



UAS and SmallSat Weekly News

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Eve and Ferrovial to Explore Air Traffic Management for eVTOLs and Vertiports

Jessica Reed | March 23, 2023



Eve Air Mobility and Ferrovial Vertiports intend to collaborate in evaluating the use of Eve’s air traffic management (ATM) solution for enabling advanced air mobility operations. These operations include electric vertical take-off and landing (eVTOL) aircraft as well as vertiports—where eVTOLs can take off, land, and recharge.

Ferrovial Vertiports is involved in the development of vertiport networks that support eVTOL operations. The CEO of Ferrovial Vertiports, Kevin Cox, shared in a recent [interview with Avionics International](#) that sustainability is part of its vertiport development strategy. “We are committed to innovation and to being part of a future of faster and greener mobility,” he explained. “We’re taking a global lead in vertiport development, creating sustainable, interconnected infrastructures for VTOLs.”

In addition to developing an eVTOL aircraft, Eve has created an agnostic software solution for urban ATM. The software is designed to support safe, reliable operations of eVTOL aircraft and vertiports.

Ferrovial Vertiports has previously entered into an agreement with another eVTOL developer, Lilium. In January 2021, the two companies announced that they will [work together to build a network](#) that includes at least **10 vertiports across the state of Florida**.

https://www.aviationtoday.com/2023/03/23/eve-and-ferrovial-to-explore-air-traffic-management-for-evtols-and-vertiports/?oly_enc_id=7021F0632090D7B

Wingcopter and ZAL GmbH collaborate on development of hydrogen-powered drones

March 22, 2023 News



[Wingcopter](#), the German developer and operator of delivery drones, and Hamburg-based [ZAL Center of Applied Aeronautical Research](#) GmbH have announced a development partnership. Together, they intend to explore the potential of green hydrogen to power Wingcopter’s drones, which are already purely electric,



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and develop a sustainable, hydrogen-based propulsion system. The propulsion system will later be produced by Wingcopter itself and installed in its delivery drones.

By refitting the battery-powered Wingcopter 198 to run on hydrogen, the plan is for the drone to not only continue to fly emission-free in the future, but also become even more powerful. Hydrogen propulsion could ensure longer flight times and thus enable correspondingly greater distances for different delivery applications.

The project-related modification of the Wingcopter will take place at ZAL's Fuel Cell Lab in Hamburg. As part of the development partnership, a solution is being developed that will fit into the existing technical ecosystem of the Wingcopter delivery drone while preserving the characteristic flight capabilities of the Wingcopter. In the past, ZAL engineers have already been able to achieve a flight duration of **over two hours** with the company's own ZALbatros hydrogen drone. This was achieved using compressed gaseous hydrogen in combination with a fuel cell. A comparable technology will also be used in the Wingcopter.

https://uasweekly.com/2023/03/22/wingcopter-and-zal-gmbh-collaborate-on-joint-development-of-hydrogen-powered-delivery-drones/?utm_source=rss&utm_medium=rss&utm_campaign=wingcopter-and-zal-gmbh-collaborate-on-joint-development-of-hydrogen-powered-delivery-drones&utm_term=2023-03-23

Skydio For All report details drone maker's global social impact Ishveena Singh - Mar. 23rd 2023



Skydio has officially launched its social impact program, Skydio For All, along with a report that details the US drone maker's community-focused projects so far across STEM education, veterans support, cultural and historical preservation, wildlife conservation, as well as the war in Ukraine.

The Skydio For All program was initially created by a group of Skydio employees who came together in the midst of COVID-19 to brainstorm how the company could support communities in need. The initiative leverages the full range of Skydio's resources – from product donations to training and support – to partner with local and global communities. Skydio For All has supported **35 nonprofit organizations** across six countries, with product and financial donations totaling over **\$824,000**.



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The goal for 2023 is even bigger, stresses Skydio. The company plans to expand community outreach through veteran programming and public access to drone education. The drone maker wants to get twice as many students enrolled in its Youth STEM programs. In addition, Skydio wants to increase the number of culturally and historically significant sites its drones scan, along with providing more robust support for wildlife conservation through product testing and innovation. <https://dronedj.com/2023/03/23/skydio-for-all-annual-report/#more-91892>

Drones for Wind Turbine Inspection: ONYX Insight and Nearthlab Partner Miriam

McNabb March 23, 2023 DRONELIFE Staff Writer Ian M. Crosby



Predictive maintenance solutions (PdM) provider [ONYX Insight](#) has announced a partnership with autonomous drone solution company [Nearthlab](#) to provide wind farm operators with a whole turbine predictive maintenance solution. The two companies are coming together to grant large operators capabilities that address issues of labor, resources and inflation facing the industry. The partnership will cover North America, with ONYX Insight licensed to utilize Nearthlab's Zoomable software in the assessment of the health of wind turbines.

