



UAS and SmallSat Weekly News

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Volocopter Funding: \$182 Million in Second Signing Series E Miriam

McNabbon: November 04, 2022 by DRONELIFE Staff Writer Ian M. Crosby



Urban air mobility (UAM) leader [Volocopter](#) has closed an additional \$182 million in funding in the second signing of its Series E round, which saw participation from new investors [NEOM](#) and [GLy Capital Management](#).

With its UAM ecosystem, Volocopter offers a fully electric solution made specifically for urban missions, ferrying goods and passengers with its multipurpose electric aircraft (the VoloCity, VoloRegion, and VoloDrone), and providing the necessary physical and digital infrastructure (the VoloPort and VoloIQ).

Volocopter is the first and only electric vertical takeoff and landing company to receive Design Organisation Approval from the European Union Aviation Safety Agency. The company's first commercial air taxi routes are expected to launch within the next two years in locations such as Singapore, Rome, Paris, and the NEOM region. <https://dronelife.com/2022/11/04/volocopter-funding-182-million-in-second-signing-series-e/>

Sabrewing's record-setting heavy-lift drone signs up Saudi buyers Bruce Crumley -

Nov. 3rd 2022



Just a month after its mighty Rhaegal-A "Alpha" transportation UAV hauled a [world-record-setting 829-pound](#) payload, California start-up [Sabrewing](#) this week landed a multimillion-dollar contract to provide its craft to the Arabian Development and Marketing Corporation (ADMC) to support Saudi Arabia's stated goal of becoming a global [center of heavy-lift drone activity](#).

The transaction is one of two between Sabrewing and ADMC and reflects the keen worldwide attention the Oxnard-based company commands since the record-setting flight of its Rhaegal-A "Alpha" [heavy-lift drone](#). The deal calls for ADMC to buy 53 of those brawny UAVs for **\$256.5 million**. ADMC, a diversified company with a primary focus in the telecom sector, has also committed to a **\$758 million** purchase of 128 Sabrewing Rhaegal-B "Bravo" UAVs, which can carry **between 5,400 pounds to 10,000 pounds of cargo**.



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Those differing weight capacities are based on use of either lower-haul [vertical takeoff](#) or more powerful conventional runway departure – with both Sabrewing Alpha and Bravo versions of the [heavy-lift drones](#) being capable of either. That combination promises enormous freight transport capacities for clients who regularly [haul huge payloads](#) as well as a greater diversity of takeoff and landing scenarios. <https://dronedj.com/2022/11/03/sabrewings-record-setting-heavy-lift-drone-signs-up-saudi-buyers/#more-88211>

Delta to Invest in Flying-Taxi Maker to Offer Rides to Airports Alison Sider Oct. 11, 2022

Delta is betting on flying-taxi rides to and from airports, announcing a \$60 million investment in [Joby Aviation](#) Inc. and plans to offer service in New York and Los Angeles.



[Delta Air Lines](#) Inc.'s investment will give it a 2% stake in Joby, which also has been backed by [Uber Technologies](#) Inc. and [went public last year](#). Delta said its investment could grow up to \$200 million if certain milestones in the development and delivery of the service are reached.

Electric aircraft that take off and land vertically have attracted growing interest from airlines and aircraft-leasing companies. Carriers including [United Airlines Holdings](#) and [American Airlines Group](#) Inc. are hoping to use the small, quiet vehicles to whisk passengers over traffic jams and crowded city streets and deliver them to and from airports.

United in the past month [announced a \\$15 million investment](#) in Eve Air Mobility and struck a preliminary agreement to **buy 200** of its four-passenger aircraft. It also recently put down a [\\$10 million deposit](#) on **100 flying taxis** being developed by Archer Aviation Inc. American [has invested \\$25 million](#) in [Vertical Aerospace](#) and secured delivery spots for **50 of the flying taxis** Vertical is developing—part of a larger order it made last year. Air-taxi manufacturers raised more than **\$7 billion from investors over the past two years**. <https://www.wsj.com/articles/delta-to-invest-in-flying-taxi-maker-to-offer-rides-to-airports-11665452680?mod=djemfoe>



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With pressure from electric aircraft makers, regulators focus on planning and safety BY PAUL BRINKMANN | NOVEMBER 4, 2022



International collaboration seen as critical for managing future spike in air traffic from air taxis and other forms of advanced air mobility

It can't be easy being a regulator. You're surrounded by dozens of electric aircraft makers, each with tens of millions of dollars of investment on the line and a

competitive drive to be first.

"We have been approached by the vehicle manufacturers who are raring to go," said Andrew Hately, a senior researcher with Eurocontrol, Europe's air traffic agency, during an online panel discussion organized by NASA's Ames Research Center in California. The panel, which NASA described as the **first of its kind**, included two sessions with 12 nations from France to New Zealand to India and several regulatory agencies represented including Eurocontrol, the European Union Aviation Safety Agency, and the FAA.

