UAS and SmallSat Weekly News

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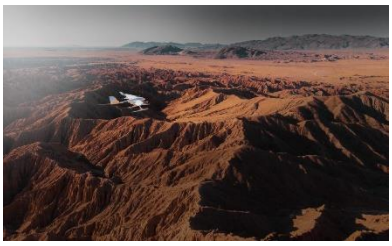
12Feb22

Wingcopter to Provide Cargo Drones for Delivery Operations in Peru Jessica Reed | February 10, 2022



Wingcopter, a German drone manufacturer, has partnered with UAV del Peru to provide and deploy its cargo drones for delivery operations in Peru. UAV del Peru expects to be one of the first companies in Latin America to make use of delivery drone technology for a range of applications including commercial and humanitarian operations.

UAV LATAM, which has more than 10 years of experience in the unmanned aerial vehicle industry, has begun discussions with affiliates in seven countries in Latin America to expand its drone delivery services beyond Peru. Wingcopter has partnered with leading business aviation specialist Synerjet which will, according to Wingcopter co-founder and CEO Tom Plümmer, provide opportunities for reaching other countries in the region. Synerjet currently has operations in Brazil, Colombia, Ecuador, Chile, Panama, and Guatemala, Plümmer told *Avionics International*.

Wingcopter 198 eVTOL drone.

An upcoming goal for Wingcopter is to achieve FAA Type Certification for its Wingcopter 198 eVTOL drone. The team is currently in the certification process. The company hopes to establish a presence on all continents, either with its own operations or via partners. Plümmer noted another of the company's aims: "We will set up delivery networks that span whole regions, allowing the instant and on-demand delivery of any kind of urgently needed goods."
https://www.aviationtoday.com/2022/02/10/wingcopter-to-provide-cargo-drones-for-delivery-operations-in-peru/

Israel Certifies Unmanned Aircraft System for Integration in Civilian Airspace Ministry of Transport and Road Safety Feb 09, 2022

JERUSALEM, Feb. 9, 2022 /PRNewswire/ -- **For the first time ever,** the Civil Aviation Authority of the State of Israel, that operates under the Israeli Ministry of Transport and Road Safety,

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has certified an Unmanned Aircraft System for civil aviation, approving it to fly in civilian airspace as any other civilian airplane and not restricting its flight to unsegregated airspace.

The receipt of the Type Certificate from the CAAI completes the compliance of Elbit Systems' **Hermes Starliner UAS** with the NATO standardization for approving UAS for integration in civilian unsegregated airspace. For safety reasons, international aviation regulations prohibit uncertified aircraft from flying in civilian airspace, limiting the operation of UAS' to unsegregated airspace, until now.

CAAI has supervised the design and manufacturing of the Hermes Starliner UAS and led a rigorous six-year certification process that included extensive ground and flight tests. The tests were conducted in compliance with air navigation rules, airworthiness and aviation standards regulated by the International Civil Aviation Organization (ICAO).
https://www.prnewswire.com/news-releases/a-step-change-in-international-aviation-israel-certifies-unmanned-aircraft-system-for-integration-in-civilian-airspace-301478861.html

Aviation Capital Group to Finance Volocopter Fleet of Aircraft for up to $1bn

Aviation Capital Group Feb 10, 2022

Aviation Capital Group LLC ("ACG"), a leading aircraft asset manager, announced today that it has entered into an agreement in principle with Volocopter, a pioneer of urban air mobility, to develop financing solutions that will assist with the sale of Volocopter's family of electric vertical take-off and landing (eVTOL) aircraft for up to $1 billion. Deliveries are expected to commence once the aircraft has been certified for commercial use by the respective civil aviation authorities. These include the European Union Aviation Safety Agency and the Federal Aviation Administration. For Volocopter customers, this agreement will offer an option and an opportunity to lease the aircraft through financing schemes, as is customary within the aviation industry. The experience and trusted services of ACG as a global aviation aircraft asset management company will provide flexibility and security in customer transactions during the lease.

"This transaction highlights ACG's ongoing commitment to reducing the environmental impact of the aviation industry and to working towards a cleaner and more sustainable future," said Tom Baker, CEO and president of ACG. "The transaction builds on the existing partnership between Volocopter and ACG's parent company, Tokyo Century, an early equity investor in

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Volocopter." https://www.asdnews.com/news/aerospace/2022/02/10/aviation-capital-group-finance-volocopter-fleet-aircraft-up-1bn

Arianespace launches 34 OneWeb satellites in first mission of 2022 Jason Rainbow — February 10, 2022

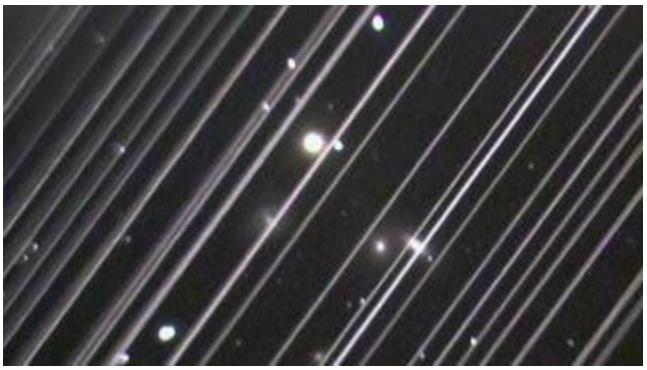
TAMPA, Fla. — Arianespace launched another batch of OneWeb satellites Feb. 10 in the launch provider's first mission of 2022.