Leveraging Nearthlab's experience with mobile drone technology, ONYX Insight will offer analysis and PdM services to lower reliance on trained drone pilots by enabling self-performing operators to conduct visual inspections of their turbine blades at a **significantly lower price** point. Wind operators will have full PdM for their wind turbines along with consistent reporting from a single ecosystem, with drone operations conducted in-house.

The combination of Nearthlab's innovative inspection solutions with ONYX Insight's expertise in turbine reliability engineering, the integration of drivetrain, blade health monitoring, and enterprise management systems into a single business ecosystem has the potential to revolutionize the way in which wind turbines are managed.

<https://dronelife.com/2023/03/23/drones-for-wind-turbine-inspection-onyx-insight-and-nearthlab/>

Lilium's Tech Demonstrator Hits Targeted Maximum Speed Jessica Reed | March 23, 2023

Earlier this month, eVTOL developer Lilium achieved a significant milestone. Its Phoenix 2 tech demonstrator aircraft hit the targeted maximum speed during a flight test—about **155 mph**.



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The Phoenix 2 comes in for a landing after hitting its maximum speed during a flight test.

Last month, Lilium shared news of an [agreement with Collins Aerospace](#) to design and develop the inceptors that pilots will use to control the Lilium Jet. "While integrating all conventional mechanical and

electrical flight controls into two sidesticks, the Collins Aerospace system brings a new piloting philosophy for single pilot operations in the eVTOL realm," according to the announcement.

Last fall, Lilium announced that its technology demonstrator achieved full transition from hover to wing-borne flight. The Phoenix 2 aircraft has been performing [test flights in Spain](#) since the spring of 2022, and the team first achieved a main wing transition flight in June.

Lilium has also successfully completed its [second Design Organization Approval \(DOA\) audit by EASA](#). Lilium is working towards type certification of its eVTOL aircraft with both EASA and the FAA. <https://www.aviationtoday.com/2023/03/23/liliums-tech-demonstrator-hits-targeted-maximum-speed/>

Drone Delivery Canada sells its first Condor heavy-lift UAV Bruce Crumley - Mar. 24th 2023



Toronto-based [Drone Delivery Canada](#) announced the first sale of its Condor [heavy-lift UAV](#) in a deal with the government's Transport Canada agency.

Drone Delivery Canada [said](#) the transaction for the [Condor heavy-lift](#) craft was valued at CAD \$1.2 million (**\$880,000**), and would also provide Transport Canada with operating and testing support throughout 2023. It noted the deal was brokered by its Air Canada sales agent as part of the government's Innovative Solutions Canada program.

Under terms of the accord, Drone Delivery Canada will provide the agency with a [Condor UAV](#) – currently the largest craft it produces. Measuring 22 feet long, five feet wide, and seven feet tall, the [heavy-lift drone](#) has a hauling capacity of **400 lb.**, and a flight range of just over 124 miles at an operating speed of nearly 75 mph.



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Propelled like a helicopter with a single main rotor overhead, the craft operates with the company's proprietary FLYTE management system used in its entire line of specialized cargo [delivery drones](#). A three-phase operational and testing program will begin with a series of short-range flights followed by long distance endurance trials, and operation in extreme environmental conditions. <https://dronedj.com/2023/03/24/drone-delivery-canada-sells-its-first-condor-heavy-lift-uav/#more-91930>

The Anti-Drone Arms Race: Inside the Fight to Protect the World's Skies CHARLIE CAMPBELL / SINGAPORE MARCH 23, 2023



A police officer presents an anti-drone gun during Railway Police Open Day at Hankou Railway Station on January 7, 2021 in Wuhan, Hubei.

On the top floor of a squat Singapore industrial estate, wedged between a railway depot and water reclamation plant, is a young security firm that's shooting for the stars. Well, shooting for anything beneath the stars that shouldn't be there, technically speaking. TRD is one of the world's leading purveyors of anti-drone technology—a burgeoning industry worth some \$1.1 billion last year and [projected to grow to \\$7.4 billion by 2032](#).

Commercial drones are typically sold with preset “geofencing” that prevent their flight near sensitive locations—however, these guardrails are easily hacked. In recent years, drones have [smuggled](#) drugs across borders and into prisons; [disrupted](#) countless sporting events; and attempted to [assassinate](#) Venezuelan President Nicolás Maduro. In June, a kamikaze drone [struck](#) Russia's Novoshakhtinsk oil refinery, sparking a large blaze. UAVs have proven a regular menace at airports. (Closing Dubai International Airport for a drone incursion, for example, [costs](#) \$100,000 every minute.) Drone threat intelligence firm DroneSec recorded 2,554 major illicit drone incidents in 2022—a [60% year-over-year rise](#).

