



UAS and SmallSat Weekly News

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19Mar22

BVLOS ARC Report Addresses Drone Industry Accessibility and Inclusion Miriam

McNabb March 17, 2022 Dawn Zoldi



The Federal Aviation Administration recently released its Unmanned Aircraft Systems Beyond Visual Line of Sight (BVLOS) Aviation Rulemaking Committee (ARC) final report. Weighing in at almost 400 pages, the document is full of surprises – including a hat tip to the need to increase accessibility in the drone

industry.

About one-third of the way into the report, recommendation OQ 2.16 – UAS Pilot Medical Qualification states, “The FAA should develop tailored medical qualifications for UAS pilots and other crew positions that consider greater accessibility and redundancy options available to UAS.”

The ARC specifically recommended that the FAA develop tailored medical qualifications for UAS pilots and other crew members that reflect the reduced physical requirements for flying UA while ensuring appropriate standards of overall health necessary to perform UA crew duties. It also suggested the FAA remove the requirement for UA pilots to obtain Class 1, 2 or 3 medical certificates. The stated intent: “To redefine medical requirements for UAS crew, opening the door for extensive contributions by people who would otherwise be disqualified from piloting a crewed aircraft.”

The document goes on to explain that flight qualification requirements, in most cases, include holding a current FAA medical certificate or conducting an FAA-required self-evaluation of the remote pilot in charge’s medical condition. However, the ARC team, composed of a diverse group of experts from industry, government, and academia, noted that several otherwise disqualifying medical conditions should not apply to the UAS context.

<https://dronelife.com/2022/03/17/bvlos-arc-report-addresses-drone-industry-accessibility-and-inclusion-developing-tailored-medical-qualifications/>



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Deutsche Aircraft's 328eco Gets Boost from Norway Gregory Polek March 17, 2022



An agreement reached this week between Deutsche Aircraft and Norway's North Energy Cluster (NEC) brings the Dornier 328 type certificate holder one step closer to realizing its ambitions to introduce **the world's first** 100 percent SAF-powered commercial aircraft to market. The agreement, which the partners say will achieve substantial

short-term reductions of northern Norway's aviation climate footprint using so-called e-fuels, calls on wind and hydropower producers, technology suppliers, and electrochemical companies to help build the infrastructure needed at the 26 airports in the remote territory while Deutsche Aircraft provides the aircraft platform.

The manufacturer expects the first D328eco to run on power-to-liquid (PtL) e-fuel by 2023 under a schedule that calls for first revenue service in 2026. The D328eco is a Pratt & Whitney PW127S-powered 43-seat stretch variant of the current PW119A-powered Do 328.

PtL fuel is a synthetically produced liquid hydrocarbon that uses renewable electricity as a key energy source. The three main steps in producing PtL consist of the conversion into carbon feedstock of CO₂ captured via, for example, direct carbon capture; the synthesis of carbon feedstocks into "green" hydrogen using processes such as Fischer-Tropsch to generate liquid hydrogen; and, finally, the conversion of the liquid hydrogen into a synthetic equivalent of kerosene.

According to Deutsche Aircraft, SAF sold today using processes such as the hydroprocessed esters and fatty acids (HEFA) production pathway achieve a maximum CO₂ reduction of 80 percent, while **PtL can achieve complete carbon neutrality**.

<https://www.ainonline.com/aviation-news/air-transport/2022-03-17/deutsche-aircrafts-328eco-gets-boost-norway>

US AFRL awards contract to develop UAV for ADAIR training missions March 18, 2022 Military | News



The US Air Force Research Laboratory (AFRL) has [awarded](#) a new contract under the Bandit program to develop an uncrewed air vehicle (UAV) for adversary air (ADAIR) training missions.

The small business innovation research contract was won by



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North Carolina-based Blue Force Technologies. The initiative carries an initial value of **\$9m** and options to develop up to **four UAVs**. Under the contract, Blue Force Technologies will develop a high-performance UAV design that can be used by USAF fighter aircraft pilots for training. The use of UAVs will enable Air Force, Navy and Marine Corps fighter jet crew to undergo adversary air training at reduced costs.