A Soyuz rocket lifted off from the Guiana Space Center in Kourou, French Guiana, at 1:09 p.m. Eastern Standard Time, carrying 34 satellites for OneWeb's low Earth orbit broadband network. All satellites were released from the rocket's Fregat upper stage over the course of nearly four hours into a near-polar orbit at around 475 kilometers.

The satellites will raise themselves over the next few weeks to an operational altitude at around 1,200 kilometers, where they will join others to expand its network to 428 of a planned 648-strong constellation.

OneWeb's launch comes a little less than a week after a batch of Starlink satellites encountered a geomagnetic storm during their post-launch climb to their operational orbits. SpaceX said Feb. 8 that up to 80% of this batch of 49 Starlink satellites will soon reenter the atmosphere, or have already done so. https://spacenews.com/arianespace-launches-34-oneweb-satellites-in-first-mission-of-2022/

NASA is concerned about SpaceX's new generation of Starlink satellites Elizabeth Howell published 1 day ago



An astronomical image marred by trails caused by satellites of SpaceX's Starlink megaconstellation

NASA has raised concerns about SpaceX's new Starlink satellites, including an increase of the risk of collision in orbit, in a letter to the Federal Communications Commission. The five-page letter was submitted to the FCC Tuesday (Feb. 8) and was first reported in SpaceNews. The letter, which includes a separate

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one-page letter from the National Science Foundation, was sent on NASA's behalf by the National Telecommunications and Information Administration.

SpaceX submitted a proposal to the FCC to put 30,000 more Starlink internet satellites into orbit as part of a "Gen 2" Starlink system. There are currently about 1,800 operational Starlink satellites in orbit and there have already been several near-misses in orbit; one study has suggested Starlinks are responsible for half of all close encounters in low-Earth orbit. With this track record, NASA has some serious reservations about SpaceX's proposed new fleet. https://www.space.com/nasa-collision-risk-starlink

Censys Technologies and Soaring Eagle Technologies Awarded Third BVLOS Waiver February 11, 2022 News

Censys Technologies and Soaring Eagle Technologies, the leading commercial Beyond Visual Line of Sight (BVLOS) Unmanned Aerial System service provider in the US, have secured their third BVLOS waiver, resulting in more efficient tech-enabled data acquisition. The waiver covers a 12-mile distance – the longest distance ever approved by the FAA.

Over the past three years both companies have worked closely with the FAA to build a reputable safety case using Iris Automation's advanced detect-and-avoid technology system, Casia, and have completed thousands of flights.

The Soaring Eagle team plans to use the waiver for inspecting transmission power lines, enabling the remote pilot-in-command to fly three miles down range for a total of six unique miles of data.

According to the President of Soaring Eagle, Will Paden, "Soaring Eagle, Censys and Iris Automation are on a mission to help surveyors, engineers, and asset managers—including those responsible for utilities, bridges and other critical infrastructure—bridge the gap in cost effectiveness in applications of unmanned aviation. The continued expansion of BVLOS operations means data acquisition with significantly lower cost and environmental impact." https://uasweekly.com/2022/02/11/censys-technologies-and-soaring-eagle-technologies-awarded-third-bvlos-waiver/?utm_source=rss&utm_medium=rss&utm_campaign=censys-technologies-and-soaring-eagle-technologies-awarded-third-bvlos-waiver&utm_term=2022-02-11

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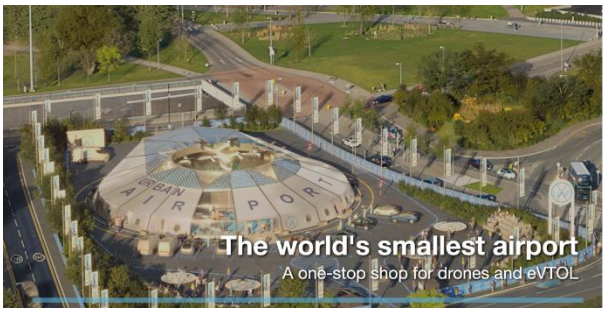
Urban-Air Ports launches first functional UK drone and eVTOL vertiport Bruce Crumley - Feb. 11th 2022



London-based Urban-Air Port announced Thursday that it had begun work on the new eVTOL and drone vertiport in the West Midlands city of Coventry. Last year it assembled and opened a delivery UAV hub that has functioned as a public education showcase demonstrating how various small and advanced air mobility services will integrate into daily life.

Selection of a mid-sized UK city in the middle of the country may seem an odd choice to assemble the first operational eVTOL vertiport. But Urban-Air Port, backing government ministries, and corporate partners like Hyundai say it makes perfect sense.

The location of the hub in a city of 400,000 people, and in proximity to train and intermodal transport links, is considered ideal for testing new drone and AAM services. Coventry is also positioned close enough to London in the south, and large northern cities like Manchester and Liverpool, to enable mid-range intra-urban eVTOL flights. The company is also working with West Midlands Police to build a network of small vertiports for its 46 drone pilots who last year flew 3,450 missions.

