



UAS and SmallSat Weekly News

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Aviation Week Forecasts 1,000 eVTOL Deliveries By 2030 Daniel Williams June 16, 2023



The Aviation Week Network's fleet data team predicts slightly more than 1,000 deliveries of electric vertical--takeoff-and-landing aircraft by 2030, presenting a conservative outlook for advanced air mobility compared to more optimistic forecasts commissioned by the industry.

More than 10,000 electric vertical-takeoff-and-landing (eVTOL) vehicle deliveries are expected by 2040, according to the Aviation Week Network forecast, and almost 30,000 by 2050. Accounting for aircraft retirements, the in-service fleet would comprise approximately 19,000 aircraft by 2050, assuming an initial eVTOL lifespan of five years, extending to 10-plus years by the end of the forecast period in 2050.

Aviation Week's projections are more conservative than those of forecasts published by industry groups and analysts. Embraer spinoff Eve Air Mobility, for example, forecasts delivery of nearly 100,000 eVTOLs by 2040, while consultancy Roland Berger expects close to 50,000. <https://aviationweek.com/shownews/paris-air-show/aviation-week-forecasts-1000-evtol-deliveries-2030>

EASA and Brazil's ANAC partner on air taxi certification Ishveena Singh | Jun 16 2023



With the recent increase in activities related to advanced air mobility using electric vertical takeoff and landing (eVTOL) aircraft to move people and cargo between places, national regulators are also finding ways to coordinate a safe and harmonized introduction of new technologies in the civil aviation system. The latest

development in this direction comes from the European Union Aviation Safety Agency (EASA).

EASA says it will work closely with ANAC, the national civil aviation agency of Brazil, to build the path toward the certification of air taxis and cargo drones. This [agreement](#) is important because these two agencies are the primary certification authorities for some of the leading air taxi developers including Brazil's Eve Mobility and Germany's Lilium and Volocopter.



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Naturally, both EASA and ANAC have a common desire to balance aviation safety with environmental quality as well as technological developments in aviation services. And as such, they want to cooperate on the harmonization of policies, procedures, and practices related to the certification of innovative eVTOL aircraft.

More specifically, both sides intend to maintain recurrent communication at a technical level with the purpose of sharing experiences and leveraging knowledge related to the certification of air taxis and cargo drones. This will include joint participation and alignment in international technical groups involved with the development of standards applicable to eVTOL aircraft, eventually leading to the adoption of common or aligned technical standards.

<https://dronedj.com/2023/06/16/easa-anac-air-taxi-certification/#more-94063>

Drone Delivery Canada gets BVLOS approval for medical flights [Bruce Crumley](#) | Jun 16 2023



Aerial transport company [Drone Delivery Canada](#) has added new capacities to its growing array of UAV activities by obtaining approval from regulators for [beyond visual line of sight](#) (BVLOS) flights of dangerous goods as part of its Care by Air program.

[Drone Delivery Canada said](#) it had gotten the [BVLOS authorization](#) from Transport Canada for a specialized Care by Air corridor, through which it provides aerial services to medical and healthcare clients.

Under the [BVLOS approval](#), Drone Delivery Canada will fly medical radioisotopes via UAV – a **first** in [Canada](#) – across a 13.4-kilometer route as part of its Care by Air project. **Other partners** in that program include McMaster University, DSV Canada Inc., Air Canada Cargo, Halton Healthcare, and the Oakville Trafalgar Hospital.

The BVLOS authorization, [Drone Delivery Canada](#) said, was granted in recognition of the company's "cutting-edge technology, rigorous safety standards, and commitment to advancing the field of drone logistics." The approval covers its Care by Air operation in the Golden Horseshoe area of southern Ontario, not far from the company's Toronto headquarters. <https://dronedj.com/2023/06/16/drone-delivery-canada-gets-bvlos-approval-for-medical-flights/>



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Transforming Mining Operations with Drones: Strayos Partners with Quantum Systems Miriam McNabb June 16, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Mining Intelligence software leader [Strayos](#) and aerial intelligence company [Quantum-Systems GmbH](#) have entered a strategic partnership to revolutionize mining operations via advanced technology and automation. The partnership will leverage the advanced capabilities of both companies, merging Strayos' expertise in artificial intelligence and data analytics with

Quantum Systems' trailblazing UAV technology. This collaboration will enable mining companies to extract greater value from data, improving the safety and productivity of operations.