Hately said Eurocontrol is currently researching how it can extend its U-Space air traffic control system for drones, which the agency is still rolling out, to include passenger aircraft. U-Space requires drone operators to disclose their identities and the location and trajectory of their aircraft. "We are looking at how we can enable AAM in a reasonable way, a safe way, which takes into account the usual caution and risk aversion of the aviation industry," Hately said.

https://aerospaceamerica.aiaa.org/acknowledging-pressure-from-electric-aircraft-makers-regulators-underscore-focus-on-sound-planning-and-safety/?utm_campaign=AerospaceAmericaAMB&utm_medium=email&_hsmt=232591330&_hsenc=p2ANqtz-8LGjCeEVVfMiaWNhMHAJNfCXqW3qa7jvKUIrtXMwtauVhaVZ3NxAlEiDD-fx8RDYYNiEu7MVuA3KJXBxv8WYqnpYhDcg&utm_content=232591330&utm_source=hs_email

Armed with an FAA type certificate, this drone company plans its next moves

BY PAUL BRINKMANN | NOVEMBER 3, 2022



Now that California drone company **Matternet** has what it believes to be **the first FAA type certificate for a delivery drone**, the company is expanding production of its electric, largely autonomous quadcopters.



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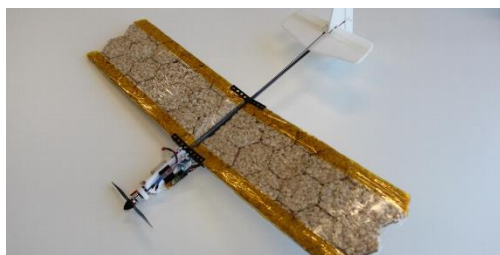
With the type certificate awarded in September, Matternet's customers and partners can now fly them without an FAA exemption to the type certificate rule, provided the customer or partner has a Part 135 operator certificate.

To learn more details about Matternet's plans following this [breakthrough](#), I interviewed CEO and founder Andreas Raptopoulos via videoconference from his office in Mountain View near San Francisco.

Could the technology underlying its M2 drones be relevant to development of air taxis, most of which are also electric aircraft and propelled by rotors? Raptopoulos doesn't see much of a link, given that an M2 weighs just 9.5 kilograms without cargo, or about as much as a car tire.

More important in Raptopoulos's view is the type certificate has positioned Matternet to build on the [deliveries of medicines and health care supplies](#) it has carried out over the last three years. Those deliveries were done under an exemption allowed by Section 44807 of the federal regulations, and in partnership with UPS, which has a Part 135 certificate. UPS has delivered cargo weighing under 2 kilograms in North Carolina and Florida suburbs with the M2 drones. https://aerospaceamerica.aiaa.org/armed-with-an-faa-type-certificate-this-drone-company-plans-its-next-moves/?utm_campaign=AerospaceAmericaAMB&utm_medium=email&_hsmt=232591330&_hsenc=p2ANqtz-84xxLq8REvYJQtRsjnkozNiCFFdQgceaF4OmdPTAePcVmX0viXXGbHlmkxEXQntDdq_7gARs2kAzzZn2wnEi2cfovHHA&utm_content=232591330&utm_source=hs_email

Swiss researchers create edible drone for emergency scenarios Bruce Crumley - Nov. 4th 2022



Researchers in Switzerland have developed an [edible drone](#) designed to serve as life-sustaining nutrition for people stranded in emergency situations.

[Scientists at the Swiss Federal Institute of Technology Lausanne](#) created the edible drone by prioritizing caloric content over aerodynamics or technical sophistication. In fact, the only engineering requirement was for the craft to be able to fly to its destination without falling apart en route; from there, the focus was entirely on how it would deliver once inside the stomach of the person receiving it.



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To make the edible drone concept (ahem) fly, the team used a thin, rudimentary fuselage, tail, and propeller unit strapped between two wings made of rice cakes. Those round crackers caught researchers' attention for sharing the lightweight yet durable characteristics of expanded polypropylene packing foam. They relied on laser tech to cut the wafers into hexagon shapes that were then stuck together using gelatin as glue to form wings.

Those were enveloped in edible wrapping paper as protection against various sources of moisture that might provoke soggy decomposition – though only after researchers had calculated the 700-centimeter wingspan required for the drone to deliver 300 kcal upon arrival (similar to the nutrition of an average breakfast).

The lightness of component rice cakes left 80 grams of payload capacity remaining for transporting something else to the distressed recipient – no lattes or sides of hash browns, of course, but perhaps vitamins or a small amount of water to keep them going.

<https://dronedj.com/2022/11/04/swiss-researchers-create-edible-drone-for-emergency-scenarios/>

Zipline discusses its newly awarded global drone delivery innovation Bruce

Crumley - Nov. 4th 2022



Trailblazing instant logistics company [Zipline](#) — along with its government partners in Rwanda and Ghana — is being honored later this month by the [Flight Safety Foundation](#) for its contributions to [global aviation innovation](#) by its medical drone delivery work in Africa.