In 12 months, the program is expected to complete the critical design level, perform engine ground testing, and validate the design to support engine installation.

https://uasweekly.com/2022/03/18/us-afri-awards-contract-to-develop-uav-for-adair-training-missions/?utm_source=rss&utm_medium=rss&utm_campaign=us-afri-awards-contract-to-develop-uav-for-adair-training-missions&utm_term=2022-03-18

FAA approves Joby's approach to eVTOL air taxi development Ishveena Singh - Mar. 18th 2022



Today, California-based Joby Aviation [announced](#) the successful completion of the initial FAA systems and compliance reviews for aircraft certification.

Joby says these reviews, completed at the end of last year, were recently **granted approval by the FAA**, providing the company with confidence in its development approach, preliminary production design, and defined path toward certification. Here's what the FAA reviews evaluated:

- The FAA Systems Review assessed Joby's plans and process for the development of safety-focused, aerospace-grade systems and equipment. Systems involved in the review included flight controls, propulsion controls, and battery management.
- The Compliance Review evaluated Joby's approach to the development and verification of aerospace-grade software and airborne electronic hardware.

And Tom Ferrell, development assurance lead at Joby, is quick to point out that successfully completing both reviews with what is regarded as one of the world's toughest and most respected regulators is no mean feat. <https://dronedj.com/2022/03/18/faa-joby-review-evtol-air-taxi-development/>



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Eve Mobility creates consortium, sells eVTOL craft for Miami UAM development

Bruce Crumley - Mar. 18th 2022



Embraer's urban air mobility (UAM) affiliate, Eve, has signed a pair of deals to prepare the rollout of electric takeoff and landing (eVTOL) aircraft in Miami, including planned air taxi shuttles between the city's airport and main convention center.

The first [development](#) involved the creation of a consortium between [Eve](#) and UAM infrastructure, tech, and user organizations to work up a Concept of Operations plan for eVTOL air taxis between the Miami Beach Convention Center and airport. The [second](#) centered on the company co-signing a letter of intent for the purchase of up to **200** Eve planes by [Global Crossing Airlines](#) Group (GlobalX) – a US domestic flag and supplemental airline that operates Airbus's A320 family of aircraft.

The GlobalX transaction brings the total number of orders for Eve eVTOL aircraft to **1,785** – a lot of work to get done before **2026**, when the company plans to begin delivering units. Just as significant, according to Eve, is the potentials of its work with GlobalX to develop UAM services in and around Miami as part of the new consortium's CONOPS project.

<https://dronedj.com/2022/03/18/eve-mobility-creates-consortium-sells-evtol-craft-for-miami-uam-development/>

DRONEDEK Applauds FAA for Opening Door to Drone Package Delivery in the U.S. March 18, 2022 News



The Unmanned Aircraft Systems (UAS) Beyond Visual Line of Sight Aviation Rulemaking Committee issued its report late last week.

"Our smart mailbox has the capacity to overhaul the global package delivery system and bring needed efficiency and environmental benefits," Dan O'Toole, Founder and CEO of DRONEDEK said. "I'm happy to see progress being made that will allow the U.S. to catch up to other countries." O'Toole had earlier complained that countries like Ireland, Canada, Uganda, Rwanda are ahead of the U.S. in this niche market.



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The committee report notes that the use of UAS continues to grow and evolve globally: “The technology has proven to provide many societal and economic benefits and can be used as a critical tool to support numerous use cases and public safety.”