Last month Urban-Air Port announced plans to build 200 vertiports for eVTOL air taxi and cargo craft in 65 international cities and prepare for the rapidly approaching launch of those and other AAM services. It will be backed in that push by Hyundai's AAM division, Supernal.
https://dronedj.com/2022/02/11/urban-air-ports-launches-first-functional-uk-drone-and-evtol-vertiport/#more-76548

Shot entirely on drones, this award-winning ski film is a must-watch Ishveena Singh - Feb. 11th 2022

Named the best international short ski film of 2021 at High Five Ski Film Festival, *FLOW* captures world-class freeride skier Sam Favret's recent adventures (on empty slopes, no less!) amid COVID-19 lockdowns. The mind-blowing film is made 100% from aerial footage – using FPV drones, DJI Inspire

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2 with Zenmuse X7, and DJI Mavic 2 Pro. It showcases the majestic beauty and high-intensity action of skiing Europe's famed Chamonix-Mont-Blanc in such a grand manner that you simply must take out a few minutes to watch it now.

With no lifts to board, the team walked from the valley to the peak, climbing up to five hours through deep snow, again and again.

Filming with a ground camera, we can communicate directly and visually. When filming with a drone, the distance requires having a detailed discussion before the shooting and to liaise with a radio or phone during the action to adjust the shots. Their reward is the film you're about to see. And as you'd agree shortly, it's well worth the effort: https://dronedj.com/2022/02/11/award-winning-ski-film-dji-drones/

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Drones Played Big Role in NC Fertilizer Plant Fire Feb. 8, 2022 Firehouse.com News

The Durham Fire Department's drone team responded to help Winston-Salem firefighters monitor fire conditions after crews evacuated last week's fertilizer plant fire due to concerns of an explosion. Durham firefighters started using drones during operations over a year ago.

As the fertilizer plant fire grew, the Durham Fire Department reached out and offered their services. The drones assisted incident commanders monitoring situational awareness, fire conditions, and other incident hazards.

Durham officials emphasized the impact drones have on operations by enhancing command's ability to keep firefighters safe. Durham has a half-dozen drone-certified pilots and is working toward its goal of having 24. https://www.firehouse.com/tech-comm/drones/news/21256015/drones-played-big-role-in-winstonsalem-nc-fertilizer-plant-fire

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14Feb22

INSIDE THE EPIC SUPER BOWL DRONE LIGHT SHOW February 12, 2022 Sally French

Most drone pilots could not fly drones anywhere near Los Angeles during the afternoon of Super Bowl Sunday. But that's not to say no drones flew near the Super Bowl festivities. In fact, hundreds of drones DID fly near the Super Bowl LVI — just on Friday and Saturday ahead of the bowl game, itself. That's thanks to a series of Super Bowl drone light show viewings held in Los Angeles.

About 500 drones were used to create designs of things like a football, and the NFL logo, in what was the NFL's first-ever Super Bowl drone light show. The 10-minute aerial show was epic, with drones flying in formations spanning 600 feet wide and more than 400 feet tall, operated by 20 technicians.

And this wasn't a one-off show. In fact, Los Angeles residents and visitors were treated to multiple Super Bowl drone light show performances on Friday and Saturday night, with each night of the weekend entailing multiple viewing opportunities.

The show was held just over the Los Angeles Convention Center — which is in downtown Los Angeles — but could be viewed in a wide swatch of the city.

CBS Los Angeles put together a near video showing not just a brief moment of the performance itself, but something that drone nerds might appreciate even more, a bit of behind-the-scenes action. The end of this video from CBS Los Angeles shows the roof of the convention center, where hundreds of drones are lined up in preparation for their next performance: https://www.thedronegirl.com/2022/02/14/super-bowl-drone-light-show/

Hybrid Electric UAV from Advanced Aircraft Systems: HAMR UAVs Selected by AFWERX Miriam McNabb February 14, 2022 by DRONELIFE Staff Writer Ian M. Crosby

The United States Air Force AFWERX program has selected hybrid-electric unmanned aircraft systems developer Advanced Aircraft Company for the development of Small Unmanned Aerial Systems as part of the Small Business Innovation Research program Open Topics 21.2/B Cohort.

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In collaboration with the Air Force Research Lab and the National Security Innovation Network, AFWERX developed the SBIR Open Topics to improve upon the effectiveness and transition rate of the SBIR program.

AAC's flexible HAMR UAS uses a multi-rotor configuration with a hybrid fuel-electric propulsion system for extended endurance and multiple, simultaneous payload capabilities, and can be optimized for a wide range of defense applications and mission profiles.

