



UAS and SmallSat Weekly News

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Thousands of abandoned Ohio oil and gas wells may be hidden. Drones could help find them 2021-05-12 Stuart Miles



After successful trials using [drones](#) to discover abandoned oil and gas wells, Ohio authorities are looking to expand their use and to **speed up remediation** at hundreds of sites across the state.

Ohio has roughly 1,000 sites on its orphan well inventory. There likely are “many more,” said Eric Vendel, chief of the Ohio Department of Natural Resources’ Division of Oil and Gas Resources Management. The hope is that [drones](#) equipped with magnetometers could help locate wells that are not yet on the state’s radar.

Orphan wells matter because they can continue to emit methane, a health and fire risk if not properly contained. Methane also is 84 times more potent as a greenhouse gas than carbon dioxide is over a 20-year time span. Abandoned oil and gas wells have also contaminated soil and groundwater. https://www.uavexpertnews.com/2021/05/thousands-of-abandoned-ohio-oil-and-gas-wells-may-be-hidden-drones-could-help-find-them/?utm_source=Master&utm_campaign=c996d01395-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-c996d01395-89168672

Tree planting in the mountains: successful field trial with BaySF May 14, 2021 News



FlyingBasket and Bayerische Staatsforsten (BaySF) joined forces to test the use of cargo drones for tree planting in the mountains. After FlyingBasket obtained cross border operation authorization by the Federal Aviation Office in Germany, the team was able to start the trial: transporting **2,000 young trees** from a location in the valley of Aschau, Southern Bavaria, to **18 planting locations** up in the mountains near the famous Kampenwand.

The team of Flying Basket used the FB3 cargo drone for the task. Three young BaySF talents studied different aspects of the test. Experienced forestry professionals provided guidance



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during the whole process. The trial was successful; all plants got transported safely and efficiently to the relevant locations.

Bernd Meier, deputy head of the BaySF training center in Laubau, Ruppolding, was happy with the results. "We see big potential in the use of the technology not only for planting in steep terrain, but also to provide our people with forestry equipment, which they otherwise need to carry. Remote sensing is another interesting field with big innovation potential."

https://uasweekly.com/2021/05/14/tree-planting-in-the-mountains-successful-field-trial-with-baysf/?utm_source=rss&utm_medium=rss&utm_campaign=tree-planting-in-the-mountains-successful-field-trial-with-baysf&utm_term=2021-05-14

Drones to prevent bird eggs from hatching near airfields Ishveena Singh May 14, 2021



The Pentagon spends around \$50 million every year to manage bird life around US airfields. And now, drones are being called upon to join the fight. The Navy is developing an [autonomous](#) drone that would search for nuisance bird nests and eggs in and around airfields. Once a target is detected, an operator can initiate oiling and prevent the eggs from hatching.

Oiling is a process that has been deemed a **humane** way of stopping eggs from growing into birds by the Humane Society. In this method of wildlife management, eggs are sprayed with food-grade, nontoxic oil to block the pores in the eggshells from circulating oxygen to the embryos inside. Oiling can both limit the number of ground-nesting birds and protect endangered species.

The drone is outfitted with obstacle-avoidance sensors and autonomous navigation technologies so it can safely maneuver in areas with sensitive equipment and wiring such as building ceilings and electricity towers. It would also be capable of acquiring accurate geospatial information, feature counting, and generating a map on the located and treated nests that can then be imported into a data management software post-flight.

<https://dronedj.com/2021/05/14/drones-bird-eggs-airfields/#more-57920>

FAA readying tests of drone safety systems at five US airports Bruce Crumley May. 14th 2021



The Federal Aviation Administration is preparing to test technologies designed to ensure safe cohabitation of airplanes and drones in the

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nation's skies. In its most recent step, the FAA named the five US airports where drone detection and mitigation air traffic systems will be evaluated.

Falling under the FAA's [Airport Unmanned Aircraft Systems Detection and Mitigation Research Program](#), the tests will evaluate systems designed to detect and mitigate potential safety risks drones may pose to piloted traffic. Slated to begin later this year, those trials will take place at:

- Atlantic City International Airport in Atlantic City, New Jersey
- Syracuse Hancock International Airport in Syracuse, New York
- Rickenbacker International Airport in Columbus, Ohio
- Huntsville International Airport in Huntsville, Alabama
- Seattle-Tacoma International Airport in Seattle, Washington

The [FAA's statement](#) said the selected sites all meet "requirements for diverse testing environments." They also handle traffic flows and operating conditions most typical to airports across the US. <https://dronedj.com/2021/05/14/faa-readying-tests-of-drone-safety-systems-at-five-us-airports/#more-57938>

'60 Minutes' reviews first month on Mars for Ingenuity helicopter and Perseverance rover

Zac Hall May. 14th 2021



Anderson Cooper spoke with the NASA/JPL team behind Perseverance and Ingenuity to recap the seven minutes of terror to key moments and discoveries made so far on Mars.

