certification from the Federal Aviation Administration. With a Part 135 Air Carrier

Certification, companies can operate and complete long-range, on-demand commercial drone deliveries in the U.S. — and North Carolina-based Causey Aviation is the latest to gain such approvals.

Up through the end of 2022, the only drone delivery companies that had Part 135 Air Carrier Certification were Amazon Prime Air, Alphabet's Wing, UPS and Zipline. The first three are all tied to big, Fortune 500 companies. The fourth, Zipline, is largely considered the [biggest drone service provider in the world](#).



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And the newcomer for 2023 is a company that's quite a bit smaller, and not exactly a household name. That's Causey Aviation. Causey Aviation gained the Part 135 Air Carrier Certification on Jan. 30, 2023, which now enables it to further expand its drone delivery service nationwide, which it conducts with another company called Flytrex.

Flytrex, which is based in Tel Aviv, has long partnered with Causey Aviation to conduct food deliveries, mainly in partnership with other popular restaurants, in limited neighborhoods around North Carolina and Texas. A spokesperson for the company said it took "years of rigorous training and testing" for Flytrex to get to this point.

<https://www.thedronegirl.com/2023/02/01/part-135-air-carrier-drone-faa/>

### **Report: Air taxis could land Va. \$16B in new biz by 2045** JANUARY 31, 2023 COURTNEY MABEUS-BROWN



*Bob Stolle, CEO and president of the Virginia Innovation Partnership Corp.*

Air taxis could generate up to \$16 billion in new business in Virginia and carry as many as 66 million passengers by 2045, according to [an economic impact study](#) released Tuesday.

The report, commissioned by the Virginia Innovation Partnership Corp. and the state commerce and trade secretary, forecasts short, carbon-free flights connecting cities, suburbs, and rural areas, allowing residents to jump on a quick flight from Winchester or Chesapeake to places like Richmond or Washington International Dulles Airport. It also predicts a future in which the public can summon an air taxi using a smartphone app like Uber.

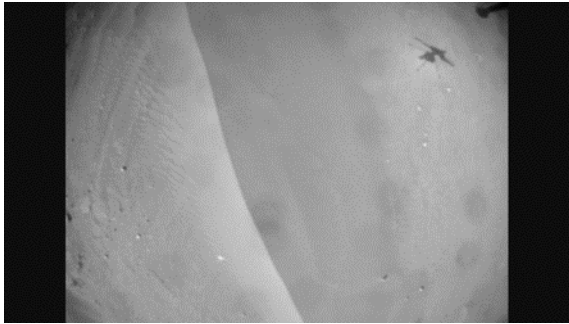
The study also examines the burgeoning [advanced air mobility \(AAM\) industry](#) and its transformative possibilities for Virginia residents, businesses, academia, and the public sector, as well as on public safety. AAM uses a variety of electric and hydrogen-electric hybrid small aircraft, as well as drones, which can travel in airspace not traditionally used and perform tasks that aren't performed by larger aircraft. [https://www.virginiabusiness.com/article/report-air-taxis-could-land-va-16b-in-new-biz-by-2045/?oly\\_enc\\_id=8242C5862912F2S](https://www.virginiabusiness.com/article/report-air-taxis-could-land-va-16b-in-new-biz-by-2045/?oly_enc_id=8242C5862912F2S)

### **Mars helicopter Ingenuity soars over Perseverance rover tracks on 41st flight** Elizabeth Howell January 31, 2023

The NASA Jet Propulsion Laboratory's [Ingenuity](#) drone made a quick flight out from its resting stop and then back again on Jan. 27, covering 600 feet (183 meters) in horizontal distance in just 109 seconds.



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After the dust settled in Jezero Crater, Ingenuity returned to its resting area at "Airfield Beta," according to [the mission's flight log](#). A [timelapse](#) (opens in new tab) of imagery captured midflight shows the helicopter's shadow dancing over sand dunes.