"We are thrilled to be part of the SBIR program Open Topics 21.2/B Cohort and look forward to a successful collaboration with our stakeholders," said AAC Founder Bill Fredericks. "Our HAMR UAVs high-performance and efficient propulsion system, rugged aerodynamic airframe, and ease of serviceability in the field make it ideally suited for demanding military operations in the most inhospitable environments." https://dronelife.com/2022/02/14/hybrid-electric-uav-from-advanced-aircraft-systems-hamr-uavs-selected-by-afwerx/

FAA Ramps Up Small Drone Testing Russ Niles February 14, 2022

The FAA has announced the next incremental step in putting drones into the National Airspace system with a field test of Unmanned Aircraft System Traffic Management (UTM). The test will start in the next few months and will gather data on the integration of small drones operating at low altitude. "UTM includes a set of services that are complementary to, but separate from, Air Traffic Management services for manned aircraft," the agency said in a press release. "It is targeted toward small, unmanned aircraft operations in airspace, generally flying below 400 feet, and builds on current rules and capabilities that enable airspace access and authorization."

The agency and drone manufacturers will fly the drones to simulate real-world circumstances and figure out how to best manage drone operations in different environments. The goal is to build the regs and standards to allow drones to fly beyond visual line of sight of the operators. "The flight tests will examine how the latest capabilities and standards will work to support the operations in the real world." https://www.avweb.com/aviation-news/faa-ramps-up-small-drone-testing/?MailingID=830&utm_source=ActiveCampaign&utm_medium=email&utm_content=Airport+Closure+Consequences%2C+New+Russian+AWACS&utm_campaign=Airport+Closure+Consequences%2C+New+Russian+AWACS-Monday%2C+February+14%2C+2022

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Leonardo To Make Fuselage for Vertical VX4 eVTOL Charles Alcock February 11, 2022

Helicopter manufacturer Leonardo will support Vertical Aerospace in developing the fuselage for its VX4 eVTOL. Under a newly inked agreement, the Italian group will initially help to build six VX4s to be used for type certification test flights, but it could be extended to cover planned annual production of up to 2,000 of the four-passenger aircraft.

At its Grottalglie site in Italy, Leonardo's aerostructure division will design, test, manufacture, and supply the carbon fiber fuselage for the all-electric VX4. The companies said they will work together to optimize lightweight composite structures, modular design, systems integration, and structural testing for the co-development of the fuselage. Partners include Rolls-Royce, which is developing the VX4's electric propulsion system; avionics group Honeywell; aerostructures manufacturer GKN; and Solvay.

Vertical is expanding its engineering and management team as it prepares for first flight of the VX4 prototype later this year. The aircraft, which is expected to complete type certification in 2024, will have a range of more than 100 miles and fly at speeds of up to 200 mph.
https://www.ainonline.com/aviation-news/business-aviation/2022-02-11/leonardo-make-fuselage-vertical-vx4-evtol

OneWeb surpasses 400 satellites with Arianespace's first launch of the year

February 10, 2022 Stephen Clark

A Russian Soyuz rocket lifted off from French Guiana and hauled 34 new satellites into orbit for OneWeb's internet network Thursday, bringing the tally of OneWeb spacecraft launched to 428 and marking the company's fleet two-thirds complete.

OneWeb's fleet is designed to provide global low-latency, high-speed internet service, placing the London-based company alongside competitors such as SpaceX's Starlink network, Amazon's planned Kuiper system, and other small satellite "megaconstellations" in the conceptual or planning phases.

The company plans to deploy 648 spacecraft in its first-generation network, using 19 satellite deployment missions on Russian Soyuz rockets marketed and managed by Arianespace, the

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French launch service provider. The launch Thursday was the 13th of the 19 planned Soyuz missions for OneWeb. https://spaceflightnow.com/2022/02/10/oneweb-surpasses-400-satellites-with-arianespaces-first-launch-of-the-year/

Elbit Systems to Showcase Hybrid Propulsion Small Tactical UAS at Singapore Airshow 2022 February 14, 2022 News

Elbit Systems will present the Skylark™ 3 Hybrid Small Tactical Unmanned Aerial Systems (STUAS) for the first time at the Singapore Airshow 2022. It is equipped with a hybrid propulsion system, both an electric and an internal combustion engine, tripling endurance and offering up to 18 hours of operations, with no change to size or weight, significantly increasing mission effectiveness and cost efficiency.

It uses its combustion engine to fly rapidly to the Area Of Interest (AOI) and switches to the electrical engine while operating above the AOI. The twin engine architecture enables one to back up the other, providing greater reliability and safety. The significantly higher endurance of the Skylark 3 Hybrid provides forces with greater capacity to hover above AOI and requires fewer platforms to execute the same mission.

Skylark 3 Hybrid is based on the Skylark family of STUAS that have been ordered by 27 countries, to date. It has a 4.7m wingspan, a maximum takeoff weight of 50kg, service ceiling of 12,000ft and a range of 120km. https://uasweekly.com/2022/02/14/elbit-systems-to-showcase-hybrid-propulsion-small-tactical-uas-at-singapore-airshow-2022/?utm_source=rss&utm_medium=rss&utm_campaign=elbit-systems-to-showcase-hybrid-propulsion-small-tactical-uas-at-singapore-airshow-2022&utm_term=2022-02-14

Plyrotech Announces Contract Award for Large, Long-Range Unmanned Aircraft Systems February 12, 2022 News

Plymouth Rock Technologies Inc. a leader in developing unmanned technologies and detection apparatus announces it has received an order for large fixed-wing Unmanned Aircraft Systems to be used for beyond visual line of sight (BVLOS) operations. The end use for the aircraft is for long range natural resource monitoring. Initial deliveries are anticipated to take place by April 2022.