Ultimately, today's proliferation of cheap UAVs means anything worth guarding by a regular fence—whether power plant, university, prison, or private residence—also requires protection from the skies above. <https://time.com/6265108/drone-trd-singapore-unmanned-aerial-vehicle/>



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LYTE Aviation Hybrid eVTOL SkyBus, SkyTruck Miriam McNabb March 26, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Today, advanced air mobility innovator [LYTE Aviation](#) unveiled its 40-seat (hybrid) eVTOL SkyBus and SkyTruck program. Its LA-44 SkyBus, an eVTOL vehicle designed to be five times more fuel efficient than current helicopters, and SkyTruck cargo variant, designed around a **4.5-ton payload**, are the result of three years' R&D.

Built primarily with currently available technology, the SkyBus will possess a **1,000 km range** and a max speed of 300 km/hr. It utilizes two propulsion systems, one of which is electric and powered by hydrogen fuel cells, and the other is turbine powered by jet fuel / SAF.

The LA-44 is a hybrid electric tandem tilt-wing design powered by four conventional turbine engines running on sustainable aviation fuel. It also utilizes four electric motors at the wingtips for greater control and stability, powered by hydrogen fuel cells. A full-scale prototype is being planned within 24 months. <https://dronelife.com/2023/03/26/40-seats-room-for-cargo-5x-more-fuel-efficient-than-a-helicopter-lyte-aviation-hybrid-evtol-skybus-skytruck/>

Archer Aviation and United Airways Establish Air Taxi Route in Chicago Miriam McNabb March 26, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Today, [Archer Aviation](#) and United Airlines announced plans to launch Chicago's first air taxi route. The route will be situated between O'Hare International Airport (ORD) and Vertiport Chicago, the largest vertical aircraft take-off and landing facility in the nation. This location was chosen because of the convenience, access and service it offers. Passengers will be able

to travel to and from ORD using Archer's Midnight aircraft in around **10 minutes**, a trip that can take over an hour by car.

The two companies intend for their UAM network to provide Chicago residents and visitors with a safe, renewable, quiet, and cost-competitive alternative to ground transportation starting in 2025. As the country's third most populous city, Chicago is a unique location for Archer and United to build out. Early launch routes will be focused on airport to city center



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transportation service, known as “trunk” routes. Once the trunk routes have been established, “branch” routes will be built to connect to surrounding communities.

<https://dronelife.com/2023/03/26/archer-aviation-and-united-airways-establish-air-taxi-route-in-chicago-video/>

Helicopter Business Leaders Open the Door to eVTOLs Charles Alcock March 24, 2023



Rotorcraft industry leaders addressing the Helicopter Investor conference this week in London expressed measured optimism over prospects for the emerging advanced air mobility sector. There was consensus that new eVTOL aircraft will start to be used for some current helicopter use cases, albeit most speakers

expressed doubt that this will start happening from 2025, as many of the more bullish market entrants are insisting.

Lobo Leasing is one of a handful of lessors to have committed to adding eVTOL aircraft, having already made a down payment for Pipistrel’s planned Nuuva autonomous cargo vehicles. The UK-based group’s CEO Dan Roberts said that he is ready to make further payments to the Textron eAviation company with a view to leasing or reselling the Nuuvas to operators.

One company that is investing in an AAM future is Bristow, which has provisional order agreements in place with seven manufacturers, including Electra, Beta Technologies, Elroy Air, Vertical Aerospace, Eve Air Mobility, Overair, and Lilium. <https://www.ainonline.com/aviation-news/business-aviation/2023-03-24/helicopter-business-leaders-open-door-evtols>

SpaceX launches latest batch of Starlink internet satellites from Florida, lands on drone ship Emre Kelly Florida Today



After an 11:43 a.m. EDT liftoff from Launch Complex 40 and a pivot toward the southeast, the 162-foot booster completed its 10th flight to date with a successful ship landing about 150 miles east of the Bahamas. The Shortfall of Gravitas drone ship and Falcon 9 booster are expected back at Port Canaveral by early next week at the latest.

Secured in the rocket's payload fairing were 56 Starlink satellites, which will spend the next several weeks slowly raising their orbits. The internet constellation's satellites – roughly **4,000**



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since the first flight in 2019 – typically operate about 340 miles above Earth. Friday's flight marked Starlink's 76th dedicated mission, which now delivers space-based internet connectivity to most of North and South America, Europe, Japan, and Australia. SpaceX expects to provide [near-global coverage](#) by next year.

<https://www.floridatoday.com/story/tech/science/space/2023/03/24/spacex-launches-batch-of-starlink-internet-satellites-from-florida/70030565007/>

Ukraine is betting on drones to strike deep into Russia Mar 20th 2023

With the West dithering about long-range munitions, drones offer an alternative



On february 28th the skies above Russia buzzed with the sound of hostile drones. St Petersburg, the country's second city, imposed a 200km no-fly zone around its airports. In Krasnodar in the south, an oil depot went up in flames. Drones reached Belgorod and Bryansk regions, which share a border with Ukraine. One even came close to Moscow—

downed after reportedly clipping trees less than 100km from the capital. The incursion was not the first time that Ukrainian unmanned aerial vehicles had found a way past Russian defenses, but it was the first concerted attack of its kind.