Quantum Systems' electric vertical take-off and landing (eVTOL) systems possess unmatched endurance and accessibility. Its drones feature six different fully integrated cameras, including RGB, oblique, multispectral and a LiDAR scanner, allowing for precise data collection and aerial mapping. Designed to operate even in the most challenging environments, Quantum Systems' UAVs provide mining companies with accurate and up-to-date aerial intelligence to enhance decision-making. <https://dronelife.com/2023/06/16/transforming-mining-operations-with-drones-strayos-partners-with-quantum-systems/>

FAA approves AviSight waiver for BVLOS pipeline inspections with Iris

Automation June 19, 2023 Jenny Beechener



Critical infrastructure inspection company AviSight utilizing Remotely Piloted Aircraft Systems (RPAS) technology, has secured a waiver to Part 107.31 for the inspection of Shell Pipeline's Falcon Pipeline subsidiary in southwestern Pennsylvania. The waiver was achieved with Iris Automation's on-board Casia X

detect and avoid solution, enabling Beyond Visual Line of Sight (BVLOS) operations without the use of visual observers.



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The pipeline is approximately 97 miles long and right-of-way surveillance is required bi-weekly. Traditionally, the longer right-of-way patrols have been accomplished with manned aircraft, introducing an associated fatality risk. To mitigate the aviation risk, SPLC awarded the aerial patrol contract to the RPAS operator Avisight in 2020. Additionally, these RPAS patrols also leverage the latest developments in digitalization. The recent advances in image analytics and change detection require higher definition imagery generally not available from the typical patrol aircraft. <https://www.unmannedairspace.info/latest-news-and-information/faa-approves-avisight-waiver-for-bvlos-pipeline-inspections-with-iris-automation-casia-x-daa-solution/>

Embry-Riddle study highlights risk of sUAS collisions, recommends mitigation measures June 19, 2023 Jenny Beechener



Embry-Riddle Aeronautical University research leads Ryan J Wallace, Scott J Winter, Stephen Rice, David Kovar, and Sang-A Less have released a [study](#) into small uncrewed aircraft systems (sUAS) near mid-air collisions with manned aircraft.

By 2025, the Federal Aviation Administration (FAA) predicts the sUAS fleet to number nearly 2.4 million units. As sUAS operations expand within the National Airspace System (NAS), so does the probability of near mid-air collisions (NMACs) between sUAS and aircraft.

The purpose of this study was to examine objective sUAS and aircraft telemetry data collected using a DJI Aeroscope sensor and Automatic Dependent Surveillance-Broadcast (ADS-B)/Mode S messages throughout 36 months near a major US airport. Recommendations are provided to mitigate risks associated with encounter trends to further enhance safety within the NAS.

<https://www.unmannedairspace.info/latest-news-and-information/embry-riddle-study-highlights-risk-of-suas-collisions-recommends-mitigation-measures/>

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Colorized LiDAR mapping with long-range DeltaQuad Evo drone [Ishveena Singh](#) | Jun 19 2023

Dutch drone maker DeltaQuad says its latest Evo aircraft with a flight time of up to 2.5 hours is now integrated with a combined Yellowscan LiDAR and RGB system. As such, the fixed-wing vertical take-off and landing (VTOL) drone can offer colorized LiDAR mapping for up to 500 hectares in a single flight.



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The integration of an RGB sensor enables the colorization of georeferenced LiDAR points. This improves both the usability of the drone data and the identification of intricate details.

Most quadcopters that can carry both LiDAR & RGB systems deliver flight times of up to 30 minutes, which is good to cover around 100 ha. At the same time, there are fixed-wing VTOLs available in the market today that can carry LiDAR systems covering up to 400 ha. But since they don't have an RGB sensor integrated, they have to conduct the same flight twice to capture both kinds of data.

DeltaQuad is striving to overcome exactly these limitations with its [long-range Evo drone](#). Further, the universal payload bay of the aircraft has a "Click & Go" mechanism with automated payload recognition, so operators can build their own multipurpose sensor ecosystem.

According to the company, the Evo drone can carry payloads of up to 3 kg, with the opportunity to combine two different sensors during one flight (RGB, Multispectral, Thermal, ISR, or any customized sensor). Users can also swap one of these sensors with an auxiliary battery to reach up to **4.5 hours of flight time**. <https://dronedj.com/2023/06/19/deltaquad-evo-lidar-mapping-drone/>

Firestorm Labs prepares launch of modular 3D-printed drones [Bruce Crumley](#) | Jun 19 2023



In what appears to be an example of new thinking arising at the right time to meet to shifting aerial demands – especially under the influence of [Ukraine's defense](#) of the Russian invasion – San Diego-based company Firestorm Labs is preparing to offer entirely modular drones whose 3D-printing manufacturing process aims to offer considerable flexibility and speed of production in fulfilling defense and security users' needs. The company's approach is based on a computer-designed, 3D-printed manufacturing process.