Since beginning with tightly-focused deliveries of blood products in Rwanda in 2017, Zipline has created [increasingly sophisticated](#) drone transportation networks across Africa that – among other things – supply COVID-19 vaccines, which require [ultracold storage, to distant localities in Ghana](#). Its UAVs serve thousands of hospitals and health facilities across the continent and have completed over **425,000 missions**, carrying more than 4.5 million products – including over seven million vaccine doses. In addition to aiding national African governments to extend healthcare to people and places that previously couldn't receive it, Zipline has introduced numerous medicine and medical product delivery routes in [US cities](#) as well as services to [islands in Japan](#).

Meanwhile, it has rolled out commercial services for [partners like Walmart](#) and, more recently, became the logistics and delivery partner to [online retailer Jumia](#) — which now looks to add quick aerial transport of orders to its continuing revolutionization of Africa's mobile phone-



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based e-commerce. <https://dronedj.com/2022/11/04/zipline-discusses-its-newly-awarded-global-drone-delivery-innovation/#more-88265>

Spright is expanding its emergency medical services drone fleet Ishveena Singh - Nov. 4th 2022



Spright, the drone division of helicopter emergency medical services provider Air Methods, has entered a partnership with Dufour Aerospace to expand its fleet of delivery drones with the addition of up to **140** Aero2 eVTOL aircraft.

While [Spright](#) plans to pick up 40 Aero2 aircraft from the Swiss eVTOL company right away, an additional 100 drones will remain up for grabs in the multi-year, multimillion-dollar agreement.

Aero2 will help Spright to serve the on-demand healthcare community by carrying heavier payload over longer distances. Think more patient samples, larger tissue specimens and organs, and heavier supplies and equipment.

Spright says it will assist Dufour in obtaining type certification for the Aero2, including technical, data, and flight activity support for demonstration purposes, such as durability, failure, and reliability testing, and detect and avoid capabilities.

Not just that, Spright will also serve as Aero2's exclusive service, maintenance, and training partner for third parties in North America. <https://dronedj.com/2022/11/04/spright-medical-drone-fleet/#more-88280>

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Rocket Lab launches Swedish satellite, fails to catch booster Jeff Foust November 4, 2022



WASHINGTON — Rocket Lab successfully launched a Swedish atmospheric science satellite on an Electron rocket Nov. 4, but a telemetry problem kept the company from attempting a mid-air recovery of the rocket's booster.

The Electron rocket lifted off on the "Catch Me If You Can" mission at 1:27 p.m. Eastern from Rocket Lab's Launch Complex 1 in New Zealand. The rocket's



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primary payload, the MATS satellite for the Swedish National Space Agency, was deployed from the rocket's kick stage about an hour after liftoff.

The company attempted to catch the booster, descending under parachute, with a helicopter equipped with a hook. That hook is designed to grapple the parachute, allowing recovery of the stage before it hits the water. However, live video from the helicopter showed no sign of the booster, and Rocket Lab later said the mid-air catch had been called off. The company said it would instead recover the stage from the ocean, as on several previous launches.

<https://spacenews.com/rocket-lab-launches-swedish-satellite-fails-to-catch-booster/>

Percepto Gains Nationwide US Waiver for Critical Infrastructure Monitoring

November 07, 2022



Percepto, the leading autonomous inspection and monitoring solution provider, today announced that the Federal Aviation Administration granted the company a nationwide waiver for Beyond Visual Line of Sight operations, empowering US-based Percepto customers whose sites comply with the waiver's criteria to benefit

from remotely operated drones. Percepto's automated drone-in-a-box technology is used by electric utilities, oil & gas, solar power stations and mining operations. The solution detects infrastructure problems, enabling faster response times and ensuring that remedial action is taken where it is needed most.

In a **first approval of its kind**, the Percepto system can be operated at qualifying sites across the country remotely from day one for increased safety, efficiency, and ease of operation. With this new waiver, the lengthy wait for site specific BVLOS approvals is no longer required. Customers can immediately gain actionable insights with Percepto's drone-in-a-box for inspection and monitoring. Customers further benefit from Percepto's ability to centrally control drone-in-a-box fleets at multiple sites. [https://innovateenergynow.com/resources/percepto-gains-nationwide-us-](https://innovateenergynow.com/resources/percepto-gains-nationwide-us-waiver?utm_campaign=InnovateEnergy%20Content&utm_medium=email&_hsmt=232888373&_hsenc=p2ANqtz-8S-ZaqrBvmDg4v_Y-bvCPi6O5FRMb1WzyOiSy-kxc6G5UtwpaPb1XkjUs5509TIJsOC9D3Nf0_i9SZWV2Z0_1Kay0YTg&utm_content=232888373&utm_source=hs_email)

[waiver?utm_campaign=InnovateEnergy%20Content&utm_medium=email&_hsmt=232888373&_hsenc=p2ANqtz-8S-ZaqrBvmDg4v_Y-bvCPi6O5FRMb1WzyOiSy-kxc6G5UtwpaPb1XkjUs5509TIJsOC9D3Nf0_i9SZWV2Z0_1Kay0YTg&utm_content=232888373&utm_source=hs_email](https://innovateenergynow.com/resources/percepto-gains-nationwide-us-waiver?utm_campaign=InnovateEnergy%20Content&utm_medium=email&_hsmt=232888373&_hsenc=p2ANqtz-8S-ZaqrBvmDg4v_Y-bvCPi6O5FRMb1WzyOiSy-kxc6G5UtwpaPb1XkjUs5509TIJsOC9D3Nf0_i9SZWV2Z0_1Kay0YTg&utm_content=232888373&utm_source=hs_email)



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WHO ARE THE TOP DRONE INVESTORS? ED ALVARADO NOVEMBER 1, 2022

DRONE Drone investments have been breaking records for the past decade, yet **INDUSTRY INSIGHTS** who are the top drone investors behind them? As a complement to our [Drone Investment Database](#), we selected the top 10 venture capital investors based on the number of investments since 2010.