Ukraine is deploying drones in at least five different ways: as small, commercially available reconnaissance vehicles that can feed video footage back over a short range; as small-scale improvised loitering munitions, often designed to disturb more than destroy; as more sophisticated reconnaissance or electronic-warfare drones; as larger loitering munitions designed to destroy heavy armor; and finally as strike drones, whether airborne or naval, able to deliver bombs and missiles over distances of hundreds or even thousands of kilometers.

The army has completed a big restructuring, establishing **60 new attack-drone squadrons**, at least one in every brigade, with separate staff and commanders. This is **the first reform of its kind anywhere in the world**. Ukraine's military doctrine has been updated to include guidelines on drone use. The defense ministry has created a new board to co-ordinate the work of drone producers. There has been a drive to remove import and certification barriers.

<https://www.economist.com/europe/2023/03/20/ukraine-is-betting-on-drones-to-strike-deep-into-russia>



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DeTect Unveils its Largest Surveillance Radar Yet, Marking a Major Milestone in Production March 27, 2023 Counter UAS



[DeTect](#), Inc. has announced a significant milestone in its radar technology development. The company has successfully produced its largest and longest-range radar to date – the HARRIER BAR300. This extended-range radar is capable of aircraft detection at a range of **30+ nautical miles**.

The HARRIER BAR300 is part of DeTect's BAR™ series radar, which is an X-band, solid-state air and marine surveillance radar developed for a range of applications including extended range airspace security, **drone operation beyond visual line-of-sight (BVLOS)**, Aircraft Detection Lighting System, bird monitoring, and long-range coastal surveillance.

Currently, the first production article of the HARRIER BAR300 is undergoing final certification testing at DeTect's R&D range in Florida. The radar is expected to be available on the market by the end of the second quarter of 2023. https://uasweekly.com/2023/03/27/detect-unveils-its-largest-surveillance-radar-yet-marking-a-major-milestone-in-production/?utm_source=rss&utm_medium=rss&utm_campaign=detect-unveils-its-largest-surveillance-radar-yet-marking-a-major-milestone-in-production&utm_term=2023-03-27

FAA invites applicants for UAS service provider for low altitude authorization program March 26, 2023 Jenny Beechener



The US Federal Aviation Administration (FAA) is opening the application period to become a UAS service supplier of the Low Altitude Authorization and Notification Capability (LAANC). It will open on 1 May 2023 and close on 2 June 2023. The LAANC capability offers industry the opportunity to work with the agency as we develop a UAS Traffic

Management System (UTM). Companies approved to provide LAANC Services are known as FAA Approved UAS Service Suppliers (USS). Applications should have a mature product at the time of application or have the capability to develop it before formal onboarding.

Upon successful completion of all onboarding activities, the FAA will sign the memorandum of association and the USS will receive notification that it may begin providing LAANC services. Application details [here](https://www.unmannedairspace.info/uncategorized/faa-invites-applicants-to-become-a-uas-service-provider-for-low-altitude-authorisation-programme/). <https://www.unmannedairspace.info/uncategorized/faa-invites-applicants-to-become-a-uas-service-provider-for-low-altitude-authorisation-programme/>



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NY gets FAA waiver for routine large drone flights in NUAIR corridor Bruce

Crumley - Mar. 27th 2023



Drones operating in New York’s Northeast UAS Airspace Integration Research Alliance ([NUAIR](#)) development and research flight corridor are set to increase in girth under a new [Federal Aviation Administration](#) (FAA) waiver that will allow routine testing of [larger, heavier UAVs](#).

Oneida County officials announced that the [FAA delivered their waiver](#) request for regular flights by drones of up to **300 pounds** within the 50-mile swath of [NUAIR’s dedicated airspace](#) between Syracuse and Rome, New York. Oneida County is home to Griffiss International Airport, the key facility in the state’s effort to develop UAV applications and uses and positioning [New York](#) as a leader in the sector.

Oneida County Executive Anthony J. Picente Jr. said the [FAA authorization](#) will save drone operators using the [NUAIR corridor](#) – as well as federal employees – a great deal of time by avoiding the case-by-case request and approval process that was previously required for flights of large, heavy craft. <https://dronedj.com/2023/03/27/ny-gets-faa-waiver-for-routine-large-drone-flights-in-nuair-corridor/#more-91952>

Enabling the Future of Advanced Air Mobility and Drone Operations in the

U.S. Jessica Reed | March 27, 2023



A U.S. House hearing held last week on the topic of advanced air mobility featured a discussion of the future of unmanned aircraft systems, or UAS, in the United States. It also served as a legislative hearing for **The National Drone and Advanced Air Mobility Act**. This is a bill that would enable a coordinated Federal initiative to accelerate civilian UAS operations. The act would also support research and development related to advanced air mobility (AAM).