Firestorm Labs says its system allows customers to modify drone configuration and operation, and thereby enable a wide array of mission types, from the same company menu. Once specifics of UAV performance have been determined, components are quickly created by 3D printers, and cemented together by a flight computer working with artificial intelligence and machine learning applications. <https://dronedj.com/2023/06/19/firestorm-labs-prepares-launch-of-modular-3d-printed-drones/>



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Illinois law OKs police drone crowd control, bans facial recognition Bruce

Crumley | Jun 19 2023



A new law in [Illinois](#) gives police the authority to [deploy drones](#) in expanded scenarios – for notably monitoring crowds during large public events – but prevents law enforcement from using any facial recognition tech during aerial operations, apart from critical situations like potential terror plotting.

Illinois governor JB Pritzker signed [bill HB 3902](#) into law over the weekend, immediately broadening [police drone](#) authorization for a range of activities – including keeping watch of crowds during parades, marches, and other large public gatherings. Concerns over privacy and civil liberty rights, however, led to the statute's ban on facial recognition use in those missions, or surveillance of political or protest marches protected by the First Amendment. Moves to pass the new law began in reaction to last summer's deadly July 4 mass shooting in the Chicago suburb of [Highland Park](#) .

The logic behind it is that by giving law enforcement the freedom to monitor large public gatherings [using drones, police](#) will be capable of identifying potential shooters before they can act, or be able to localize and stop them if they begin firing first.

<https://dronedj.com/2023/06/19/illinois-law-oks-police-drone-crowd-control-bans-facial-recognition/>

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Japan's SkyDrive Will Leverage Suzuki's Manufacturing to Build eVTOL

Aircraft Miriam McNabb June 19, 2023



eVTOL and drone manufacturers around the world have run up against the realities of cost-effective manufacturing at scale. At this week's Paris Air Show, Japan's SkyDrive announced their solution.

SkyDrive has partnered with Suzuki Motor Corporation to leverage Suzuki's production facilities and expertise to manufacture Skydrive eVTOL. Skydrive will establish a wholly owned manufacturing subsidiary. With Suzuki, the subsidiary will begin building the SkyDrive eVTOL by spring of 2024 in a Suzuki production facility in Shizuoka



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Prefecture, Japan. Suzuki will also assist with staffing and other preparations in the manufacturing facility.

SkyDrive has multiple models of eVTOL available: the aircraft to be built at the Suzuki facility is a 3 seat, electric lightweight vertical takeoff and landing vehicle.

<https://dronelife.com/2023/06/19/skydrive-will-leverage-suzukis-manufacturing-to-build-evtol-aircraft/>

Skyportz Works to Make Investment in Vertiports Less Risky Miriam McNabb June 19, 2023



Right now, there is no business model for vertiports. It's too soon to get government approvals to use them for their intended purpose as air taxi landing sites. Skyportz has tackled this problem head on – lowering the cost and risk of investment by providing a relatively inexpensive solution. The buildings are small, attractive, and can be repurposed while investors wait for regulations to catch up with air taxi technology. The Vertiport-in-a-Box™ products

range in price from €99,000 – €235,000 plus fit out.

“Everyone can sense this is going to be big but no-one wants to get burnt by over capitalizing too early. What the property industry needs is an entry level step to get a toe hold into the ecosystem. They want something that is small, fixed price and able to be easily installed.”

“With the Vertiport-in-a-Box™ property owners can move fast to show their investors and tenants that they are ready to be part of this revolution – and the vertiport building can be used for other purposes such as a bar or cafe while we wait for aircraft to get certified,” said Newton-Brown.

Skyportz has partnered on the construction and activation of the modular vertiports with a host of specialist companies that will provide weather data, air traffic management systems, booking services, battery charging, last mile logistics and aviation operations.

<https://dronelife.com/2023/06/19/for-air-taxis-to-take-off-they-need-somewhere-to-land-skyportz-works-to-make-investment-in-vertiports-less-risky/>



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FAST is to provide intelligence, surveillance, reconnaissance, and precision strike

John Keller June 9, 2023



ARLINGTON, Va. – U.S. Navy anti-air warfare experts needed an advanced unmanned aircraft for [reconnaissance and strike](#) that can be launched from unmanned submarines and surface vessels. They found their solution from Raytheon Technologies Corp.

Officials of the Office of Naval Research in Arlington, Va., announced a \$146.7 contract last month to the Raytheon Missiles & Defense segment in Tucson, Ariz., for the Future Advanced Strike (FAST) project

The Coyote is a small, expendable, and tube-launched UAV that can be deployed from the ground, air, or surface warships. It can operate individually or can be networked with other Coyote UAVs in [swarming](#) operations for surveillance, electronic warfare, and strike missions.