Benefits include inspections of critical infrastructure and delivery of medical supplies and packages to consumers as well as public safety including aiding with disaster recovery, wildfire response, and search and rescue missions. https://uasweekly.com/2022/03/18/dronedek-applauds-faa-for-opening-door-to-drone-package-delivery-in-the-u-s/?utm_source=rss&utm_medium=rss&utm_campaign=dronedek-applauds-faa-for-opening-door-to-drone-package-delivery-in-the-u-s&utm_term=2022-03-18

20Mar22

Firefighters use drone to rescue dog stranded on cliff in Folkestone 8 March 2022



Sarah Wilson, from Whitstable, had taken her long-haired dachshund Bear, to the beauty spot on Sunday. The 58-year-old had been walking with her partner Luke Hooker and other dog Alfie, just off Old Dover Road when they realized Bear was missing.

The walk quickly turned into an emergency after the three-year-old slipped out of his collar and ended up stranded on a cliff face. Crews from Kent Fire and Rescue service and the Coastguard helped to search for Bear and a rescue team joined them at 6.50pm.



Firefighters used a drone with a thermal imaging camera to look for heat spots and spotted Bear stuck in thick grass on the steep cliff face.

Crews cleared a pathway to the bottom of the cliff and managed to bring the little dog to safety by 11pm.

<https://www.itv.com/news/meridian/2022-03-08/firefighters-use-drone-to-rescue-dog-in-folkestone-cliff-fall>



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21Mar22

Air Force aims to sharpen vision for teaming pilots with drones Stephen Losey Mar 18



ORLANDO, Fla. — The Air Force’s next budget proposal, expected to be released by the end of March, will provide more clues on how it hopes to mix manned fighters and bombers with autonomous combat drones.

Air Force Secretary Frank Kendall views this concept as so vital that elements of it made up two of the seven operational imperatives he outlined in his March 3 keynote address to the Air Force Association’s Air Warfare Symposium [here](#).

Kendall reiterated his belief that the classified Next Generation Air Dominance concept should combine up to five unmanned, autonomous and attritable aircraft controlled by a **single piloted** that is **“calling plays” for the** drones to follow. The F-35 could also be teamed with unmanned aircraft, he said.

And the Air Force must define a “family of systems” for the in-development B-21 Raider long range strike bomber, he said. This would be similar to NGAD, including teaming autonomous combat drones up with the B-21. <https://www.airforcetimes.com/air/2022/03/18/air-force-aims-to-sharpen-vision-for-teaming-pilots-with-drones/>

Dynetics releases video of counter drone test activity at Eglin Air Force Base

March 21, 2022 Jenny Beechener



Leidos subsidiary Dynetics has released a [video](#) of the Phase 3 Counter-Unmanned Air System (CUAS) completed in mid-2021 at Eglin Air Force Base. The company’s tube launched CUAS solution is designed to work in all weather (up to 40mph winds), offer accurate targeting and maneuverability, says the company.

Tests were carried out for the US Defense Advanced Research Projects Agency Mobile Force Protection (MFP) program in mid-2021. Dynetics advanced a range of technologies to enable rapid detection, identification, tracking, and neutralization of adversary small, unmanned aircraft systems (sUASs) – all while mitigating collateral damage and operating on the move.



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MFP features a multi-layer defense architecture to defeat unauthorized drone intrusion over fixed-base military installations or on-the-move operations. To meet this need, the MFP system employed two types of reusable interceptors that disable enemy UAS while minimizing the risk of harm to by-standers. The Co-axial Unmanned Guided Autonomous Rotorcraft from Dynetics was complemented by the fixed-wing MORFIUS interceptor provided by subcontractor Lockheed Martin. <https://www.unmannedairspace.info/counter-uas-systems-and-policies/dynetics-releases-video-of-counter-drone-test-activity-at-eglin-air-force-base-in-western-florida/>

DJI MATRICE 30 DRONE KICKS OFF LINEUP OF NEW ENTERPRISE DRONE SYSTEM

March 19, 2022 Sally French



DJI just dropped a **massive trove** for enterprise-minded drone pilots. The Chinese-based drone company today released a slew of new projects, including an all-new, relatively small drone called the Matrice 30, a new Zenmuse H20N sensor,

improved docking and charging systems and more.