Two insights stand out to me after viewing the segment. If scientists do *not* find signs of ancient life on Mars around Jezero crater, scientists will worry that there may not be life anywhere else in the universe. And the landing site (believed to once be a lake) contains boulders which were likely delivered after the lake dried up and a flood occurred.

The Ingenuity helicopter is also super-fast compared to the slow-moving Perseverance rover. This just excites the mind even more when imagining what future Mars helicopters could do for discovery and explanation. Watch the segment below and [learn more here](#).
<https://spaceexplored.com/2021/05/14/60-minutes-reviews-first-month-of-life-on-mars-for-ingenuity-helicopter-and-perseverance-rover/#more-57986>



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European Consortium Tests Long-flying Hydrogen-cell Drones Jason Reagan May 14, 2021



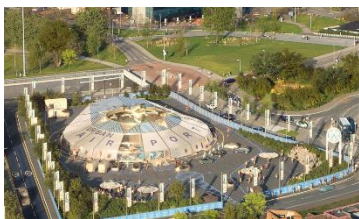
French tech company [Thales](#), Drones-Center and ZenT have teamed up to demo a hydrogen-powered drone.

Hydrogen fuel cells are a particularly effective way to increase the drone's endurance due to the low mass and high energy density of hydrogen. During the test, the drone reached the capacity to fly up to two hours without recharge with a **cell refuel time of no longer than a minute**.

"Hydrogen drone technology opens up new opportunities in applications such as surveillance of sensitive sites and military facilities. Equipped with ScaleFlyt operational safety technologies and integrated into Thales's Security Digital Platform, hydrogen drones will be able to conduct complete missions drawing on high-reliability, affordable, easily deployable solutions," said Emmanuel Guyonnet, Drone program director, Flight Avionics, Thales.

Researchers say hydrogen drones could someday reach flight times of at least **three hours** while carrying payloads up **6.6 pounds**, covering about **90 percent** of all site surveillance and inspection use cases. <https://dronelife.com/2021/05/14/european-consortium-tests-hydrogen-drones/>

UK Government backs world-first Air Architecture for air taxis and delivery drones LEGISLATION GEORGINA FORD MAY 13, 2021



Industry leaders Urban-Air Port have announced a partnership with Altitude Angel and Safeguard Vertiports to design safe, clean and connected Air Architecture for future electric air taxis and autonomous logistics drones.

These 'air roads' will enable people and cargo to travel by manned and unmanned electric vertical take-off and landing aircraft. This **world-first** infrastructure program, being demonstrated in Coventry later this year, is supported by the UK government as a significant step towards unlocking a future of clean urban air mobility for the UK and will provide a model for other countries to follow.



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According to Morgan Stanley, the global VTOL and drone market is estimated to be up to \$2.9trn by 2040. In the US, NASA predicts urban air mobility could be worth up to \$500bn in the near term. NASA estimates that more than 70% of the potential urban air mobility market value is dependent on infrastructure – this value is what Urban-Air Port is working to unlock. The company develops scalable, zero-emission infrastructure for high-frequency air mobility. Its Air-One project is a **world-first** hub for future air taxis, drones and ground-based electric transport, such as cars, e-bikes and e-scooters, which **will open in central Coventry later this year.**

<https://www.commercialdroneprofessional.com/uk-government-backs-world-first-programme-to-build-air-architecture-for-air-taxis-and-delivery-drones/>

NASA to work with local governments on introducing UAM/AAM operations May

17, 2021 Philip Butterworth-Hayes Urban air mobility



Five state and local governments have signed agreements with [NASA's aeronautical innovators](#) to work together in considering how emerging cargo-carrying drone and passenger-carrying air taxi services can best be included in their civic transportation plans.

According to a NASA press statement: “The five cooperative activities will take **place through summer of 2022**, each including a series of at least four workshops where experts from the localities and NASA’s [Advanced Air Mobility \(AAM\) mission](#) will work on updating local plans and creating new plans that might be needed to enable AAM. The five government agencies that have signed agreements with NASA are the Massachusetts Department of Transportation; Minnesota Department of Transportation; the North Central Texas Council of Governments Department of Transportation; the Ohio Unmanned Aircraft Systems Center of the Ohio Department of Transportation; and the City of Orlando, Florida.