The top drone investor over the past decade has been [Drone Fund](#), with a total of 22 investments. This company is based in **Tokyo, Japan**, and recently celebrated their 5th anniversary. Drone Fund invests exclusively on drone startups and has shown a strong interest in air mobility. Most of their investments go into early-stage funding (68%). In addition to investments, they also provide operational support, collaborative planning, and regulatory assistance to drone companies.

In second place, we find [Andreessen Horowitz](#). This venture capital firm located in Silicon Valley, California, engages in different stages of funding, with around half of their 18 total [drone] investments going into early-stage funding. In addition to drones, Andreessen Horowitz invests in different areas such as consumer, enterprise, bio/healthcare, crypto, and fintech spaces.

Rounding up the top 3 drone investors we find the American technology accelerator [Y Combinator](#), founded in 2005. Their 15 drone investments have gone exclusively to seed or early-stage funding. Since their founding, they have invested in nearly 3,500 companies including Airbnb, DoorDash, Stripe, Instacart, Dropbox, and Coinbase. They offer different programs like YC batch program, YC growth program or YC Continuity which support startups throughout the life of their companies. https://droneii.com/who-are-the-top-drone-investors?goal=0_8e282c8de0-7d986f70fe-262004956&mc_cid=7d986f70fe&mc_eid=86e1627d30&utm_campaign=InnovateEnergy%20Content&utm_medium=email&hsmi=232888373&hsenc=p2ANqtz-8ybOeBVfN3rXNTjq3WcZGrHxVVdy5npWiPO40LqUzeBdRg2QG_T6lcFiYJWGSfBkS8MyxBouHrQ1fK_c_p7WP_om1GMw&utm_content=232888373&utm_source=hs_email

Teal Group Predicts Worldwide CIVIL UAS Spending of \$139 Billion Over the Next Decade By Press NOV 4, 2022

The dynamic growth in Civil Unmanned Aerial Systems (UAS) over the period will create significant rewards for smart investment as nations open their airspace, commercial



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applications take off, and civil governments adopt systems for new roles in border security and public safety.



Teal Group's 2022/2023 World Civil UAS Market Profile and Forecast projects that non-military UAS production will jump **from \$7.2 billion a year to \$19.8 billion by 2031**, a 9.1% compound annual growth rate in constant dollars. Total civil UAS purchases will reach **\$139 billion** over that decade.

The United States market is expected to grow when other global markets are already beginning to level off. "That's the one upside of a late start," Jeremiah Gertler, Teal Group's lead author of the study, said. "You're running hard when everybody else is already in the showers."

Commercial use will drive the market as consumer drone purchases slow and government purchases remain a small but growing portion of the market.

https://www.suasnews.com/2022/11/teal-group-predicts-worldwide-civil-uas-spending-of-139-billion-over-the-next-decade-in-its-2022-2023-uav-market-profile-and-forecast/?mc_cid=3a5bb4b9fa&mc_eid=9cec79331a&utm_campaign=InnovateEnergy%20Content&utm_medium=email&_hsmt=232888373&_hsenc=p2ANqtz-8IUoMjc1Fi3lBx3U6h0kDkPe_iQLk-bIFN1lzApqHiYDn8sHutGS2onSDE7rX0TcH5rC2B7U-ehhcSlSxPOZZngRjA&utm_content=232888373&utm_source=hs_email

American Robotics, Infrared Cameras Partner for Oil and Gas Inspection Miriam McNabb November 06, 2022 by DRONELIFE Staff Writer Ian M. Crosby



Ondas Holdings [NASDAQ:ONDS] is one of the holdings in the AdvisorShares Drone Technology ETF [NYSE ARCA:UAV], the only ETF dedicated to the drone economy. For complete list of holdings [click here](#). The [AdvisorShares Drone Technology ETF](#) is a thematic investment strategy seeking to capture the growth opportunities in drones and autonomous vehicles (AV).

[American Robotics](#) announced the formation of a strategic technology partnership with thermal camera and infrared system developer [Infrared Cameras Inc.](#) (ICI).

American Robotics' autonomous Scout System drone, with the integration of ICI's optical gas imaging (OGI) and thermal sensors, will possess the necessary technology to automate the inspection of oil and gas assets and the detection of methane leaks.