Consider it the next generation of enterprise drone systems — or at least that's what DJI is calling it. And what's so standout about it? In short, it truly steps up the autonomy factor of drones. While a drone is by definition autonomous, realistically there is heavy reliance on humans for functions like transporting them to chargers, planning missions and more. And now, this all-in-one solution enterprise setup is a fully remote fleet management system, with an autonomous docking and recharging station.

Here's everything you need to know about DJI's big project launch that hit today:

<https://www.thedronegirl.com/2022/03/21/dji-matrice-30-drone/>

Australia names first domestically built uncrewed combat aircraft

March 21, 2022
Military



The Australian Government has [officially named](#) the first domestically produced uncrewed combat aircraft as 'MQ-28A **Ghost Bat**'.

The uncrewed jet was built by Boeing Australia in partnership with the Royal Australian Air Force (RAAF) under the Loyal

Wingman program.



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The military designation for the uncrewed combat aircraft was announced at a ceremony in RAAF Base Amberley in Queensland.

Commenting on the move, Australian Minister for Defence Peter Dutton said: “Our partnership with Boeing has successfully designed, manufactured, and flown the **first** Australian-built military combat aircraft in 50 years. The uncrewed air vehicle has a **range of 3,700km** and has completed a series of [test flights](#).

The Australian Government has invested more than **\$111m** (A\$150m) to support the Loyal Wingman program. It is expected to create new job opportunities when production increases in the following years. https://uasweekly.com/2022/03/21/australia-names-first-domestically-built-uncrewed-combat-aircraft/?utm_source=rss&utm_medium=rss&utm_campaign=australia-names-first-domestically-built-uncrewed-combat-aircraft&utm_term=2022-03-21

American Robotics to scoop up rail inspection platform Ardenna [Ishveena Singh](#) - Mar. 21st 2022



Industrial drone solutions provider American Robotics has reached an agreement to acquire Ardenna, a **Virginia-based firm** providing AI-powered analytics software for the rail industry. The acquisition would enable American Robotics to offer **autonomous drone-in-a-box solutions to railways**.

Ardenna’s software uses advanced machine-learning algorithms to automatically process and analyze visual data captured during drone surveys, identifying and measuring railway features, classifying anomalies, and assessing the health of track and railbed infrastructure.

Reese Mozer, the cofounder and CEO of American Robotics: Ardenna is a leading provider of rail-focused machine learning and SaaS software. Together, we can offer the end-to-end data solution that the rail industry has been waiting for, enabling new efficiencies and increased safety.

It also helps that with this strategic acquisition, American Robotics will begin to work with major rail industry companies, including Ardenna’s current customers, which are among the largest freight railroad networks in North America. <https://dronedj.com/2022/03/21/american-robotics-ardenna/>



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VERIZON LONG RANGE DRONE PROJECT SET TO LAUNCH IN OREGON March 15, 2022 Sally French



The drone range in Pendleton, Oregon, is one of just a small handful of [Federal Aviation Administration-designated test ranges](#), and is located in the northeast corner of the state of Oregon. Verizon's drone arm, Skyward, is based in Portland, Oregon, which is a roughly 3-hour drive from Pendleton.

At the Pendleton drone range, Verizon Robotics will test various proof-of-concept capabilities primarily around long range robotics. Pendleton, which is a relatively low-density, small city with vast amounts of open space, is set to be an ideal location to host the Verizon project. The Pendleton Range itself has more than 14,000 square miles of FAA-approved airspace for advanced drone flight operations and testing. Even pre-Verizon long range drone project, the site regularly hosts between 400 and 1,000 drone operations per month.

A big component of the latest Verizon long range drone project will include training Pendleton Range staff to control what's being referred to as "a rapid-response command mobile unit vehicle." That vehicle will be able to deploy messages, applications, and advanced computing solutions to both robots in the air and on the ground.