“What’s the best way for a local government to implement an AAM system that is equitable, sustainable, and integrated with its other transportation systems? Answering that is a big part of what this is all about,” said Nancy Mendonca, NASA’s deputy AAM mission integration manager. Another major goal is to develop a “best practice” document around a key topic that other states and municipalities might follow in developing their own plans for integrating AAM into their transportation systems. <https://www.unmannedairspace.info/latest-news-and-information/nasa-to-work-with-us-local-governments-on-introducing-uam-aam-operations/>



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SpaceX launches Starlink satellites and rideshare payloads Jeff Foust May 15, 2021



*A Falcon 9 lifts off from the Kennedy Space Center May 15 carrying **52 Starlink satellites** and two rideshare payloads.*

WASHINGTON — A SpaceX Falcon 9 launched another group of Starlink satellites May 15 on a mission that included two rideshare payloads.

The Falcon 9 lifted off from Kennedy Space Center's Launch Complex 39A at 6:56 p.m. Eastern. The rocket's first stage, making its **eighth launch** dating back to the Demo-2 commercial mission nearly a year ago, **landed** on a droneship in the Atlantic.

The rocket's primary payload, 52 Starlink satellites, separated from the rocket's upper stage 1 hour and 38 minutes after liftoff. The launch brings the total number of Starlink satellites in orbit to more than **1,600**. This was the fourth Falcon 9 launch of Starlink satellites in 17 days, and the ninth Falcon 9 launch of Starlink satellites since the beginning of March. <https://spacenews.com/spacex-launches-starlink-satellites-and-rideshare-payloads/>

Trident Aerospace and Hydra Technologies Announce S-45 BAALAM UAV

Milestone May 16, 2021 News



Trident Aerospace, the group's Phoenix-based ISR Services company with a strong presence in Latin America, has announced that one of its customers has reached **4,000 flight hours** in a continuous ISR services contract over a **24-month** period. Providing persistent support for critical law enforcement operations and exceeding the contractual requirements of 1,500 flight hours per year.

Designed for harsh weather conditions, the S-45 BAALAM UAV is a twin engine, tactical unmanned aerial system with an endurance of **12 hours**, a command-and-control range of 75 miles and a 17,000 ft operating ceiling. Payloads include EO/IR as well as SIGINT and ELINT capabilities. Trident Aerospace offers full ISR solutions, as well as the sale of their unmanned aerial systems, for government institutions in border protection, law enforcement and intelligence support. The company also provides solutions for private sector customers such as utility, oil and gas companies through aerial unmanned systems solutions.

https://uasweekly.com/2021/05/16/trident-aerospace-and-hydra-technologies-announce-milestone-for-the-s-45-baalam-uav/?utm_source=rss&utm_medium=rss&utm_campaign=trident-aerospace-and-hydra-technologies-announce-milestone-for-the-s-45-baalam-uav&utm_term=2021-05-17



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Deals and tests fuel advances in hydrogen cell development Bruce Crumley May. 17th 2021



Monday brought [word](#) that South Korean hydrogen fuel company [Doosan Mobility](#) has closed a \$737,000 deal with the nation's military for a fleet of hydrogen powered drones. Doosan will deliver the unmanned aerial vehicles in November for use in the army's surveillance programs.

Embrace of hydrogen cell technology by the armed forces will expand the time each drone can be flown to **two hours**. Standard batteries currently allow for missions of about 30 minutes.

The Doosan UAVs will also be equipped with low-noise and low-vibration technologies. The combination, officials say, will produce extended – and thus more efficient – surveillance missions at considerably decreased risk of detection. <https://dronedj.com/2021/05/17/deals-and-tests-fuel-advances-in-hydrogen-cell-development/#more-58081>

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Drone Delivery Market Growing at 53% CAGR... Because Most People are Very Impatient Miriam McNabb May 17, 2021



Research firm [Facts and Factors](#) has published a new research report that forecasts the drone delivery market to expand at a 53% CAGR from 2020 – 2026. *"The global [Drone Package Delivery Market](#) was estimated at \$528 Million in 2020 and is expected to reach \$6,773 Million by 2026."*

Medical drone delivery is expanding rapidly around the world [distributing vaccine and testing materials to remote areas](#). As aviation authorities move towards regularizing flight beyond visual line of sight, on-demand cargo delivery becomes a viable option. The retail sector is rising fast – more than 50% of online shoppers favor same-day delivery.

North America is leading in drone delivery revenue. Companies like UPS, Wing, and a partnership between Flytrex and Causey Aviation has been licensed for commercial drone delivery as "Aircraft Carriers."