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By incorporating ICI's OGI and thermal sensors, the Scout System will be able to autonomously gather essential data and detect anomalies such as methane leaks and equipment and electrical hotspots. This integration will also allow customers to cut down on operational costs, reduce the chance of reputational risk and protect employees and the environment. This combined integration is currently targeted for a 2023 release. <https://dronelife.com/2022/11/06/american-robotics-infrared-cameras-partner-for-oil-and-gas-inspection/>

Airbus and Space Compass to serve Japan with mobile connectivity and earth observation November 7, 2022 News



Airbus HAPS Connectivity Business has signed a Letter of Intent with Space Compass Corporation of Japan for a cooperation agreement to service the Japanese market with mobile connectivity and earth observation services **from the Stratosphere** with Airbus' record-breaking Zephyr platform.

Airbus HAPS is an Airbus subsidiary, which intends to provide new environmentally friendly services from its stratospheric-operating, Zephyr solar-powered aircraft for Mobile Connectivity, Platform Mobility, Earth Observation and for Government applications. With the ability to provide low latency 4G/5G services, Zephyr acts as a tower in the sky, complementing terrestrial networks, and providing MNOs with a profitable solution to serve rural and remote areas as well as an emergency response. https://uasweekly.com/2022/11/07/airbus-partners-with-space-compass-to-serve-the-japanese-market-with-mobile-connectivity-and-earth-observation-solutions/?utm_source=rss&utm_medium=rss&utm_campaign=airbus-partners-with-space-compass-to-serve-the-japanese-market-with-mobile-connectivity-and-earth-observation-solutions&utm_term=2022-11-07

Small Military Bombing Drone to Debut on AIRSHOW CHINA 2022 November 7, 2022 News



The opening of the 14th China Airshow is coming soon. LoongUAV will bring a variety of cost-effective, efficient, lightweight military drones to debut.

This drone has low cost and high cost-effectiveness. It can carry six 60mm or four 82mm mortars, through a simple module installed on shells at a cost of less



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than \$10, the accuracy of the bombs is within 3 meters, the maximum endurance time exceeds 240 minutes, and the maximum flight speed is 80km/h. Vertical Take-Off and Landing technology is used to improve deployment maneuverability and optimize flight performance.

With suicide attack capability, it can lock and track dynamic targets for precise strikes. It has strong stealth, is a low-slow and small target, has no heat source, and has a very small radar reflection surface, which can effectively avoid radar monitoring and is not easy to be shot down. And it has the strong anti-interference ability and super battlefield survivability, and the **current anti-UAV technology cannot defend against it.** https://uasweekly.com/2022/11/07/small-military-bombing-drone-to-debut-on-airshow-china-2022/?utm_source=rss&utm_medium=rss&utm_campaign=small-military-bombing-drone-to-debut-on-airshow-china-2022&utm_term=2022-11-07

Rigitech, local agencies, complete long range BVLOS medical flight between Swiss cantons November 1, 2022 Jenny Beechener UAS traffic management news, Urban air mobility



Following the steps of the first short-range deliveries carried out by La Poste, Swiss drone manufacturer Rigitech reports **one of the first long-range Beyond Visual Line of Sight (BVLOS) drone delivery routes** in Switzerland, successfully flying over Lake Geneva to a laboratory in Coppet and back. Both RigiTech's proprietary software, RigiCloud, and Eiger drone hardware is compliant with BVLOS SORA regulations, says the Rigitech press release.

The flight involved coordination with Skyguide and Geneva Airport to establish an effective communications channel and to obtain clearance before flights. This milestone was **several months** in the making, as RigiTech gathered the approval and collaboration from Geneva Police, the Cologne Municipality, the Office conatolan de l'agriculture et de la nature (OCAN), and Swiss Federal Office of Civil Aviation. "We are managing to surpass new obstacles and challenges from our sector. Every new successful authorization and safe operation is a step forward for the whole industry, which is something we can be proud of," said Alejandro Del Estal, Head of Operations at RigiTech. <https://www.unmannedairspace.info/latest-news-and-information/rigitech-local-agencies-complete-long-range-bvlos-medical-flight-between-swiss-cantons/> S



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8Nov22

The Top 3 Things to Consider When Applying for a BVLOS Waiver Miriam

McNabb November 07, 2022



Censys Sentaero BVLOS Fixed Wing

DRONELIFE met with Rob Knochenhauer, UAS Operations and Regulatory Specialist, about how companies can approach a Beyond Visual Line of Sight (BVLOS) waiver application.

Knochenhauer is the Director of Regulatory Affairs at Censys Technologies, US-based manufacturer of a fixed-wing drone designed for BVLOS applications. He says there are 3 things applicants can do to make evaluation easier for the FAA, and increase their chance of a successful outcome.

1. **Read the Guidance – and Follow It.** Knochenhauer says that the most important place to start is with the [Waiver Safety Explanation Guidance](#) from the FAA.
2. **Don't Make Any Assumptions.** The FAA is responsible the safety and security of the National Airspace, Knochenhauer points out. The Waiver Safety Guidelines ask companies to answer “How you will ensure your operation(s) remains safe at all times, even in unusual circumstances,” and “What kinds of circumstances could arise, and how you plan to handle each.”
3. **Reach Out to Partners.** Lastly, Knochenhauer suggests companies partner if necessary to add critical capabilities. “For BVLOS operations, you need airspace awareness as well as to mitigate ground-based risk. You may need to partner for Detect and Avoid or whatever the right tools are for your application.”