Space & Aeronautics Subcommittee Chairman Brian Babin explained in his opening remarks that enabling the next generation of UAS will require further research and development as well as improvements to the regulatory framework. “Commercial use of UAS and AAM have the potential to carry out a wide range of missions across a broad range of sectors, including agriculture, weather monitoring, critical infrastructure, transportation, public safety, and disaster relief,” he said.



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House Rep. Babin warned that many U.S. companies are choosing to conduct R&D in other countries because of the delays in the process of integrating UAS into the national airspace. “We’re losing out on the economic benefits of having American businesses compete in this rapidly growing industry,” he added. <https://www.aviationtoday.com/2023/03/27/enabling-the-future-of-advanced-air-mobility-and-drone-operations-in-the-u-s/>

28Mar23

Airbus Demonstrates In-Flight Autonomous Guidance and Control of a Drone from a Tanker March 28, 2023 Military | News



Airbus UpNext and Airbus Defence and Space have made a **significant breakthrough** by achieving in-flight autonomous guidance and control of a drone from a tanker aircraft. This accomplishment marks a significant milestone in the development of Autonomous Formation Flight and Autonomous Air-to-Air refueling.

The successful demonstration was conducted using an A310 MRTT flying testbed, which took off from Getafe, Spain, on March 21st. Several DT-25 target drones, acting as receiver aircraft, flew from the Arenosillo Test Centre at Huelva, Spain. Over the waters of the Gulf of Cadiz, the control of the drone transitioned from a ground station to the A310 MRTT, which autonomously guided the DT-25 to the in-flight refueling position.

During almost six hours of flight test, the four successively launched receivers were sequentially controlled and commanded thanks to artificial intelligence and cooperative control algorithms, without human interaction. The different receivers were controlled and guided until a minimum distance of 150 feet from the A310 MRTT. https://uasweekly.com/2023/03/28/airbus-successfully-demonstrates-in-flight-autonomous-guidance-and-control-of-a-drone-from-a-tanker-aircraft/?utm_source=rss&utm_medium=rss&utm_campaign=airbus-successfully-demonstrates-in-flight-autonomous-guidance-and-control-of-a-drone-from-a-tanker-aircraft&utm_term=2023-03-28

Flytrex reports enormous surge in 2022 drone delivery activity Bruce Crumley - Mar. 28th 2023

Fast-moving [drone delivery](#) startup [Flytrex](#) had an eventful 2022, during which it considerably expanded its zones of operation as well as its [list of retailers and restaurant partners](#). Today the company released its annual barometer of activity showing a corresponding jump in clients served last year – a whopping **seven-fold increase over 2021 to “21,350 orders” flown**.



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That surge in activity issues [from the authorization Flytrex received](#) from the [Federal Aviation Agency](#) in March to begin its [automated drone delivery services](#) in the **Dallas-Fort Worth** area. Then in July, the company got the green light to [expand its zone of operation to two nautical miles](#) around those Texas suburbs covered

by its Granbury station, as well as over the **North Carolina** cities of Fayetteville, Raeford, and Holly Springs it previously worked in.

That more than doubled the number of **potential households** that can receive Flytrex [drone delivery services](#) from 40,000 to around 100,000. It has since broadened that to a total of **140,000**, fueling the boom of business that [CEO Yariv Bash had earlier told DroneDJ](#) would make 2022 a breakout year for the company and overall sector.

<https://dronedj.com/2023/03/28/flytrex-reports-enormous-surge-in-2022-drone-delivery-activity/#more-91821>

AAM startup Ascendance gets \$22.6 million for its ATEA VTOL Bruce Crumley_ Mar. 28th 2023



French [advanced air mobility](#) (AAM) startup [Ascendance Flight Technology](#) says it is revving up its push to finalize the prototype of its ATEA hybrid [vertical takeoff and landing](#) (VTOL) plane, thanks to new investment of \$22.6 million.

Toulouse-based [Ascendance said](#) it had raised the new financing from existing backers and several new investors including Bpifrance, a public-private fund that supports France's most promising tech startups. Ascendance said the infusion will be used to finish the full-scale prototype of its ATEA [VTOL](#) and begin test flights to prepare for certification and eventual large-scale production of the [AAM plane](#). The company says it has already signed **245 memos of understanding** with customers keen on buying the aircraft.

Last October, Ascendance [signed an agreement with Air France-KLM maintenance](#), repair, and operations unit AFI KLM E&M, making the Franco-Dutch airline group not only a potential buyer of ATEA [VTOLs](#), but also a [major industrial partner](#) in servicing [AAM craft](#).