The system will operate for as long as **one hour**, and can carry out surveillance imagery, enhanced targeting, near real-time damage assessment, and reduced threat to manned aircraft missions.

The U.S. Army has selected the Coyote for near-term counter-unmanned systems with an advanced seeker and warhead. In 2016 demonstrations on land and at sea, more than **two dozen** Coyote systems launched in a swarm and moved in formation, demonstrating the effectiveness of **autonomous networking**.

[https://www.militaryaerospace.com/unmanned/article/14294961/swarming-unmanned-reconnaissance-and-strike?utm_source=MAE+Unmanned+Vehicle&utm_medium=email&utm_campaign=CPS230616014&oid=2872A0273056D7W&rdx.ident\[pull\]=omeda|2872A0273056D7W&oly_enc_id=2872A0273056D7W](https://www.militaryaerospace.com/unmanned/article/14294961/swarming-unmanned-reconnaissance-and-strike?utm_source=MAE+Unmanned+Vehicle&utm_medium=email&utm_campaign=CPS230616014&oid=2872A0273056D7W&rdx.ident[pull]=omeda|2872A0273056D7W&oly_enc_id=2872A0273056D7W)

Uncrewed Aerial Drones Take on Industrial Cargo Delivery June 20, 2023

Because of the nature of industrial applications, especially energy assets that may be remote, [drone cargo delivery](#) has been a big topic of discussion. How much can they carry? What's allowed in the airspace? How long can they travel?

Dronamics, the world's first cargo drone airline, successfully completed the [first flight of its flagship aircraft](#), the Black Swan, at Balchik airport in Bulgaria, paving the way for uncrewed aerial deliveries.



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Elroy Air, which is working to develop a [vertical take-off and landing \(VTOL\)](#) aerial logistics system, demonstrated the autonomous ground navigation and cargo-handling systems of its Chaparral aircraft at Travis Air Force Base.

RigiTech and Spright are partnering up to deploy the [Eiger delivery system](#) and establish new drone delivery networks for healthcare clients—first in Europe and then worldwide.

Wingcopter got a [€40 million investment](#) from the European Investment Bank to ramp up production and deployment of its Wingcopter 198, which focuses on last-mile delivery.

Velos Rotors, with its Velos V3 UAV helicopter used for cargo delivery and other missions, [closed a \\$2 million investment](#) from Marathon Venture Capital.

Industrial enterprises are keeping their eyes to the sky with **autonomous drone cargo delivery** advancements, which are poised to revolutionize logistics.

https://innovateenergynow.com/resources/uncrewed-aerial-drones-take-on-industrial-cargo-delivery?utm_campaign=Energy%20Drone%20%26%20Robotics%20Coalition%20Content&utm_medium=email&_hsmt=263246724&_hsenc=p2ANqtz-8c8abpXKrXJly9X5ZyZQKbrk5FxmMSxt8Ouwlbm5k23xP7MTGEw2zp5B4yEad0hUnWAc1VjA_dbeol9BS5ZApwsfCWQQ&utm_content=263246724&utm_source=hs_email

Partnership to Launch Hydrogen-Electric Cargo UAS Joe Macey / 20 Jun 2023



[H3 Dynamics](#) has partnered with EOS Technologie, a French manufacturer of electric fixed-wing unmanned aircraft systems (UAS), to introduce two new hydrogen-electric cargo UAS platforms.

The partnership between EOS and H3 brings green innovation into the aerial cargo landscape. By combining expertise, innovative technologies, and commitment to sustainability, the companies aim to set new industry standards and propel the aviation sector towards a more environmentally conscious future.



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At the 2023 Paris Air Show, EOS and H3 will showcase two hydrogen-electric cargo UAS capable of transporting **30 to 100kg** of goods over extended flights and significant distances. This is made possible by fusing H3 Dynamics lightweight hydrogen-electric systems with custom-fit aerodynamic designs. <https://www.unmannedsystemstechnology.com/2023/06/partnership-to-launch-hydrogen-electric-cargo-uas/>

Voliro partners with MFE to transform inspection processes with new drone Cat Vitale June 14, 2023



The drone's skills, force and torque allow it to manoeuvre in any orientation, height or position.

Swiss-based robotic inspection and maintenance solutions company Voliro has partnered with MFE Inspection Solutions to launch the Voliro T drone.

The Voliro T, with semi-autonomous flying modes and pilot assistance, offers safe and easy navigation even in GPS-denied environments, making it ideal for close proximity structural inspections.