Read more about Censys Technologies and BVLOS flight: <https://dronelife.com/2022/11/07/the-top-3-things-to-consider-when-applying-for-a-bvlos-waiver/>

Korean Drones at CommUAV Expo: Why Korea's Drone Industry is Racing Ahead Miriam McNabb September 22, 2021



The Korean delegation at the recent [Commercial UAV Expo](#) show in Las Vegas was among the largest international groups on the floor, featuring not only a large and varied range of [Korean drones](#), but

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representation from the [Korean Ministry of Land, Infrastructure, and Transportation](#) – a body actively supporting the growing drone industry in Korea. Korea’s decision to support innovation and the drone ecosystem at a **top-down, national level** is helping small- and medium-sized drone businesses make their mark on the global drone market.

Korean technology is known around the world, with large companies like [Hyundai](#), [Samsung](#), LG, and Kia among the top automotive and tech providers around the globe. Korean drones are entering the global market quickly, supported by generous grants to support innovation, regulatory flexibility, and government-funded testing facilities. As the U.S. government turns away from China-made tech, the Korean industry is ready to take advantage of the opportunity that a growing market provides. <https://dronelife.com/2021/09/22/korean-drones-at-commuav-expo-why-koreas-drone-industry-is-racing-ahead/>

New Fixed-Wing eVTOL sUAS Launched for Airborne ISR Missions Phoebe Grinter / 04 Nov 2022



Aurora Flight Sciences, a Boeing Company, has released the Skiron Expeditionary sUAS (SKIRON-X), a fixed-wing eVTOL sUAS designed for deployment across a wide variety of environments.

With an EO/IR camera that provides excellent ground resolution, a low noise signature, and a military-grade radio, SKIRON-X is well suited for airborne ISR missions. For operations requiring a variable or custom payload, SKIRON-X has a modular nosecone design enabling quick payload swaps and custom integrations.

SKIRON-X operations are quick to train, and user-friendly mission planning software makes it easy to implement mission changes, even during flight. According to Aurora, it takes 15 minutes from setup to launch and 10 minutes to pack out. The air vehicle is FAA PART 107 compliant, providing flexibility to fly in more areas for testing, training, and data collection.

The first customer is Bridger Aerospace. Bridger has purchased two systems and will deploy them for the 2023 fire season. https://www.unmannedsystemstechnology.com/2022/11/new-fixed-wing-evtol-suas-launched-for-airborne-isr-missions/?utm_source=UST+eBrief&utm_campaign=17e2619d2d-ust-ebrief_2022-nov-8&utm_medium=email&utm_term=0_6fc3c01e8d-17e2619d2d-111778317&mc_cid=17e2619d2d&mc_eid=acabe18a61



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FAA Issues BVLOS Waiver for Commercial UAS Inspections Mike Ball / 02 Nov 2022

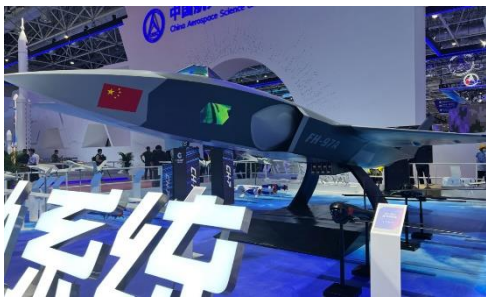


Soaring Eagle Technologies has confirmed that it has been awarded one of the first waivers by the Federal Aviation Administration allowing BVLOS (beyond visual line of sight) commercial inspection missions under **operational guidelines** rather than specific operations in restrained geographical areas.

The approval is **nationwide** and based on meeting operational parameters, not restricted to specific areas during specific time limits. This waiver allows Soaring Eagle Technologies clients to collect data such as high-resolution images or LiDAR more quickly and safely than with manned aviation.

The most recent FAA approval for flying BVLOS for commercial missions allows asset managers to partner with Soaring Eagle Technologies to inspect electric utility corridors and other critical infrastructure and collect information on the condition of assets or vegetation with greater efficiency and return on investment. https://www.unmannedsystemstechnology.com/2022/11/faa-issues-bvlos-waiver-for-commercial-uas-inspections/?utm_source=UST+eBrief&utm_campaign=17e2619d2d-ust-ebrief_2022-nov-8&utm_medium=email&utm_term=0_6fc3c01e8d-17e2619d2d-111778317&mc_cid=17e2619d2d&mc_eid=acabe18a61

China's new loyal wingman drone to greatly change air combat Liu Xuanzun, Cao Siqi and Fan Wei in Zhuhai Nov 08, 2022



China's FH-97A loyal wingman, a type of unmanned aerial vehicle (UAV) that can accompany manned aircraft and provide it with intelligence, information and firepower support, made its debut at the Airshow China 2022 held in Zhuhai, South China's Guangdong Province in early November, with its chief designer saying that this new technology is expected to greatly change

conventional air combat.