Ingenuity is the flying mission addition to NASA's car-sized [Perseverance](#) Mars rover. The rover touched down in February 2021 inside of Jezero, which had a huge ancient lake and river delta and is roughly 28 miles (45 kilometers) wide. [https://www.space.com/mars-helicopter-ingenuity-41st-flight?utm\\_term=95A14428-A25B-49BA-BA05-64ECE93DDE2A&utm\\_campaign=58E4DE65-C57F-4CD3-9A5A-609994E2C5A9&utm\\_medium=email&utm\\_content=75A42DF4-818E-4F4C-B44F-7948232FDC7F&utm\\_source=SmartBrief](https://www.space.com/mars-helicopter-ingenuity-41st-flight?utm_term=95A14428-A25B-49BA-BA05-64ECE93DDE2A&utm_campaign=58E4DE65-C57F-4CD3-9A5A-609994E2C5A9&utm_medium=email&utm_content=75A42DF4-818E-4F4C-B44F-7948232FDC7F&utm_source=SmartBrief)

## General Atomics Aeronautical Systems Eaglet Takes Its First Flight January 31, 2023 Military | News



General Atomics Aeronautical Systems, Inc. flew a new survivable Air-Launched Effect (ALE) for the first time as part of a flight demonstration based out of the Dugway Proving Grounds, Utah, on Dec. 8, 2022. The ALE, known as **Eaglet**, was launched from a U.S. Army MQ-1C Gray Eagle Extended Range Unmanned Aircraft System (UAS). The Eaglet flight was jointly funded by

GA-ASI and the U.S. Army Combat Capabilities Development (DEVCOM) Army Research Laboratory (ARL) and Aviation & Missile Center (AvMC).

"The first flight of the Eaglet was an important milestone for the GA-ASI/U.S. Army team," said GA-ASI President David R. Alexander. "Eaglet is intended to be a low-cost, survivable UAS with the versatility to be launched from a Gray Eagle, rotary-wing aircraft, or ground vehicles. It enables extended reach of sensors and increased lethality while providing survivability for manned aircraft."

Eaglet design extends battlefield options for commanders while reducing their decision cycles. Gray Eagle can carry Eaglet for thousands of kilometers before launching it while being controlled through unmanned-unmanned teaming or as a component of advanced teaming command and control concepts.



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Eaglet can work in concert with other long-range payloads carried by Gray Eagles, helicopters, or other platforms to support deep sensing in Multi-Domain Operations.

[https://uasweekly.com/2023/01/31/general-atomics-aeronautical-systems-eaglet-takes-its-first-flight/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=general-atomics-aeronautical-systems-eaglet-takes-its-first-flight&utm\\_term=2023-02-01](https://uasweekly.com/2023/01/31/general-atomics-aeronautical-systems-eaglet-takes-its-first-flight/?utm_source=rss&utm_medium=rss&utm_campaign=general-atomics-aeronautical-systems-eaglet-takes-its-first-flight&utm_term=2023-02-01)

### Pyka Launches Groundbreaking Autonomous Electric Cargo Plane: The Pelican

January 31, 2023



Featuring unprecedented payload and range capabilities, Pelican Cargo is **the world's largest zero-emission cargo airplane and the first autonomous vehicle of its class.**

With a range of up to **200 miles, a payload of up to 400 pounds** in 66 cubic feet of cargo volume and a nose-

loading system with a sliding cargo tray, the Pelican Cargo platform will enhance express logistics networks, enable connectivity of remote rural communities, and ensure fast and reliable access to vital goods and supplies for areas in need.

"Pelican Cargo will have a significant positive impact on people's lives," says Pyka Chief Executive Officer and Co-founder, Michael Norcia. "We designed this plane to eliminate CO<sub>2</sub> emissions from the logistics chain, while offering a significant speed advantage over ground transportation and operating costs at a fraction of conventional air transportation."

Following the commercial success of its agricultural spray aircraft, which led to a **\$37 million** Series A raise in April 2022, Pyka has secured pre-commitments of **over 80 orders** and options for its Pelican Cargo from three launch customers across North America and Europe. The aircraft is currently undergoing testing at Pyka's flight test facility in Northern California. The first commercial operation of the new product is expected for the second half of 2023.