MFE sUAS product line manager Cody Menchaca shared his enthusiasm about the partnership and how it can drive innovation in the inspection industry. "The Voliro T drone is truly an exceptional addition to our arsenal of external inspection equipment. This collaboration reaffirms our unyielding commitment to drive innovation and equip our customers with the most advanced technology in the inspection industry."

According to [GlobalData estimates](#), the global drone market was worth \$15.2bn in 2020 and will reach \$89.6bn by 2030, demonstrating [demand in the uncrewed aviation sector is advancing rapidly](#), allowing the construction and agriculture sectors to lead commercial drone markets over the next ten years. https://www.airport-technology.com/news/voliro-partners-with-mfe-to-transform-inspection-processes-with-new-drone/?utm_campaign=Energy%20Drone%20%26%20Robotics%20Coalition%20Content&utm_medium=email&_hsmt=263246724&_hsenc=p2ANqtz-8L95y4bSbENDcohHzK711A7gX_3A2J1iE4fOKRNFx4RvTfJxpRn1P8aNtWPefwKvHsvG_GwM9JK8EueVBO6FuYRkplQ&utm_content=263246724&utm_source=hs_email#catfish

Strix2100 universal drone docking station rolls out from Ohio [Ishveena Singh](#) | Jun 20 2023



It looks like Spright, the drone services division of air medical service provider Air Methods, is set to receive what is being called **the only universal and fully autonomous** drone docking station in the world. Israel-based StrixDrones tells *DroneDJ* that the first units of its highly advanced Strix2100 DroneDock are now rolling off the assembly line in Dayton, Ohio.

[StrixDrones](#) announced the opening of its US manufacturing facility a little over a year ago. The drone tech company had been awarded a contract by [Air Methods](#), which was looking to build the only bi-directional, drone-based, healthcare-specific delivery network across the United States and beyond. The Israeli company then roped in local material suppliers such as RAM Precision Industries and NCT Technologies Group as subcontractors.

Niv Aharoni, founder and CEO of StrixDrones, explains that, unlike other docking systems, the customizable DroneDock is the only product in the market with a universal, modular-designed landing pad enabling any drone, including eVTOL, from any manufacturer to land without special adjustments. <https://dronedj.com/2023/06/20/strix-universal-drone-docking-station/>

Volocopter adds emergency medical response to diversifying air taxi uses [Bruce Crumley](#) | Jun 20 2023



Urban air mobility startup [Volocopter](#) is finding additional ways to expand uses for its battery-powered craft beyond its principal [air taxi](#) services, most recently through a new deal concluded with fellow German organization ADAC Luftrettung to deploy the planes in [emergency medical response](#).

[Volocopter](#) made the announcement amid opening activities of the 2023 Paris Air Show. It said the agreement calls for ADAC Luftrettung to purchase two Volocopter VoloCity [air taxis](#), and carries an option to buy another **150**. The initial pair will be used to test ways the next-generation planes can be deployed in future [emergency medical](#) and rescue operations.



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ADAC Luftrettung, one of the largest [first responder](#) organizations in Europe, has worked with Volocopter on potential deployment of its nominal air taxis for emergency [medical deployment](#) since 2018. It initially put in a reservation for the first two craft in 2020, and this week confirmed those as hard purchases while putting in an option for the additional 150 aircraft.

[Volocopter said](#) plans are for ADAC Luftrettung to begin testing the emergency medical use sometime next year, when VoloCity is expected to receive European Union Aviation Safety Agency [certification](#). <https://dronedj.com/2023/06/20/volocopter-adds-emergency-medical-response-to-diversifying-air-taxi-uses/#more-94138>

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WingXpand Wins U.S. AirForce Contract: the 7ft Backpackable Drone [Miriam](#)

[McNabb](#) June 20, 2023



[WingXpand](#) wins 7-figure U.S. AirForce contract to ruggedize 7ft backpackable drone, and develop fire-spotting software.

WingXpand's unique feature is described in its name. The wings on what appear to be a fixed wing drone literally expand out to 7 feet from a form factor small enough to be carried in a

backpack. The design offers major benefits, providing the portability of a quad with the flight endurance of a fixed wing. Now, the U.S. Air Force has granted WingXpand a contract "for the customization and ruggedization of its unique 7ft backpackable aircraft," says a company press release.