The report outlines drone delivery in the following segments: Food Delivery, Retail Goods Delivery, Postal Delivery, Medical Aids Delivery, Precision Agriculture Delivery, Industrial



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Delivery and Weapons & Ammunitions Delivery. <https://dronelife.com/2021/05/17/drone-delivery-market-growing-at-53-cagr-because-most-people-are-very-impatient/>

Skyward and Pix4D: Integrating Drone Management Platform with Drone Mapping

Miriam McNabb May 17, 2021



[Skyward](#) and [Pix4D](#) have announced that the [drone management platform](#) will now offer Skyward Mapping and Modeling. The platform allows customers to manage their drone program – from aircraft and battery to flight planning and approvals and mission operations. With the new integration, customers will be able to produce 2D maps and

3D images from the same interface. *It enables customers to create, view, measure, and export 2D orthomosaic maps and 3D photogrammetric models from Skyward's web app. Customers can get business-ready data sets through a seamless plan, fly, process workflow.*

Skyward will hold a [webinar](#) on June 8 at 2 p.m. ET. Commercial operators can [try Skyward Mapping & Modeling](#) free for 30 days. <https://dronelife.com/2021/05/17/skyward-and-pix4d-integrating-drone-management-platform-with-drone-mapping/>

SURPRISING METRIC SHOWS HOW MUCH THE DRONE INDUSTRY GREW IN 2020

May 18, 2021 Sally French News



One surprising metric illuminates just how much the drone industry grew in 2020. Companies increased their staff by **15%**.

That's according to an April 2021 report from German-based drone research group [Drone Industry Insights](#), which analyzed more than 1,000 drone companies. Companies including [Skyfish](#) and DroneDeploy were among those with significant hiring last year.

In terms of personnel: **Hardware:** 18% increase in size of workforce, **Service sector:** 8% increase **Software:** 0.4% decrease

Hardware jobs were largely driven by passenger drone manufacturing growth. The service sector is a broader field that encompasses everything from consulting and advisory groups to



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marketplaces for drone footage and service providers. Large drone service providers are the primary growth driver. [Coronavirus provided a clear, landmark opportunity for drone delivery](#) from [PPE for medical providers](#) to [at-home coronavirus test kits](#) to basic pantry items to fun treats like [coffee](#) to people's homes. It's likely that the big players in those fields, such as Google-sibling Wing, and Zipline, led that growth.

Still, 43% of drone service companies experienced a drop in demand for drone work (though a lucky 15% of companies saw growth due to coronavirus). Jobs on the software side saw a marginal decrease. <https://www.thedronegirl.com/2021/05/18/drone-industry-grew-in-2020/>

SwissDrones Develops Long-Range & BVLOS Unmanned Helicopters 12 May 2021 Mike Ball



[SwissDrones](#), a leading developer of UAV helicopters, has partnered with Unmanned Systems Technology to demonstrate their expertise in this field. The 'Gold' profile highlights how their unmanned helicopter platforms provide **superior endurance** for long-range inspections, surveillance, and search & rescue missions.



The [SDO 50 V2](#) is a state-of-the-art unmanned helicopter with a flight endurance of over **3 hours** and the ability to operate day or night in adverse weather conditions, such as rain, snow and wind speeds of up to 21 knots. Based around a proprietary double rotor design, the system is highly cost-effective compared to

manned aerial solutions and requires less training to operate confidently. The rapidly deployable aircraft is transportable by van and can be prepared for flight by a team of two in just 15 minutes. It is controlled via a rugged portable ground control station which features a built-in keyboard, monitor, and 3-axis joysticks. It is equipped with an advanced autopilot and high-performance GPS receiver and magnetometer with optional redundant systems. https://www.unmannedsystemstechnology.com/2021/05/swissdrones-develops-vtol-long-range-bvlos-unmanned-helicopters/?utm_source=UST+eBrief&utm_campaign=ae714dab9c-UST_ebrief_2021_05_18_AB-Test&utm_medium=email&utm_term=0_6fc3c01e8d-ae714dab9c-119747501



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Wireless network group Ondas buys American Robotics for \$70 M Bruce Crumley

May. 18th 2021



American Robotics Scout System drone and nest

Licensed wireless data network specialist [Ondas Holdings](#) announced it has acquired enterprise drone maker [American Robotics](#) in a deal valued at \$70.6 million.

Ondas's software-based wireless broadband capacities are intended to strengthen performance of American Robotics' fully automated unmanned aerial vehicles.

The deal aims to provide clients in utility, industrial, and agricultural sectors with enhanced communications and internet-of-things application capacities in American Robotics drones. In-flight performance and information analyses of American Robotics UAV will be considerably improved.