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The UAS are based on the PRT XV-L platform, with several 'client-specified' modifications. These are large all-environment UAS, designed to be deployed for land and maritime operations at BVLOS distances, capable of operating for up to 7 hours.

Unlimited global communications capability will be built-in via the latest Satellite Communication technologies, alongside enhanced military grade communications for secure, high-quality data feeds for sub sixty-mile communications.
https://uasweekly.com/2022/02/12/plyrotech-announces-contract-award-for-large-long-range-unmanned-aircraft-systems/?utm_source=rss&utm_medium=rss&utm_campaign=plyrotech-announces-contract-award-for-large-long-range-unmanned-aircraft-systems&utm_term=2022-02-14

Singapore consortium to use drones for shore-to-ship parcel delivery Ishveena Singh - Feb. 14th 2022

Singapore-based ST Engineering, Sumitomo Corporation, and Skyports are joining forces for a nine-month drone delivery pilot wherein drones will be used for shore-to-ship parcel delivery of maritime essentials.

With a goal to establish a drone delivery network capable of carrying parcel payloads up to 10kg, each consortium member will bring a different operational and technological capability to the table. ST Engineering will provide the drone technology using DroNet; Skyports will jointly conduct the Beyond Visual Line of Sight flight operations with ST Engineering; while Sumitomo Corporation will provide go-to-market support, including their own fleet of vessels.

Traditionally, boats are used to deliver maritime essentials. However, using drones can slash the response time and logistics costs significantly while speeding up turnaround for shore-to-ship delivery. The group further points out that replacing boat delivery with drones will help to reduce carbon emissions and contribute to the maritime industry's overall efforts to operate sustainably. https://dronedj.com/2022/02/14/singapore-shore-ship-drone-delivery/

Lumicopter makes confined-space inspection more accessible with DJI FPV drone Ishveena Singh - Feb. 14th 2022

Singapore-based drone solutions company Avetics Global says it's set to make confined-space inspection more accessible with an affordable new product, Lumicopter. Combining the DJI FPV drone with a custom-made protective shell and LED light, Lumicopter has been designed to fly

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in enclosed or hazardous facilities such as storage tanks, building interiors, powerplants, and ships.

While the drone camera can capture crystal clear videos of up to 4K 60 fps, a 4,000 lumens LED system makes the Lumicopter ready for low-light indoor inspections as well. It can be deployed quickly without any complex installation, can roll around tight corners, detect damage, and send a live video feed to the controlling tablet to reduce the safety risk for workers.

Additional features include a controllable single-axis camera tilt of up to 108°, reducing the need for drone maneuvering during the inspection. It has a downward vision sensor for altitude position hold and better flying stability. The makers promise signal penetration of up to three floors in a concrete stairwell (no line of sight), while safety feature such as a forward distance sensor for obstacle avoidance is also available.

What really sets Lumicopter apart from the competition is its price. The complete solution set – comprising of the drone with 10 batteries, an Android tablet, and a whole gamut of accessories – costs only $6,500. https://dronedj.com/2022/02/14/lumicopter-drone-confined-space-inspection/#more-76525

15Feb22

Urban Air Mobility Could Deliver S$4 billion Boost to Singapore Charles Alcock

February 14, 2022, 1:00 AM

Adopting urban air mobility (UAM) could generate S$4.18 billion ($3.1 billion) in accumulative benefits to the Singapore economy by 2030, according to a new report published by eVTOL aircraft developer Volocopter. The Singapore Roadmap proposes an initial network of four to six vertiports to support tourist flights over locations such as Marina Bay and Sentosa. Subsequent air taxi services using the German company's all-electric two-seater VoloCity eVTOL aircraft and the four-passenger VoloConnect model would provide flights to Changi Airport and cross-border trips to Malaysia and Singapore.

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The VoloCity, which could enter service around 2024, will fly to a range of 35 km (22 miles), while the VoloConnect would operate up to 100 km (63 miles). The company is also developing an autonomous cargo-carrying eVTOL called the VoloDrone. Volocopter intends to launch commercial services with a pilot on-board, but eventually transition to autonomous operations. https://www.ainonline.com/aviation-news/air-transport/2022-02-14/urban-air-mobility-could-deliver-s4-billion-boost-singapore

Hybrid UAV-UGV Project Completed Phoebe Grinter / 15 Feb 2022

A consortium of seven partners from the European Union has successfully completed the concept of Hybrid UAV-UGV for Efficient Relocation of Vessels (HUUVER).

The hybrid Unmanned Aerial Vehicle-Unmanned Ground Vehicle has the capability of almost all-terrain movements like flying, perching, driving, climbing, vertical take-off and landing. It was designed to perform search and rescue or patrol missions in difficult environments, with the ability of ground-based movements allowing the HUUVER to reach areas inaccessible from the air.

The HUUVER drone is the first fully integrated with the Galileo navigation system, benefiting from the authentication service and precise navigation solution.