As wildfire season comes earlier and earlier to North America, government and state agencies are seeking new solutions for managing fires. The AirForce has contracted WingXpand to upgrade their aircraft to deal with more significant weather conditions and to integrate advanced fire spotting software. "This notable contract underscores WingXpand's pioneering role in the field of aerial intelligence and its significant contributions to national security and environmental safety," says the release. <https://dronelife.com/2023/06/20/wingxpand-wins-u-s-airforce-contract-the-7ft-backpackable-drone/>



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TEAMING: Expanding Capabilities, Enhancing War Fighter Safety RENEE KNIGHT JUNE 11, 2023



Putting robots out in front of warfighters creates a standoff distance that could be the difference between going home and not. Unmanned systems can provide critical information regarding the enemy's location or carry out a strike while the crewed aircraft or ground vehicle stays back. They

can expand capabilities, serve as loyal wingmen, and help our militaries match up better to the adversary, becoming true force multipliers when they work in tandem with their crewed counterparts.

"If anything, future battlefields are going to get more lethal and more hyperactive, so the ability to offload tactical risk onto a robot is something we absolutely need to maintain combat power," said Wallace, the U.S. Army's remote combat vehicle (RCV) requirements lead for the Next Generation Combat Vehicle Cross Functional Team.

<https://insideunmannedsystems.com/teaming-expanding-capabilities-enhancing-war-fighter-safety/>

EASA and Brazil's ANAC partner on air taxi certification Ishveena Singh | Jun 16 2023



With the recent increase in activities related to advanced air mobility using electric vertical takeoff and landing (eVTOL) aircraft to move people and cargo between places, national regulators are also finding ways to coordinate a safe and harmonized introduction of new technologies in the civil aviation system. The latest development in this

direction comes from the European Union Aviation Safety Agency (EASA).

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they want to cooperate on the harmonization of policies, procedures, and practices related to the certification of innovative eVTOL aircraft. <https://dronedj.com/2023/06/16/easa-anac-air-taxi-certification/>

MQ-9B SeaGuardian® Remotely Piloted Aircraft Helps Rewrite Practices Of Sea Power Sponsored By General Atomics Aeronautical June 15, 2023



Manufactured by San Diego-based [General Atomics Aeronautical Systems, Inc.](#), SeaGuardian has recorded a number of recent first-ever achievements in a range of operational and test environments around the world. Even as users prove out what the system can do as it begins to enter widespread service, they're only scratching the surface of the ways MQ-9B will alter the practice of sea power.

SeaGuardian has shown it can hunt for and help prosecute submarines. It escorts naval surface task groups. It provides sensing, targeting, and communications for the battle force. It self-deploys from its home station and integrates seamlessly into normal aviation traffic.

As the world's aerospace leaders gather for the Paris Air Show, we're focusing on how MQ-9B has validated and reaffirmed its role as a sea power enabler across the globe.

In just two years' time, the aircraft has recorded more than 12,000 operational hours in the service of the Indian Navy.

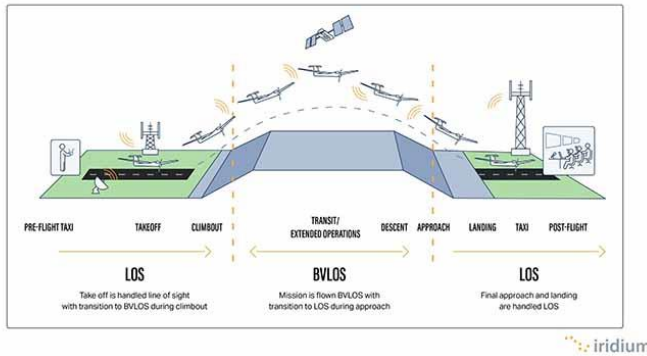
MQ-9B provided security and surveillance for the recent G-7 summit at its island location in Hiroshima, Japan.

And in the spring, SeaGuardian joined the U.S. Navy for one of its most complex and challenging integrated exercises yet – one in which the aircraft joined with human-flown maritime helicopters in a major anti-submarine warfare exercise. <https://aviationweek.com/aerospace/mq-9b-seaguardianr-remotely-piloted-aircraft-helps-rewrite-practices-sea-power>



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Iridium Proposes a New Model for Monitored BVLOS UAS Integration June 20, 2023 News



[Iridium Communications Inc.](#) has announced the results of an Uncrewed Aircraft System (UAS) flight trial highlighting Beyond Visual Line of Sight (BVLOS) capabilities in the National Airspace System (NAS), with a published a whitepaper titled “Monitored BVLOS: A New Model for UAS Integration in the National Airspace System.” The

whitepaper highlights and solves for challenges faced in enabling a safe, scalable, and efficient adoption of UAS in the NAS, including how to maintain safe separation of aircraft and what supportive Commercial Off-the-Shelf (COTS) avionics are readily available.

As part of the flight trial, a Remote Pilot-in-Command (RPIC) drone equipped with Iridium Connected® COTS avionics identified an intersecting aircraft at five Nautical Miles (NM) of separation with a closure rate of 300 knots. The RPIC successfully performed a BVLOS evasive maneuver in less than 18 seconds from detection to completion, maintaining two NM of separation with nonidealized operations.