American Robotics was the **first – and to date, only** – company to receive Federal Aviation Administration approval for **beyond-visual-line-of-sight** drone flights without a human ground controller. Its UAV operates with American Robotics patented Scout System. That links the fully automated, artificial intelligence-enhanced Scout drone, a weatherproofed charging and computing dock, and front-end management and analytics software in **a single operational network**. <https://dronedj.com/2021/05/18/wireless-network-group-ondas-buys-american-robotics-for-70-m/#more-58146>

Sony shares video footage from Airpeak field testing at subtropical paradise

Ishveena Singh May. 18th 2021



We may not know the full specs or price of Sony's Airpeak drone yet, but we do know that it can produce amazing results when paired with the company's Alpha series of full-frame cameras. And we know this because Sony has unveiled never-before-seen video footage captured by the Airpeak over the remote island of Iromote in Okinawa, Japan.

Airpeak, a drone intended for high-end photography and videography, is a modular platform that can accommodate a variety of professional cinematography equipment. While Sony has been pretty low-key about the drone since its [launch](#) at CES 2021, the company is now slowly



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publishing updates. Last month, Sony showcased the incredible [wind-resistance capability](#) of Airpeak. It can withstand wind speeds of up to 70 km per hour (43.6 miles per hour).

Meanwhile, the video footage released now has the drone flying through a subtropical jungle. It aims to shine a light on what kind of sweeping shots are possible when creators are presented with unprecedented freedom in high-quality filming. See the video: <https://dronedj.com/2021/05/18/sample-video-footage-airpeak/#more-58144>

Those aren't UFOs, it's the Secret Service flying its drones Bruce Crumley May. 18th 2021



Just hours after the *60 Minutes* segment featured officials backed up by military video footage detailing numerous sightings of astonishing, perhaps other worldly flying objects, the Secret Service [revealed](#) it will be conducting drone flights over the greater DC area **from May 17 to the end of the month.**

The agency has flown experimental drone missions in the capital before. During [testing in 2015](#), the Secret Service flew missions near the White House – usually banned to virtually all aircraft – in the dead of night to avoid overly curious eyes. Previous trials have focused on both signal-jamming and other techniques to intercept and neutralize potentially hostile craft and uses in the Service's own law enforcement and protection work.

As in some earlier instances, Monday's briefest of announcements was a means of avoiding anyone catching a glimpse of the drone activity and becoming alarmed. Flying drones or other unmanned aerial vehicles within a 15-mile radius of National Airport is prohibited without special FAA authorization. <https://dronedj.com/2021/05/18/those-arent-ufos-its-the-secret-service-flying-its-drones/#more-58155>

Chinese Drones Fly Near Taiwan-held Island in South China Sea Zachary Haver 2021-04-07 Radio Free Asia



A Taiwanese coast guard handles a machine gun at a fort on the Pratas Islands in the South China Sea. Reuters

Taiwan said Wednesday that it is willing to shoot down Chinese drones that have been flying near Taiwan-occupied Pratas Island in the South China Sea, a response to what analysts view as the latest pressure tactic from Beijing.



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Ocean Affairs Council Chair Lee Chung-wei told Taiwan's legislature that the Taiwanese coastguard had recently identified Chinese unmanned aerial vehicles operating near Pratas, which sits about 170 nautical miles to the southeast of Hong Kong in the northern part of the South China Sea. Lee indicated that Taiwanese forces would open fire on UAVs that fly over the island, which is also claimed by the People's Republic of China.

<https://www.rfa.org/english/news/china/taiwan-drones-04072021180138.html>

19May21

Aevum says launching satellites will be side gig for cargo-delivery drone Sandra Erwin May 18, 2021



Aevum's patented modules for Ravn X for air cargo, drone delivery and space launch

WASHINGTON — Space launch startup Aevum on May 18 said that its Ravn X unmanned aircraft will be used to both deliver cargo and launch rockets, pending approval from the Federal

Aviation Administration.

The Alabama-based company on May 4 received a patent for an “adaptive autonomous aircraft system with modular payload systems,” a technology that would allow Ravn X to be converted from a space launcher to a cargo delivery aircraft and vice versa.

The company is now saying that space launch is only going to be a part-time job for Ravn X. The aircraft is intended to mostly perform cargo and drone delivery services, and launch rockets eight to 10 times a year, said Aevum's founder and CEO Jay Skylus.