HUUVER is an international project developed by seven organizations from five EU member states: Cervi Robotics / Dronehub (Poland), RECTANGLE (Poland), LUT University (Finland), NTT Data Spain – formerly Everis Aerospace & Defense (Spain), GINA Software (Czech Republic), BLADESCAPE (Austria) and Brimatech Services (Austria).

"Our project is the next step in the development of drone technology and showing its unlimited possibilities. The HUUVER drone combines the most useful and necessary features of a flying drone with a ride-on drone, and the transition between modes is a continuous motion," said Jakub Węglarz, project manager from Cervi Robotics / Dronehub, the leader of the project. https://www.aviationtoday.com/2022/02/14/verizon-5g-enables-near-real-time-object-detection-for-drones/

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The project has received funding from the European Union's Horizon 2020 research and innovation program, European GNSS Agency. At the turn of January and February 2022, the project was successfully presented and officially completed.

Verizon 5G Enables Near-Real-Time Object Detection for Drones

Jessica Reed February 14, 2022

A collaboration between Easy Aerial, Verizon, and Amazon Web Services has demonstrated the use of Verizon 5G Edge and AWS Wavelength to enable near-real-time object detection for drones. The Easy Guard ground station, one of Easy Aerial's product offerings, is described by the company as a "smart" aircraft hangar for takeoff, landing, and charging, and this "drone-in-a-box" solution was selected for exploring 5G integration. Easy Aerial first considered integrating 5G into the Easy Guard at Verizon and Newlab's Brooklyn, New York-based 5G Studio.

According to the collaboration announcement from Verizon, the integration of 5G and mobile edge computing for drone operations resulted in savings of about 10% in drone costs and flight time that was increased by about 40%.

Stamatovski explained that "typically, we would have our AI for people recognition and car detection, and we would run it on a local computer, but we said, 'Since there's limited space and limited power for it, let's see if we can put that all on Amazon Edge.'" It was also important to have low latency for object detection so that processing would happen in real-time or near real-time.

Stamatovski noted that Easy Aerial benefited greatly from using the high bandwidth for unmanned aerial vehicles (UAV) that Verizon 5G Edge and AWS Wavelength can provide. By processing data at the edge of the network—in near-real-time—"it shifts the paradigm on what is possible to achieve with airborne sensors." https://www.aviationtoday.com/2022/02/14/verizon-5g-enables-near-real-time-object-detection-for-drones/

Seletar Aerospace Park to Support Advanced Air Mobility Growth

February 15, 2022 News

Seletar Aerospace Park, Singapore's centerpiece for the aerospace sector has been identified as a future Advanced Air Mobility (AAM) hub with an enabling ecosystem for the industry. Today, JTC, the master planner for the park, and the Singapore Economic

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Development Board announced signing two Memorandums of Understanding with Skyports and Volocopter to explore ways the aerospace park can support the growth of the emerging AAM sector in Singapore.

The MOU with Skyports will draw on the vertiport developer's experience of building take-off and landing infrastructure for air taxis to explore ideas for the future development of the park. This includes an air taxi vertiport terminal, airside facilities and hangarage as well as facilities to support research and development and pilot training.

The MOU with urban air mobility pioneer Volocopter will study the feasibility of developing facilities and resources to carry out manufacturing and maintenance, repair, and overhaul activities. https://uasweekly.com/2022/02/15/seletar-aerospace-park-to-support-advanced-air-mobility-growth/?utm_source=rss&utm_medium=rss&utm_campaign=seletar-aerospace-park-to-support-advanced-air-mobility-growth&utm_term=2022-02-15

Odys Aviation raising VTOL plane development funds for longer-range AAM flights Bruce Crumley - Feb. 15th 2022

Los Angeles-area developer of hybrid-electric vertical takeoff and landing aircraft Odys Aviation has launched a $12.4 million seed funding round to accelerate work on its innovative longer-haul advanced air mobility (AAM) aircraft and its anticipated type certification in 2026.

A Y Combinator S21 company with $13.7M in total funding, Odys Aviation is looking to nearly double the finances it's been using to bring the plane to prototype demonstration stage – a goal it expects to achieve later this year. Odys is looking to produce VTOL craft that fly longer AAM hauls between cities – permitting operators to cover well over half of all US domestic routes.

The nine-passenger vehicle is intended to make regional travel simpler, faster, cheaper, and far less polluting than current aerial or ground options. Once in flight, the craft will have a maximum speed of 345 mph, range of 1,000 miles, and cruise altitude of 30,000 ft. That velocity and the relatively large passenger load are tailored to the needs of high-volume air transport operators aiming to fly clients on some of the world's busiest travel corridors in nearly half the time – and at competitive prices – compared to existing options.
https://dronedj.com/2022/02/15/odys-aviation-raising-vtol-plane-development-funds-for-longer-range-aam-flights/#more-76678

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16Feb22

Researchers ask industry to develop laser weapons that take down unmanned aircraft John Keller Feb. 14, 2022

ARLINGTON, Va. – U.S. military researchers are asking industry to develop affordable high-energy laser sources for future laser weapons that can destroy or disable enemy unmanned aerial vehicles.

Officials of the U.S. Defense Advanced Research Projects Agency in Arlington, Va., issued a broad agency announcement late last month for the Modular Efficient Laser Technology (MELT) program.