The analysis was completed following the trial flight of a 220-pound, medium altitude, fixed-wing aircraft, known as the [AiRanger](#), over agricultural land near Bakersfield, California.

The flight trial provided needed data regarding how RPIC operations and procedures inform decision-making, how long maneuvers take to complete over BVLOS communication links, and as a result, the ability to maintain safe separation. With these points in mind, the whitepaper suggests a simplified Federal Aviation Administration BVLOS waiver process inclusive of the recommended MEL and provides a proposed template for consideration.

https://uasweekly.com/2023/06/20/iridium-proposes-a-new-model-for-monitored-bvlos-uas-integration-in-the-national-airspace-system/?utm_source=rss&utm_medium=rss&utm_campaign=iridium-proposes-a-new-model-for-monitored-bvlos-uas-integration-in-the-national-airspace-system&utm_term=2023-06-21



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uAvionix and Choctaw Nation Pioneer FCC-Authorized C-Band BVLOS Operations

June 19, 2023 News



Through a collaborative effort, uAvionix and the Choctaw Nation have secured FCC authorization for Beyond Visual Line of Sight operations in the C-Band frequency range. This opens up new opportunities for long-range drone operations and showcases the potential of utilizing C-Band frequencies for safe and efficient BVLOS flights.

By leveraging uAvionix's advanced avionics solutions and the expertise of the Choctaw Nation, this partnership aims to demonstrate the viability of C-Band BVLOS operations in various industries. The successful FCC authorization is a testament to their commitment to innovation and regulatory compliance.

This historic achievement not only showcases the technical capabilities of uAvionix's avionics systems but also highlights the progressive mindset of the Choctaw Nation in embracing cutting-edge technologies. https://uasweekly.com/2023/06/19/uavionix-and-choctaw-nation-pioneer-fcc-authorized-c-band-bvlos-operations/?utm_source=rss&utm_medium=rss&utm_campaign=uavionix-and-choctaw-nation-pioneer-fcc-authorized-c-band-bvlos-operations&utm_term=2023-06-21

Air taxi maker Lilium's deals in Shenzhen to prime wider AAM activity in China

Bruce Crumley | Jun 21 2023



German [air taxi](#) developer [Lilium](#) has announced a pair of deals providing it a foothold in China to build future business activity in what's expected to be an **enormous** and effervescent market for [advanced air mobility](#) (AAM) services.

The Munich-based company announced the developments against the background of this week's Paris Air Show. One of those accords was made with Shenzhen Eastern General Aviation Co., known as Heli-Eastern, which provides helicopter transportation services in Guangdong-Hong Kong-Macao Greater Bay Area. Under the terms of

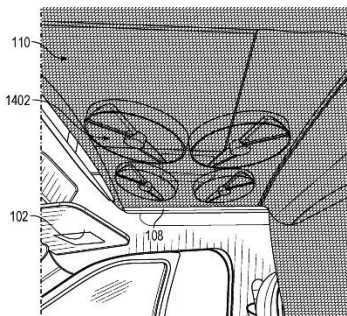


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the deal, Heli-Eastern will buy up to **100** [Lilium](#) battery-powered jets to enable new [air taxi](#) and other AAM activities.

The [other is an agreement](#) with the Bao'an District of the bustling business city Shenzhen, where [Lilium](#) will establish an office to oversee development of air taxi operations in the same Guangdong-Hong Kong-Macao Greater Bay Area. Those facilities are also intended to serve as a base camp for the company's efforts to launch AAM services in other municipalities and regions of China. <https://dronedj.com/2023/06/21/air-taxi-maker-liliums-deals-in-shenzhen-to-prime-wider-aam-activity-in-china/#more-94180>

Ford patent describes drone moonroof allowing take-off and landing from moving vehicles [Bruce Crumley](#) | Jun 21 2023



Given its [earlier filings](#) describing concepts for gear permitting drones to perform wide-ranging services – including accessing and [jump-starting cars](#) with flat batteries – [Ford's patent submission](#) for a moonroof accessory allowing UAVs to take off and land from the tops of cars and trucks isn't the stuff of science fiction fantasies.

Because as the ever vigilant *Ford Authority* blog [reported](#) – and the US Patent Office June 8th publication of application 17/544535 indicates – the Detroit auto company is at work on a system that would permit drivers doubling as drone operators to both lift off and land their UAVs from the tops of moonroof-equipped cars and trucks while either parked or on the move.