<https://dronedj.com/2023/03/28/aam-startup-ascendance-gets-22-6-million-for-its-atea-vtol/>

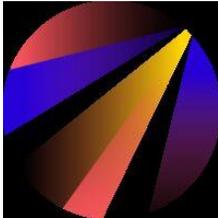


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Air Taxis Will Start Commercial Flights in 2025, Honeywell Predicts Thomas Black

March 28, 2023



[Honeywell International Inc.](#) sees the first electric aircraft that take off like helicopters and fly like airplanes beginning commercial flights in 2025, but no air taxi boom until closer to the end of the decade.

“There will be some initial vehicles introduced that’ll be used for some limited use cases maybe under some pretty strict requirements, and then it will take off,” said Mike Madsen, the head of Honeywell’s aerospace business, who expects Honeywell’s eVTOL equipment-related sales to grow to about **\$2 billion by 2030**. “It’s going to be really slow at the beginning”

The promise of more nimble aircraft that use multiple electric motors, which are quieter, safer, and less expensive to maintain than a helicopter’s internal combustion engine, has attracted several startups as well as traditional aerospace manufacturers. The passenger market alone could grow to as much as **\$1 trillion by 2040**, and some \$3 trillion including military and cargo, according to JPMorgan Chase analyst Marcelo Motta. Even eVTOL producers that have made the most progress have many regulatory hurdles remaining and some experts say certification for pilot-less flights is likely many years away. <https://www.bloomberg.com/news/articles/2023-03-28/honeywell-sees-air-taxis-starting-slow-in-2025-soaring-by-2030>

PI ZERO MICRO DRONE: THE DIY DRONE KIT FOR BEGINNERS THAT WORKS WITH ARDUPILOT March 28, 2023 [Sally French](#)



Looking to get into the world of DIY drones? The Pi Zero micro drone is one of the best ways to start — particularly if you’re looking for a safe drone that’s relatively inexpensive *and* still works with ArduPilot.

Now the [Pi Zero micro drone](#) certainly has a DIY feel. Expect to do your own soldering. You’ll also do your own binding and motor number mapping. Should you want to get even more advanced, the ArduPilot unlocks even more custom features like running your own autonomous missions and python scripting.



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But it's a lot cheaper than most other DIY drone kits. And in fact, it's about half the price of the other DIY drone kit that I usually recommend: the \$1,000 [Drone Dojo Raspberry Pixhawk Drone Kit](#).

This new [Pi Zero micro drone kit](#) also comes from the folks over at Drone Dojo — and this one cost just \$597. And, if you enter coupon code DRONEGIRL3, you'll save \$50, which brings your price down to just \$547. <https://www.thedronegirl.com/2023/03/29/pi-zero-ardupilot-drone-doj/>

New FAA waiver will make it easier to test aircraft at Northern Plains UAS Test Site Ingrid Harbo March 27, 2023



GRAND FORKS – A waiver issued to the Northern Plains UAS Test Site by the Federal Aviation Administration will make it easier for companies to test their aircraft at the Grand Forks test site.

Announced by U.S. Sen. John Hoeven, R-N.D., on Monday, March 27, the waiver allows Northern Plains UAS Test Site to support unmanned aircraft systems flights involving aircraft that do not have a public designation.

Under FAA rules, aircraft can be tested for research and development purposes at UAS test sites as long as it is being done in the interest of public good. But Trevor Woods, executive director of the Northern Plains UAS Test Site, says the public aircraft operation designation has a narrow definition and requires a lot of paperwork. The designation also prohibits a lot of commercial operations like carrying cargo or passengers.

The waiver will allow companies to test aircraft at Northern Plains without flights having to be considered public aircraft operations. This will **streamline the regulatory process** for companies hoping to test aircraft at Northern Plains.

The FAA has approved waivers for beyond-visual-line-of-sight flights conducted by the Northern Plains UAS Test Site and General Atomics using enhanced radar software.

<https://www.grandforksherald.com/news/north-dakota/new-faa-waiver-will-make-it-easier-for-companies-to-test-aircraft-at-northern-plains-uas-test-site>



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AeroVironment Launches a Highly Mobile and Quickly Deployable Loitering Missile System March 28, 2023 News



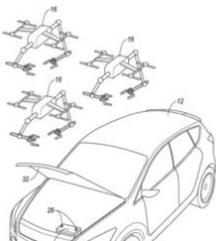
The Switchblade 300 Block 20 is designed to be portable, lightweight, and easy to operate, requiring only a single operator. It features a new tablet-based Fire Control System that allows operators to easily train, plan, and execute missions, while an integrated control directly onto the launcher tube simplifies operation even further.

With these new features, the Switchblade 300 Block 20 provides a game-changing capability for both U.S. and allied forces.