MELT seeks to develop a compact, scalable, actively coherently beam combined semiconductor laser source with excellent beam quality to create a mass-producible, low size, weight, and power scalable laser source. MELT aims to capitalize on technologies such as semiconductor fabrication techniques, coherent beam combining, photonic integration, and 3D integration and packaging. https://www.militaryaerospace.com/power/article/14233732/laser-weapons-unmanned-affordable?utm_source=MAE%20Weekly&utm_medium=email&utm_campaign=CPS220215020&o_eid=3090G6152045F2X&rdx.ident%5Bpull%5D=omeda%7C3090G6152045F2X&oly_enc_id=3090G6152045F2X

Joby's New ANA, SK Telecom Partnerships Will Introduce Air Taxis in Japan and South Korea Jessica Reed | February 15, 2022

This week, Joby Aviation and ANA HOLDINGS—parent company of All Nippon Airways—announced their joint efforts to establish aerial ridesharing services in Japan. The collaboration includes infrastructure development, air traffic management, pilot training, and meeting regulatory requirements to begin operations with Joby's electric vertical take-off and landing vehicle. Toyota Motor Corporation will join the efforts to explore integration with ground transportation.

ANA, the largest airline in Japan, has operated for 70 years and will bring significant operational experience to this partnership. Koji Shibata, Representative Director and Executive Vice

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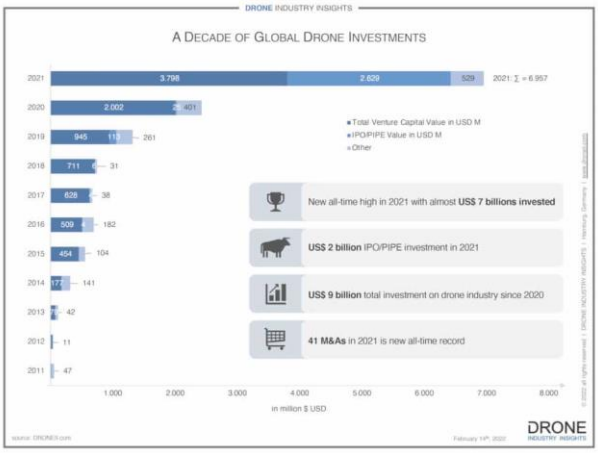
Joby's all-electric eVTOL will deliver emissions-free air taxi services with a low noise profile for journeys of up to 150 miles. The vehicle's top speed is 200 mph, meaning that the 31-mile trip from Osaka Station to Kansai International Airport, which would take an hour by car, could be completed in less than 15 minutes in Joby's eVTOL.
https://www.aviationtoday.com/2022/02/15/jobys-new-partnerships-will-introduce-air-taxis-in-japan-and-south-korea/

DRONE INVESTMENTS CONTINUE TO BREAK RECORDS ED ALVARADO FEBRUARY 14, 2022

Another year has gone by, and drone investments have once again reached new heights. The years 2020 and 2021 brought recessions and uncertainty for various industries thanks to the pandemic, but they have also provided a chance for investors to put their money into the future. The latest edition of our annual Drone Investments Database provides the latest information on these transactions, and here are some of the highlights.



The Value of Drone Investments Doubles

In 2021, we registered 199 investment deals involving a drone company. These deals amounted to a total drone investment value of almost US$7 billion. If we compare this to the previous year (2020: US$2.4 billion), it means that the total amount of investment once again *doubled* from the previous year for the second year in a row and this year it almost tripled. Within this record-breaking amount, the value of venture capital investment was almost US$4 billion, and the amount can also be broken down by drone industry segment as follows.

Drone Companies working on hardware received US$ 5 billion in investment, which also doubled compared to last year. The reason for this was yet another year of excitement and investing into passenger drone companies. These passenger drones received the highest amount of investment (US$4 billion, another doubling from last year) in comparison to the US$ 1 billion of all other drone hardware companies combined. Drone software companies received US$ 639 million, where investment on counter drones decreased compared to last year and investment on UTM companies increased to US$ 38 million (from US$13 million last year).

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https://droneii.com/drone-investments-in-2021-break-records?utm_source=email&utm_medium=newsletter&utm_campaign=release-invest-data-2022&utm_content=read-blog&utm_term=continue-reading-button&goal=0_8e282c8de0-51ebdbde8b-261886717&mc_cid=51ebdbde8b&mc_eid=857447fe29

LA startup snags $200 million in funding to boost counter-drone tech Ishveena Singh - Feb. 16th 2022

The company says it will use the fresh cash infusion to accelerate the development of its government product line that is dedicated to destroying critical electronic components in drones. At the same time, Epirus also hopes to make inroads into new commercial markets such as keeping fans safe at mass gatherings like Sunday's NFL Super Bowl, protecting critical infrastructure, and managing airport safety.

The news of Epirus' Series C funding comes just one day after the company launched its latest product: a drone-mountable high-power microwave pod, Leonidas, that can be used to fry other drones *(pictured above)*.

With a valuation of $1.35 billion, Epirus has raised $287 million to date.