The autonomously operated Ravn X weighs 55,000 pounds and is 80 feet long with a 60-foot wingspan. For package deliveries, the cargo module could **deploy up to 264 smaller drones**, Skylus said. He said that the aircraft would be able to fly from any airport or spaceport that has a mile-long runway, a hangar and regular jet fuel. <https://spacenews.com/aevums-autonomous-aircraft-will-deliver-cargo-and-occasionally-launch-rockets/>



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Whale of a hug: Drone video shows endangered mammals in apparent

embrace Associated Press May 14, 2021



WOODS HOLE, Mass. — Drone video of two critically endangered North Atlantic right whales swimming in Cape Cod Bay shows the animals appearing to embrace one another with their flippers.

Wildlife photographer Brian Skerry and scientists from Woods Hole Oceanographic Institution and the New England Aquarium captured the moment on Feb. 28 as the whales interacted.

Woods Hole scientists say such behavior is rarely observed and that it might have been **the first time** a whale hug was recorded from the air.

“Researchers saw what appeared to be whales hugging with their flippers, technically described as ‘belly to belly:’ perhaps showing affection and attempts at mating,” the research team said.

See the video. <https://chicago.suntimes.com/2021/5/11/22430332/whale-hug-drone-video-endangered-whales-embrace-cape-cod-woods-hole-oceanographic-institution>

Cutting through the eVTOL hype with the AAM "Reality Index" Loz Blain May 11, 2021



There are literally hundreds of companies jostling for funding and headlines in the emerging eVTOL market. The AAM Reality Index is an attempt to rank the top contenders as they stand.

Marc Phillipp Veenendaal / AAM Reality Index

The emerging [eVTOL air taxi market](#) is drawing a lot of attention and an avalanche of funding. Literally hundreds of companies are jostling for position as this nascent air mobility tech prepares for its prime-time debut. But with renders, press releases and SPAC fundraising efforts flying as fast and frequently as these radically different new vehicles claim to, how do we know which ones are really taking off?

It's time for an eVTOL reality check – and that's exactly what consulting group SMG is trying to achieve with its Advanced Air Mobility Reality Index. SMG is not technology-focused; these guys don't care if a company is building an autonomous cargo machine, a medium-range winged tilt-rotor or a simple manned multicopter. They'll all find their place – what SMG tries to determine is simply this: how close is a given company to delivering their aircraft in volume?



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It's a very useful way to look at this exciting new space, and there are certainly some surprises on the list. Here's the current AAM Reality Index as it stands in early May 2021:

<https://newatlas.com/aircraft/evtol-air-taxi-aam-reality-index-sergio-cecutta/>

NASA to Develop BVLOS Drone Flight Research Corridors 19 May 2021 Mike Ball



[NASA](#) has entered into a Space Act Agreement with The Longbow Group to develop beyond visual line-of-sight (BVLOS) flight corridors for testing Advanced Air Mobility unmanned aerial system in **Hampton Roads, Virginia**.

Longbow consists of researchers and supporters from the city of Hampton, Virginia, Raytheon, and Hampton

University. The University's involvement allows students to be engaged with local cutting-edge sUAS research, testing and development.

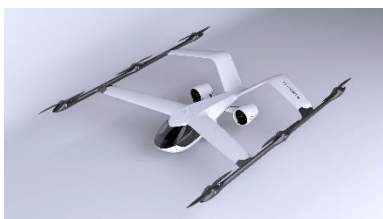
NASA's Langley Research Center will partner with Longbow on the development and assessment of a Concept of Operations, supporting infrastructure, data sharing requirements and other factors required to conduct BVLOS operations **between LaRC's City Environment Range Testing for Autonomous Integrated Navigation range and Longbow's Unmanned Systems Research and Technology Center on Fort Monroe, Virginia**.

NASA's AAM High Density Vertiplex project aims to both prototype and assess a UAM ecosystem using small UAS as surrogates for larger Urban Air Mobility aircraft. The project will also perform testing, safety risk assessments, documentation, and collaboration with the FAA to **enable routine BVLOS flights at NASA Langley**.

Other possible areas of collaborative research include UAS Traffic Management, supplemental data service providers, surveillance radars, meteorological systems, data networks, data, and command & control communications.

<https://www.unmannedsystemstechnology.com/2021/05/nasa-to-develop-bvlos-drone-flight-research-corridors/>

Volocopter Introduces VoloConnect eVTOL Kate O'Connor May 18, 2021

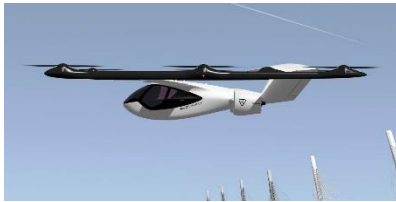


Urban air mobility aircraft company Volocopter unveiled the design for its newest electric vertical takeoff and landing aircraft at EBACE Connect on Monday. The four-seat, retractable gear VoloConnect is expected to have a range of 54 NM and a top



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cruise speed of 135 knots. Volocopter is also developing the two-seat VoloCity eVTOL air taxi and VoloDrone heavy-lift drone.