The Switchblade 300 Block 20 provides small expeditionary units with a stand-alone precision capability with minimal collateral effects. It delivers 20-plus minutes of tactical reconnaissance, surveillance, and target acquisition, providing real-time video for use against beyond-line-of-sight targets. Cursor-on-Target GPS coordinates provide situational awareness, information collection, targeting, and feature/object recognition, enabling the system to deliver actionable intelligence and precision firepower needed to achieve mission success across multiple domains. https://uasweekly.com/2023/03/28/aerovironment-launches-switchblade-300-block-20-a-highly-mobile-and-quickly-deployable-loitering-missile-system/?utm_source=rss&utm_medium=rss&utm_campaign=aerovironment-launches-switchblade-300-block-20-a-highly-mobile-and-quickly-deployable-loitering-missile-system&utm_term=2023-03-29

30Mar23

Could Drones Come Jump Start Your Car When You're Stranded? Ford's New Patent Miriam McNabb March 29, 2023 by DRONELIFE Staff Writer Ian M. Crosby



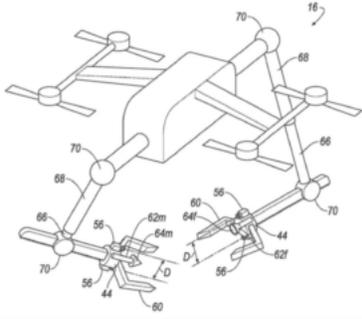
A patent originally filed on April 12th, 2017 by Ford Motor Company for multiple drones which could be used to jump start future Ford vehicles has been published and assigned serial number 11614063, as reported by [Ford Authority](#).

Ford has filed several recent drone-related patents, including a [jump start system](#) using drones to charge Ford vehicles, as well as [external jump start battery terminal hookups](#). Building upon



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these prior filings, the new patent details multiple drones for use in jump starting future Ford vehicles with dead batteries.



This new patent seeks to deploy the unmanned aircraft to assist motorists who are stranded with a dead battery and who may lack access to a jump cable or another vehicle. Ford vehicles would have the ability to transmit a jump start request along with the vehicle's current location, which would be received by one or more drones. Upon navigating to the location, the drones would then open the hood, form a connection with the vehicle's battery, and provide a boost,

allowing the motorist to continue their journey. <https://dronelife.com/2023/03/29/could-drones-come-jump-start-your-car-when-youre-stranded-fords-new-patent/>

SpaceX sends 56 Starlink satellites into low-Earth orbit Joe Fisher MARCH 29, 2023



A SpaceX Falcon 9 rocket launches a batch of 56 Starlink satellites at 4:01 PM from Complex 40 at the Cape Canaveral Space Force Station, Florida, on Wednesday. The first stage booster previously had been used in the launch of the Crew 5 mission to the International Space Station in October. It has been used in four launches.

A Falcon 9 rocket [lifted off](#) at about 4 p.m., carrying 56 satellites into low-Earth orbit. The first stage booster successfully returned and landed on the "Just Read the Instructions" [drone](#) ship in the Atlantic Ocean about eight minutes after launch.

The satellites are Starlink's V1.5 model, rather than the V2 Mini model which ran into an issue after being launched a month ago, according to [Spaceflight Now](#). Founder and CEO [Elon Musk](#) said the issue was discovered after launch when the satellites did not continue to increase their altitude, but some could still be reused in the future.

In total, 4,217 Starlink satellites have been put into orbit since 2018. According to [Space.com](#), SpaceX has permission to launch **12,000** Starlink satellites into orbit and has requested permission to launch **30,000 more**. https://www.upi.com/Science_News/2023/03/29/spacex-starlink-56-satellite-launch/9921680126019/



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Commercial Drone Alliance Executive Director Testifies Before Congress on US Leadership MARCH 23, 2023_Scott Howe



In [testimony](#) before the US House of Representatives Committee on Science, Space, and Technology, [Lisa Ellman](#), Executive Director of the [Commercial Drone Alliance](#) (CDA), explained how federal investment in UAS research and development could help the country maintain its leadership position in the field of advanced aviation.

During the hearing, titled “Advance Air Mobility: The Future of Unmanned Aircraft Systems and Beyond,” Ellman discussed the current state and future promise of UAS and advanced air mobility systems.