Perhaps just as significant in racking up neato points, the contraption is also being conceived to let people inside – presumably passengers, rather than drivers – insert or retrieve their drones from within the vehicle rather than having to do so from above, further [facilitating flights](#) without stopping. <https://dronedj.com/2023/06/21/ford-patent-describes-drone-moonroof-pad-allowing-take-off-and-landing-from-moving-vehicles/#more-94172>



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22June23

Volocopter Sets Its Sights on Olympic Games: Paris to Offer eVTOL Services in Summer 2024 Miriam McNabb June 21, 2023 by DRONELIFE Staff Writer Ian M. Crosby



Volocopter, Group ADP Announces Paris to be First City to Offer eVTOL Services in Summer 2024, “All Indicators Green,” says Groupe ADP.

This week at the [International Paris Air Show](#), urban air mobility pioneer [Volocopter](#) and [Groupe ADP](#), alongside the French Civil Aviation Authority and Paris Region, emphasized that Paris will be the first European city to offer electric vertical takeoff and landing aircraft (eVTOL) services in time for the 2024 Olympic and Paralympic Games. The services will be available to the general public as an addition to the existing public transportation system of the Paris Region.

Volocopter is currently **the only** eVTOL company on track to achieve certification in 2024 from the European Union Aviation Safety Agency. Electric air taxis undergo the same strict safety certification process as airliners and create safety through redundant aircraft features tested in over 1,500 test flights. Operations in Paris will start with five vertiports, gradually growing to cover all the Paris region over the course of the next decade. The two-seater VoloCity aircraft will fly at heights below 500 m and **will not be audible** from ground level in urban environments.

Vertiport construction will begin during the summer and be in full swing by the end of 2024. The development schedule of the five vertiports in Paris will allow for commercial launch in summer 2024. <https://dronelife.com/2023/06/21/volocopter-sets-its-sights-on-olympic-games-paris-to-offer-evtol-services-in-summer-2024/>

Drone Diplomacy: Humanitarian or Act of Aggression? A DRONELIFE Exclusive

Miriam McNabb June 21, 2023

Drones are incredibly useful tools for diplomatic relations on local and foreign soil. The United States, China, and Israel have all used drones to carry out diplomatic missions, distribute much-needed aid, and gather information on their adversaries. Drone diplomacy can be an effective tool for missions such as these as it allows countries to send representatives and humanitarians to places not otherwise traversable and gather intelligence without putting human lives at risk.



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However, this raises questions about sovereignty, privacy, and security. Some critics argue that the use of drones for diplomacy can be seen as an act of aggression and escalate tensions between countries. Proponents suggest that it can be a useful tool for conflict resolution, as it allows countries to monitor and respond to situations without the need for military or human intervention. Drone diplomacy can also be used for humanitarian missions to deliver aid to areas that are difficult to reach by traditional means, such as war-torn regions or areas impacted by natural disasters. In these such scenarios, drones are used to map hard to reach areas, especially after a natural hazard, which then helps in the organization of international help, prioritizing and facilitating the response efforts (rapid assessment of the damage, identification of critical needs, mapping access routes, search and rescue operations, monitoring, and progress assessment).

Effective use of drones for diplomatic relations has the potential to change the way countries interact with each other, as it allows for **more efficient and less-risky methods** of both communication and conflict resolution. <https://dronelife.com/2023/06/21/drone-diplomacy-humanitarian-or-act-of-aggression-a-dronelife-exclusive/>

23June23

Aloft's Air Boss: Real-World Airspace Management for Emergency

Response Scott Howe JUNE 20, 2023



[Jon Hegranes](#), Aloft's Founder and CEO, explained , "Emergencies and disaster response situations are high value opportunities where there is a lot of flight happening all of a sudden, and when first responders, utilities, and media companies converge on a location all at once, it can get pretty complicated," he said. "With Air Boss, we can coordinate what's going on."

Air Boss "brings together multiple elements required for low-altitude UTM," including custom data layers and live flight feeds, compliance capabilities for fleet management, UTM, and Remote ID, developer APIs and map tiles to integrate natively with emergency response centers, FAA-approved USS capabilities, such as LAANC, and secured and certified systems to



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ingest radar and surveillance data. Moreover, Aloft says it has “the largest audience of recreational, commercial, and government drone operators” and “over 5 million square miles of unique safety data via Aloft Geo.” https://www.commercialuavnews.com/public-safety/aloft-s-air-boss-real-world-airspace-management-for-emergency-response?mkt_tok=NzU2LUZXSi0wNjEAAAGMg0oi5fR6YnslnyUb2s2f2cVZV-tjnf0z22p-C3WRdsiTvmLztJc5Q6uk_CBr0_Pf1zouaZDY8xcbXmd2bC_F2qCl60Bg6-iRFT4G7F4oGiTWKI4