The VoloConnect is designed to **connect suburbs to cities**. The company is aiming to have the aircraft certified under EASA's SC-VTOL rule in the next five years. As [previously reported by AVweb](#), Volocopter raised \$238 million—which the company says will go toward the certification of the VoloCity and the launch of its first commercial routes—in its Series D funding round last March.

<https://www.avweb.com/recent-updates/evtols-urban-mobility/volocopter-introduces-voloconnect-evtol/>

Ondas Acquires American Robotics to Leverage Autonomous Drone Tech Jason Reagan May 18, 2021



Wireless broadband company [Ondas Holdings](#) has acquired drone company American Robotics in a **\$70.6 million** deal.

Founded in 2016, American Robotics brings its Scout drone system to Ondas' portfolio—the **first drone system to receive FAA regulatory approvals for autonomous flight**. "This gives the company an exclusive first-mover advantage to unlock the commercial drone market by overcoming the need for costly visual observers to be on the ground during every drone flight."

For Ondas, the acquisition will help integrate its technology platforms and increase automation, data collection, and AI-powered analytics in industrial markets to improve maintenance, monitoring and operation of critical infrastructure.

The company plans to use the Scout System as a mobile data gathering application for wide field area operations in industrial, agricultural and governmental settings.

<https://dronelife.com/2021/05/18/onadas-acquires-american-robotics-to-leverage-autonomous-drone-tech/>

Skycart rolls out world's first four-drop delivery drone Bruce Crumley May. 19th 2021

Bay Area drone maker and delivery service provider Skycart has unveiled what it touts as the world's first four-drop unmanned aerial vehicle.



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In addition to enabling separate deliveries to four different locations in a single mission, [Skycart's Nimbus](#) drone also operates in **fully autonomous** mode through the company's cloud network. The quad-package payload capacity goes one better than the [Wingcopter's 198](#), which was introduced scarcely a month ago as the world's first triple-drop UAV.

Skycart says the Nimbus flies at a maximum 80 mph, with a range of 100 miles and top payload of 15 kg. Skycart boasts the four-drop capacity represents a 75% reduction in drone traffic over single-parcel UAVs.

The Nimbus is equipped with a patented self-balancing system that regulates shifting weight distribution during missions as cargo offloading progresses. Deliveries can be made by line, using a parachute, or placed directly on the ground.

Skycart says it developed the Nimbus using improved aerodynamics that enable it to reach higher speeds with lower emissions. As part of that design, the drone sports forward canards that minimize both resistance and risk of stalling. <https://dronedj.com/2021/05/19/skycart-rolls-out-worlds-first-four-drop-delivery-drone/#more-58215>

20May21

Europe regulator sees first flying taxis in 2024 or 2025 Tim Hephner May 19, 2021



More than half a dozen European firms have announced developments of Urban Air Mobility vehicles for passenger use or for unmanned cargo sorties such as delivering medical supplies.

"I believe that commercial use of (air) taxis can start to take place in 2024 or 2025," Patrick Ky, executive director of the

European Union Aviation Safety Agency (EASA) said.

EASA cited figures suggesting a 4.2-billion-euro UAM market in Europe by 2030, creating 90,000 jobs. Some 31% of the global market for the new technology would be based in Europe.

EASA is focusing on projects involving piloted vehicles for passengers and unpiloted drones for cargo deliveries. Fully autonomous vehicles are still some years away, Ky said.



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Some 71% of people surveyed in six urban areas expressed interest in using air taxis or delivery services or both, and the largest category of those surveyed - 41% - said emergency medical activities would be most beneficial. Safety was the chief concern for both drones and taxis, as well as noise, particularly in the case of passenger vehicles. A majority of people polled by EASA also expressed concerns about the impact on birds or insects, while cybersecurity was high on the list of potential worries, especially for drones. <https://www.reuters.com/technology/europe-regulator-sees-first-flying-taxis-2024-or-2025-2021-05-19/>

NASA's Advanced Air Mobility Project: ANRA to Provide UAM Services for Multi-Year Project Miriam McNabb May 19, 2021



[ANRA Technologies](#) has won a leading place in NASA's new advanced air mobility project, the Aeronautics Research Mission Directorate National Campaign 2 for Advanced Air Mobility for Community Planning and Integration. ANRA will work with [FlyOhio](#), a collaboration of public, private and academic institutions led by DriveOhio's advanced air mobility group, to address the safety issues and other barriers to integrating passenger drones and other advanced air mobility vehicles into transportation systems.