Developed by Feihong Company under the Ninth Academy of the state-owned China Aerospace Science and Technology Corporation, the FH-97A loyal wingman drone is exhibited to the general public for the first time at the Airshow China 2022.



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It is the drone industry's general belief that loyal wingmen are expected to greatly change the pattern of conventional manned air combat by **creating a new niche in the air combat system**.

Based on this combat concept, the FH-97A loyal wingman drone is designed as a new type of autonomous UAV formation system. It can form a dense formation and efficiently coordinate with manned combat aircraft to perform air superiority operations, air defense suppression, and air escort missions, the Global Times learned from the drone's developers.

<https://www.globaltimes.cn/page/202211/1278930.shtml>

Gadfin & SAREL Partner to Create World's Longest Drone Delivery Lines Phoebe

Grinter / 07 Nov 2022



[Gadfin Aero-Logistics Systems](#) has secured a long-term exclusive partnership agreement with SAREL, **Israel's** biggest medical Group Purchasing Organization (GPO) and logistics company, to create a drone delivery network that will connect major hospitals in Israel within a 200km radius. According to Gadfin, this new contract will make Israel the **first western country** in the world to have an **automatic, on demand, medical delivery aerial grid**.

The first operational delivery line is thought to be **the longest drone delivery line in the world**, stretching up to **100km radius**, and will enable SAREL to have constant supply of medical equipment, medicines, vaccines, blood, serum, lab samples and more.

The project is based on Gadfin's patented technology that enables flight of up to a 250km distance (125km radius without swapping batteries and hydrogen tank). This is accomplished by using hydrogen fuel cell technology, a special patented wing folding mechanism, and state-of-the-art safety design to meet the demanding regulation

standards. https://www.unmannedsystemstechnology.com/2022/11/gadfin-sarel-partner-to-create-worlds-longest-drone-delivery-lines/?utm_source=UST+eBrief&utm_campaign=17e2619d2d-ust-ebrief_2022-nov-8&utm_medium=email&utm_term=0_6fc3c01e8d-17e2619d2d-111778317&mc_cid=17e2619d2d&mc_eid=acabe18a61



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2022 SKYPIXEL PHOTO AND VIDEO CONTEST OFFERS LARGEST PRIZE PACKAGE

EVER November 7, 2022 Sally French



In the 8th Annual SkyPixel Photo & Video Contest, we're getting the biggest prize pool yet. About **\$143,000** is up for grabs. This year's contest opens today and will be accepting entries through **Jan. 30, 2023**.

The 2022 SkyPixel judging panel includes Claudio Miranda Academy Award-winning cinematographer Claudio Miranda, National Geographic's Anne Farrar, and Phil Pastuhov, who was Director of Cinematography for The Lord of the Rings.

The contest is broken out by photo and video submissions. They are:

2022 Skypixel photo categories: Nature, Architecture, Portrait, Sports

All photos must be shot on a drone, and each image must be at least 3 MB with a resolution of at least 300 dpi. EXIF data should be retained.

2022 Skypixel video categories: Nature, City, Travel, Sports, Story, Vertical

All videos submitted must not exceed five minutes in length. The entry must contain at least 30 seconds of aerial footage.

This year's contest also includes a theme, which is dubbed "The Story Behind." Given the theme, participants will be encouraged to convey a message and meaning in their video or photo submission. <https://www.thedronegirl.com/2022/11/09/2022-skypixel-photo-video-drone/>

Advanced Aircraft Company Awarded AFWERX SBIR Phase II Contract November 9, 2022 News



[Advanced Aircraft Company](#) (AAC), a developer and manufacturer of distributed electric propulsion tilt-wing and multi-rotor uncrewed aircraft systems for defense applications, today announced it has been selected by AFWERX for an SBIR Phase II contract focused on the further development to investigate its potential to fill



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capability gaps in the Department of the Air Force. This contract will enable AAC to continue the development of its highly versatile Hybrid Advanced Multi-Rotor (HAMR) Uncrewed Aerial System for the United States Air Force.

HAMR combines a unique multi-rotor configuration with distributed electric propulsion for extended endurance and multiple, simultaneous payload capabilities. The aircraft can be optimized for a wide range of defense applications and mission profiles.

HAMR's distributed electric propulsion system incorporates an electronic fuel-injected and computer-controlled dual piston engine driving an integrated electric generator producing up to 4000W to power the onboard sensors, six independent brushless DC electric motors, and a backup battery.

HAMR's capabilities bridge the gap between today's Group 1 and Group 2 UAS with a maximum payload capacity of twelve pounds. Multiple redundant systems, remote in-flight engine starting, and onboard batteries ensure the aircraft can operate with a high margin of safety. https://uasweekly.com/2022/11/09/advanced-aircraft-company-awarded-afwerx-sbir-phase-ii-contract-to-continue-development-of-next-generation-tactical-uas/?utm_source=rss&utm_medium=rss&utm_campaign=advanced-aircraft-company-awarded-afwerx-sbir-phase-ii-contract-to-continue-development-of-next-generation-tactical-uas&utm_term=2022-11-09

Percepto Gains US Waiver to Remotely Deploy Drones for Critical Infrastructure Monitoring

November 8, 2022 News



[Percepto](#) today announced the Federal Aviation Administration granted the company a nationwide waiver for Beyond Visual Line of Sight (BVLOS) operations. Percepto's automated drone-in-a-box technology is used by electric utilities, oil & gas, solar power stations and mining operations. It detects infrastructure problems, enabling faster response times and ensuring remedial action is taken where it is needed most.