While announcing the new funding round, Leigh Madden, the CEO at Epirus, was quick to point out that the kind of money being poured into his startup and its associated valuation were "clear signals" of the growing demand for counter-electronics technology.
https://dronedj.com/2022/02/16/epirus-200-million-counter-drone-funding/

17Feb22

AirAsia Makes Plans for eVTOL Air Taxi Services Charles Alcock February 16, 2022

AirAsia plans to lease at least 100 of Vertical Aerospace's VX4 eVTOL aircraft and deploy them for urban air mobility services in Southeast Asian cities. Under a non-binding memorandum of understanding signed on February 16 during the Singapore Airshow, the Malaysia-based airline will take the aircraft from a batch of 500 units ordered by leasing group Avolon in June 2021.

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Through Avolon's investment and innovation affiliate Avolon-e, the companies say, they will work together to launch commercial operations of the four-passenger eVTOL models, with passengers booking flights using the AirAsia app. They are to form a working group to pursue local approvals for the aircraft, conduct market research, and evaluate infrastructure requirements.

Last year, Ireland-based Avolon placed another 350 of the aircraft—which it expects to add to its portfolio in 2025—with Japan Air Lines and Brazilian carriers Gol and Grupo Comporte. The aircraft, which is set to complete type certification in 2024, is expected to have a range of 100 miles and a top speed of 200 mph. Other scheduled operators for UK-based Vertical's aircraft, including Virgin Atlantic, American Airlines, and Iberojet, have also placed provisional orders, as have Japanese investment group Marubeni and helicopter operator Bristow. https://www.ainonline.com/aviation-news/air-transport/2022-02-16/airasia-makes-plans-evtol-air-taxi-services

Bell Receives Market Research Investment for U.S. DoD High-Speed VTOL Capabilities February 17, 2022 Military | News

Bell Textron Inc. today announced its advancement to the next phase of the AFWERX High-Speed Vertical Take-Off and Landing (HSVTOL) Concept Challenge, a crowdsourcing effort for the United States Air Force and United States Special Operations Command. Bell is one of 11 companies from more than 200 challenge entrants selected to receive market research investments that enable optimal agility in austere environments.

Bell's HSVTOL vehicles blend the hover capability of a helicopter with the speed, range, and survivability features of fighter aircraft. This family of aircraft concepts is designed to support a range of missions, including personnel recovery, autonomous ISR/Strike, and tactical mobility with low downwash hover capability and jet-like speeds of more than 400 kts.

Bell's concepts are envisioned as part of a broader HSVTOL mission system framework that provides the next generation of speed, range, and survivability. It emerged as a top-tier entrant in the HSVTOL Concept Challenge by meeting rigorous evaluation criteria focused on technical merit, reliability, and scalability. https://uasweekly.com/2022/02/17/bell-receives-market-research-investment-to-advance-u-s-dod-high-speed-vtol-

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capabilities/?utm_source=rss&utm_medium=rss&utm_campaign=bell-receives-market-research-investment-to-advance-u-s-dod-high-speed-vtol-capabilities&utm_term=2022-02-17

AutoFlight's Prosperity I eVTOL air taxi passes transition test [Video] Bruce Crumley - Feb. 17th 2022

Shanghai-based air taxi company AutoFlight has released a video of its Prosperity I electric takeoff and landing (eVTOL) craft completing its first proof of concept test flight involving vertical-to-horizontal transitioning.

Designed for use as an eVTOL air taxi, Prosperity I successfully completed its first-ever live transitioning during a test in China's JiangSu province. The trial took place in January, with the craft reaching an altitude of 150 meters and speed of 123 mph. Slated to enter service in 2025, the piloted plane will carry three passengers at 200 mph over a 250 km range.

The proof of concept test required eight rotors to lift the 3,307-pound vehicle aloft. Once it reached an altitude of 150 meters and an airspeed between 100 and 110 mph, the fixed wing provided sufficient lift for the top rotors to stop spinning while the propellers on the rear transitioned the aircraft into horizontal motion. The project is backed by a $100 million investment by Team Global. https://dronedj.com/2022/02/17/autoflights-prosperity-i-evtol-air-taxi-passes-transition-test-video/#more-76781

18Feb22

Sony Cameras on Drones Enable Engineering-Grade Data: The Skyfish Solution Miriam McNabb February 17, 2022

In a new integration deal, U.S.-manufacturer Skyfish will leverage Sony cameras on drones to acheive engineering-grade digital twins of large infrastructure.

The partnership is a "technical integration with Sony Electronics' Alpha series mirrorless cameras[1], to deliver high-quality data capture and drone-enabled photogrammetry – the science of leveraging photography,

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proprietary algorithms, and accurate metadata to create precise 3D models or digital twins of large infrastructure," says a Skyfish press release.

Skyfish's drones are designed for precise engineering. Skyfish 3D infrastructure models are measurable and accurate to within 1/32 of an inch. Engineering-grade photogrammetry cases include 3D modeling for precision inspection, measurement and analysis of physical features including cellular towers, bridges and roadways, wind turbines, airports, power lines and energy infrastructure, and specialized land use management. Sony's cameras and Skyfish's autonomous drone enable the data capture needed to achieve these results.
https://dronelife.com/2022/02/17/sony-cameras-on-drones-enable-engineering-grade-data-the-skyfish-solution/

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