ANRA has been a key player in the global development of [unmanned traffic management \(UTM\)](#) and other drone integration technologies. For NASA's Advanced Air Mobility project, ANRA will be the primary Provider of Services for this multi-year program, enabling information sharing between aircraft operators and other stakeholders, and leading the development and testing of Provider of Services for Urban Air Mobility integration with vertiport automation services. <https://dronelife.com/2021/05/19/nasas-advanced-air-mobility-project-anra-to-provide-uam-services-for-multi-year-project-to-develop-passenger-drones-and-other-advanced-air-mobility-solutions/>

Zenith AeroTech to offer DroneShield counter-drone capabilities on tethered aerial vehicles May 19, 2021



AFTON, VA: Zenith AeroTech, a leading developer of heavy-lift tethered aerial vehicles (TAVs), announced today that it is partnering with Sydney and Virginia-based DroneShield to provide enhanced drone detection capabilities, along with a range of countermeasures.



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As part of the distribution agreement with DroneShield, Zenith AeroTech will incorporate DroneShield's DroneSentry-C2™ command-and-control ecosystem into its own family of TAVs, along with an Echodyne EchoFlight radar, to counter drone or drone swarm attacks.

"By putting a detection capability on a TAV, which typically flies at 400 feet, you get better range than if you were to have these systems on a pole or ground vehicle," said Kutlay Kaya, CEO of Zenith Aerotech. "Also, your alerts will be more accurate because, at elevation, you've eliminated clutter."

In contrast to standard drones, these three TAVs can stay aloft for hours—and **even days**—at a stretch thanks to Zenith's Ground Power-Tether Management System, which converts 120- or 240-volt AC power from a generator (or other source) into high-voltage DC, powering both platform and payload. Don Leckrone, TEL: 540-456-1147, don@zenithaerotech.com

21May21

Luxaviation To Operate Commercial eVTOL Flights for Lilium Gregory Polek May 20, 2021



Lilium is partnering with business aircraft operator Luxaviation to provide commercial operations with its seven-seat eVTOL aircraft in Europe from **2024**. Under the terms of the contract announced today, Luxaviation will take responsibility for securing necessary regulatory approvals and managing pilots, who will train following an

EASA-approved type rating concept developed by Lilium partner Lufthansa Aviation Training. Luxaviation manages hundreds of aircraft under 10 air operator certificates across Europe, giving it operational flexibility.

On a single charge, the all-electric Lilium Jet will have a projected range of up to 155 miles and fly at speeds of 175 mph. It has **36 tilting ducted fans** installed in its wing and canard.

Lilium describes its planned service as an "airline" operation and says that flights will be **scheduled**. It has also announced plans to launch services in locations such as Florida and intends to partner with other local operators where necessary. The company also intends to launch networks in Germany through partnerships with Munich, Nuremberg, Dusseldorf, and Cologne/Bonn airports. <https://www.ainonline.com/aviation-news/business-aviation/2021-05-20/luxaviation-operate-commercial-evtol-flights-lilium>



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Drones Flying Near Airports, Infrastructure Prompt U.S. Action Brett Forrest and Brian McGill May 20, 2021

Federal agencies are scrambling to address a **surge in the use of consumer drones** as the unmanned aircraft crowd the airspace above critical sites, posing a threat to public safety and national security.

The Federal Aviation Administration and the National Aeronautics and Space Administration are developing a **joint national air-traffic-control system** for low-flying drones. The Department of Homeland Security is testing technologies to detect small drones favored by consumers, and the Pentagon is researching methods to knock them out of the sky.

Reports of drone sightings around airports are pouring into the FAA at a rate of more than 100 a month. Commercial pilots flying into and out of Los Angeles International Airport have reported increased sightings of drones near their flight path, with 23 sightings reported to the control tower so far this year, according to an airport official.

Drone incursions into the Los Angeles airport's restricted airspace nearly tripled from 2019 to 2020, with a high of roughly 1,200 flights last June, according to WhiteFox Defense Technologies Inc., a California developer of drone-tracking technology.



Drone detections within restricted airspace around Los Angeles International Airport

With prices having dropped on small consumer models, drones are everywhere, used for fun and for business like land-surveying. Restricting their use creates a conundrum for regulatory, law-enforcement and intelligence agencies as they **race** to identify what is in the sky and to separate hobbyists from users with malicious intent.

Some amateur fliers have taken to challenging their piloting skills amid industrial sites and alongside borders where smuggling of people and drugs is common.

<https://www.wsj.com/articles/drones-flying-near-airports-infrastructure-prompt-u-s-action-11621533604>