In the US and beyond, the many [benefits of uncrewed systems](#) have been widely reported. For example, uncrewed systems offer faster and more frequent [delivery of medical supplies](#), especially to remote areas, and this work proved essential to many communities during the [COVID-19 pandemic](#). Looking at other industries, commercial drones have consistently demonstrated that they can improve efficiency, accuracy, safety, and cost-effectiveness in fields such as [mining](#), [agriculture](#), [surveying](#), [public safety](#), [construction](#), [energy](#), and [infrastructure](#). To fully realize these benefits, Ellman said that the US needs to make changes in rules and regulations and reduce regulatory burdens.

https://www.commercialuavnews.com/regulations/commercial-drone-alliance-executive-director-testifies-before-congress-on-maintaining-us-global-leadership-in-advanced-aviation?mkt_tok=NzU2LUZXSioWnJEAAAGK0qfSoYSvD711aWNpHO6wXVDtC7c_nGPqcFqQOW3nwwrC06cyp96cfB2bsIxMpl76ZogAqGKFXWDlwGerKT1L24Ank3q4orCliUNdWhcwkDpwyc

Northrop Grumman, Shield AI selected for US Army Tactical UAV Prototype

March 30, 2023 Military | News



Northrop Grumman Corporation, teamed with Shield AI, has been chosen by the U.S. Army to participate in the Future Tactical Unmanned Aircraft System (FTUAS) competition, Increment 2, to replace the long-serving RQ-7B Shadow tactical unmanned aerial system (UAS).

Under a seven-week base period contract, the Northrop Grumman-led team will define the modular open-system architecture of an enhanced V-BAT aircraft, including the integration of



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advanced surveillance and electronic warfare payloads. The V-BAT UAS is an innovative, agile, compact, and lightweight platform that a combat team of two soldiers can rapidly launch and recover in challenging and on-the-move environments.

Northrop Grumman is teamed with Shield AI, designer and manufacturer of the V-BAT platform, to provide best-in-class solutions for an expeditionary vertical takeoff and landing (VTOL) UAS, capable of persistent aerial reconnaissance for U.S. Army Brigade Combat Teams, Special Forces and Ranger battalions. As a Future Vertical Lift program, the FTUAS is the Army's premier VTOL unmanned aircraft modernization effort.

https://uasweekly.com/2023/03/30/northrop-grumman-shield-ai-selected-for-us-army-tactical-uav-prototype/?utm_source=rss&utm_medium=rss&utm_campaign=northrop-grumman-shield-ai-selected-for-us-army-tactical-uav-prototype&utm_term=2023-03-30

SURVEY Copter Unveils Highly Versatile and Modular VTOL UAS 'CAPA-X' March 30, 2023 Military | News



SURVEY Copter, an Airbus subsidiary specializing in the design, production, and operational support of light tactical unmanned aerial systems (UAS), has announced the launch of a new light tactical UAS called CAPA-X at the SOFINS Special Forces exhibition.

The concept behind the design was to create a flexible drone system that can easily adapt to the unique needs of public decision-makers, armies, and para public forces. This modular system offers a wide range of configurations to fulfill various missions, including intelligence, surveillance, reconnaissance, target detection and tracking, investigation, damage assessment, communication relay, cargo transport, and search and rescue.

The propulsion system of CAPA-X can be configured as either VTOL or HTOL, enabling vertical or conventional take-offs and landings, optimizing logistical footprint and performance. The UAS also features two wing configurations (short and long) to suit missions requiring hovering at high cruising speeds or increased flight autonomy. Additionally, it is equipped with a payload bay to integrate different sensors, making it possible for operators to use them simultaneously and address various types of missions. https://uasweekly.com/2023/03/30/urvey-copter-unveils-highly-versatile-and-modular-vtol-uav-capax/?utm_source=rss&utm_medium=rss&utm_campaign=urvey-copter-unveils-highly-versatile-and-modular-vtol-uav-capax&utm_term=2023-03-30



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POLITICIAN ROASTS FAA IN CONGRESSIONAL HEARING ON DRONES March 30, 2023 Sally French



On Thursday, March 30, the U.S. House Committee on Transportation and Infrastructure (which is a standing committee of the United States House of Representatives) hosted a Congressional hearing with

its Subcommittee on Aviation. The hearing featured panelists who represent key players in the drone industry, including drone delivery giant Wing, the Chula Vista Police Department, WakeMed Health and Hospitals and the University of Alaska Fairbanks, which is an official [FAA drone test site](#).

The committee, which is chaired by Missouri Republican Rep. Sam Graves, had some unfavorable words for the FAA — including words from Graves himself.

“The FAA’s inability to make quick and sound decisions, and stick by those decisions, has resulted in a lack of clarity for new entrants in the market,” Graves said in his opening remarks. “After over five years of trying, the FAA has succeeded in certifying a grand total of one drone.”

That single, certified drone Graves referenced is the Matternet M2 drone, which in November 2022 became the first (and still, to date, only) drone to hold what’s called a [FAA Production Certificate](#). The Production Certificate basically certifies that Matternet’s management and manufacturing capabilities are up to par, thus capable of producing aircraft that conform to a specific design (that has separately been approved). With it, Matternet is **the only drone company in the U.S.** that can manufacture, test and issue airworthiness certificates for M2 drones moving forward (the M2 [drone will be produced in America](#) at the company’s production facility in Mountain View, California).

<https://www.thedronegirl.com/2023/03/31/congressional-hearing-drones-sam-graves/>