[https://uasweekly.com/2023/01/31/pyka-launches-groundbreaking-autonomous-electric-cargo-plane-the-pelican/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=pyka-launches-groundbreaking-autonomous-electric-cargo-plane-the-pelican&utm\\_term=2023-02-01](https://uasweekly.com/2023/01/31/pyka-launches-groundbreaking-autonomous-electric-cargo-plane-the-pelican/?utm_source=rss&utm_medium=rss&utm_campaign=pyka-launches-groundbreaking-autonomous-electric-cargo-plane-the-pelican&utm_term=2023-02-01)





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### **BVLOS Multi-Drone Missions in Urban Area: FlightOps OS, FlyTech IL Trial for Israeli Police** Miriam McNabb February 01, 2023 DRONELIFE Staff Writer Ian M. Crosby



As part of an operational trial for the Israeli Police, drones were deployed in Ramla and Lod, two Tel Aviv suburbs with a combined population of 154,000. Two drones served as first responders managed by FlyTech's Yahav Preiss, the **first** commercial drone pilot in Israel licensed to operate beyond the visual line of sight (BVLOS).

Upon receiving a call of a reported incident, the police headline would forward the address to the drone pilot in the command and control center. The pilot uploaded the address into the FlightOps system and monitored the **autonomous** drone flight. After flying to the site of the incident, the drone then transmitted the visual back to the command center before returning to headquarters.

"The drones are fitted with three sim cards from three different mobile network operators and the drones are controlled via LTE network secure links," said Preiss. "In the event of an incident, the FlightOps multi-drone operating system alerts the drone, and it takes off, flying a geo-fenced, autonomous route to the scene, transmitting images of the event to the police control center. Eventually, if the trials are successful, the images will also be transmitted to police vehicles."

One of the more challenging aspects of the trial was collaborating with the regulator, the Israeli Air Force and the Tel Aviv International Airport on a comprehensive airspace assessment to guarantee the drones can safely operate in a shared airspace below rooftops.

<https://dronelife.com/2023/02/01/bvlos-multi-drone-missions-in-urban-area-flightops-os-flytech-il-trial-for-israeli-police/>

3Feb23

### **PIKACHU WEEKEND GETS 3X DRONE LIGHT SHOW** January 23, 2023 Sally French



Here's an absolutely adorable drone light show that you can relive online even if you didn't catch it at all in-person: a Pokemon themed show. Pikachu Weekend featured all sorts of Pokemon-themed festivities, but



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perhaps the highlight was a drone light show. Watch a clip of the drone light show from Pikachu Weekend here: [View this post on Instagram](#)

[A post shared by SKYMAGIC: Drone Light Shows \(@skymagicdronesshows\)](#)



The show performed three times in one weekend in the skies above **Singapore's Marina Bay Sands**, the iconic resort. For the show, drones flew in formations including Pikachu traveling by jet and drones in the shape of [Corsola](#), which is a small, pink, roundish Anthozoan Pokémon.

It was all held as part of Pokemon Air Adventures, which is an initiative by The Pokémon Company to give back to affected travel industries hit by the pandemic. Besides the Pikachu Night Show at Marina Bay, Pokemon fans in Singapore were treated to "POKÉGENIC," which was an art display of photogenic picture spots sprinkled throughout Gardens by the Bay. <https://www.thedronegirl.com/2023/02/03/pikachu-weekend-gets-3x-drone-light-show/>

## Streamlining the BVLOS Approval Process: Percepto's Regulatory

**Milestone** Miriam McNabb February 02, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Today, industry leader [Percepto](#) announced a **first-of-its-kind** exemption denial from the Federal Aviation Administration.

The denial enables Percepto to operate Uncrewed Aircraft Systems (UAS) beyond visual line of sight (BVLOS) without the presence of humans onsite, removing an exemption process that has previously been required to allow for remote pre-flight check

under Part 107.

In the past, the FAA has required both a Part 107 waiver approval and an exemption to 14 CFR Sections 107.15 (condition for safe operation) and 107.49 (preflight familiarization, inspection, and actions for aircraft operation) in order to conduct UAS BVLOS operations without humans onsite. This process typically takes years to approve and is disproportionate to the risk involved. Notably, nothing in the text of Part 107 specifies that pre-flight inspections need take place in person.



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Percepto proved to the FAA that its pre-flight inspection exceeded Part 107's requirements and as such did not necessitate an exemption. The company's inspection process features UAS inspection with cameras surrounding the base and images to verify safe deployment. Percepto communicated with the FAA to address its questions, surpassing the FAA's expectations of pre-flight inspection processes. This milestone will serve to advance the industry as Percepto seeks to streamline the applications and approval process for BVLOS UAS operations.

<https://dronelife.com/2023/02/02/streamlining-the-bvlos-approval-process-perceptos-regulatory-milestone/>

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