In a first approval of its kind, the Percepto system can be operated at qualifying sites across the country **remotely from day one** for increased safety, efficiency, and ease of operation. With this new waiver, the lengthy wait for site specific BVLOS approvals is no longer required. Customers can immediately gain actionable insights with Percepto's drone-in-a-box for inspection and monitoring. Customers further benefit from Percepto's ability to centrally control drone-in-a-box fleets at multiple sites. <https://uasweekly.com/2022/11/08/percepto-gains-nationwide-us-waiver-to-remotely-deploy-and-operate-automated-drones-for-critical-infrastructure->



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[monitoring/?utm_source=rss&utm_medium=rss&utm_campaign=percepto-gains-nationwide-us-waiver-to-remotely-deploy-and-operate-automated-drones-for-critical-infrastructure-monitoring&utm_term=2022-11-09](#)

Dronamics seeks hydrogen fuel cells for middle-mile drone delivery Bruce Crumley - Nov. 9th 2022



Middle-mile European [drone delivery specialist Dronamics](#) is joining forces with groundbreaking aviation tech developer Cranfield Aerospace Solutions (CAeS) in an effort to perfect clean [hydrogen fuel cells](#) to power the company’s Black Swan cargo UAVs.

Dronamics, which has been certified by the [European Union Aviation Safety Agency](#) to operate across the bloc as a drone airline, [is looking to CAeS hydrogen cell development](#) to address what may arguably be the one wrinkle in its middle-mile delivery strategy: the carbon-free sustainability of its automated Black Swan freight craft. [Designed to fly](#) continent-spanning routes of up to **1,500 miles carrying as much as 770 lb. at speeds of 125 mph**, those planes require long-lasting power that cleaner technologies haven’t been able to provide. Perhaps until now.

Initially Dronamics pursued a [hybrid solution](#) that lowered rather than eliminated carbon emissions. Last month, the company struck a partnership with [UK](#) company Zero Petroleum to supply fossil-free fuel for [future net-zero aerial cargo transport](#). Now the Dronamics is turning to CAeS [hydrogen-cell technology](#) that may one day rid its middle-mile drone deliveries entirely of CO2 output. <https://dronedj.com/2022/11/09/dronamics-seeks-hydrogen-fuel-cells-for-middle-mile-drone-delivery/>

10Nov22

Rocket Lab announces December Virginia launch window NOVEMBER 9, 2022 BY COURTNEY MABEUS



A Rocket Lab Electron at its New Zealand site

Rocket Lab USA Inc. will launch the first U.S. mission for its Electron rocket from a launch pad on NASA’s Wallops Flight Facility in



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Accomack County during a 13-day window that opens **Dec. 7**.

The mission, called “Virginia is for Launch Lovers,” will deploy satellites for [Herndon-based HawkEye 360](#) and will be Rocket Lab’s **first liftoff from the company’s Launch Complex 2** at Virginia Space’s Mid-Atlantic Regional Spaceport within the NASA facility. The launch pad was built for the company’s Electron rocket and is the company’s first launch site in the United States. The Electron rocket launch from Virginia will supplement its Launch Complex 1 in New Zealand, from which 31 Electron missions have previously taken off. Combined, the two pads can support more than 130 launch opportunities every year, Rocket Lab said in a news release.

NASA’s Wallops visitor center will be open for the launch. A live webcast will also be available at www.rocketlabusa.com/live-stream from around T-40 minutes.

https://www.virginiabusiness.com/article/rocket-lab-announces-december-va-launch-window/?oly_enc_id=9130E4751801F0T

11Nov22

Taiwan private drone makers urged to help military prepare for possible China war

war KATHRIN HILLE — TAIPEI Financial Times



Patrol drone: an Albatross UAV used by the Taiwanese military

Taiwan is trying to build a domestic supply chain within a year for drones its military could use in a possible war with China.

The strategy is part of President Tsai Ing-wen’s effort to make the armed forces focus on a rising threat from Beijing, whose long-range military drone missions against Taiwan since August have given her push more impetus.

Under the plan, which is backed with public funds of up to NT\$50bn (US\$1.6bn) over three years, the government aims to organize Taiwanese private drone makers into a “national team” to develop unmanned aerial vehicle systems for several specific missions in a cross-strait war scenario.

In recent years, the Taiwanese military’s efforts to expand its UAV arsenal have focused on acquiring systems from the US. In September, Taipei reached a US\$555mn agreement with Washington to buy four MQ-9B SeaGuardian drones, the maritime variant of the Reaper drone



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American forces used for missile strikes in Afghanistan.

<https://digital.olivesoftware.com/olive/odn/ftus/default.aspx>