<https://www.thedronegirl.com/2022/03/22/verizon-long-range-drone-project-pendleton-oregon/>

Acciona Partners with Embraer's Eve, Agrees to Invest \$30 Million Jessica Reed | March 21, 2022



*The latest partnership announced by Eve is an agreement with Acciona, who will invest \$30 million and contribute to Eve's Board of Directors following the company's business combination with Zanite Acquisition Corp. Eve is developing an eVTOL aircraft, imagined in the photo above, and has already received close to **1,800 pre-orders** for the vehicle.*

. This investment will follow Eve's business combination agreement with Zanite Acquisition Corp. agreement, after which **Eve will list on the New York Stock Exchange**. This is expected to take place in Q2 of this year.



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Eve also formed another partnership with Global Crossing Airlines Group (GlobalX) that was announced last week. The two companies signed a [Letter of Intent for GlobalX](#) to order up to **200 electric vertical take-off and landing (eVTOL) aircraft** from Eve, which will likely be fulfilled in 2026 when Eve expects to begin eVTOL deliveries. The partnership extends beyond the order for Eve's aircraft; GlobalX and Eve intend to work together in exploring urban air mobility (UAM) and development of a UAM ecosystem, including infrastructure to support eVTOL operations. <https://www.aviationtoday.com/2022/03/21/acciona-partners-with-embraers-eve-agrees-to-invest-30-million/>

Canadian Draganfly drones to deliver medical supplies in war-torn Ukraine

Ishveena Singh - Mar. 22nd 2022



Draganfly says it is readying critical lifesaving drones for deployment with [Revived Soldiers Ukraine](#) (RSU), a non-profit organization focusing on medical response and rehabilitation of injured troops in Ukraine. While 10 medical drone delivery platforms and search and rescue drones will be dispatched by the Canada-based UAV

manufacturer immediately, the initial order size can go up to **200** units, the company says. In addition, Draganfly will be donating three drone systems to RSU.

Draganfly, which has received the order through channel partner Coldchain Delivery Systems, explains that its temperature-controlled drone delivery payload box can transport up to **35 pounds** of medical supplies such as blood, pharmaceuticals, insulin/medicines, vaccines, water, and wound care kits. The platform is also uniquely top-mounted to make deliveries more accessible to soldiers and civilians alike.

With more than 300 volunteers across Ukraine and the US, RSU plans to deploy drones within major Ukrainian cities, including Kyiv and Kharkiv. RSU has received support from several medical facilities **in the US**, including Yale, Cleveland Clinic, Metro Health, Mass General/Harvard, USC, Orlando Prosthetics and Orthotics Associates, Wills Eye Hospital, Brooks Rehabilitation Center, and Miami University. <https://dronedj.com/2022/03/22/canada-draganfly-drones-deliver-medical-supplies-ukraine/>



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How Elon Musk's satellites are helping Ukrainian drones to destroy Russian tanks Ishveena Singh - Mar. 22nd 2022



Aerorozvidka, a dedicated drone unit within the Ukrainian army, is leveraging Elon Musk's Starlink satellite system to hunt and attack the Russian forces "as they sleep."

Dozens of "priority targets" including Russian tanks, command trucks, and vehicles carrying electronic equipment have been destroyed in this manner, according to a report in Britain's oldest daily newspaper, *The Times*. "We strike at night, when the Russians sleep," says Yaroslav Honchar, who's leading the Ukrainian aerial reconnaissance unit from Kyiv.

The Aerorozvidka unit has a variety of drones at its disposal – right from cheap off-the-shelf ones to thermal drones that can detect human heat signature even at night, and heavy-duty multirotor aircraft that have been customized to drop anti-tank grenades.

The operators are reportedly flying up to 300 drone missions a day to ensure that the Ukrainian army uses its limited supply of bombs efficiently. And this is where the newly available Starlink internet system comes in, helping the Ukrainian troops to **stay online even during power outages** that have become rampant in the war-torn nation.

<https://dronedj.com/2022/03/22/ukrainian-drones-destroy-russian-tanks/#more-78238>

Regulatory breakthrough allows Percepto drones to fly BVLOS without onsite observers Ishveena Singh - Mar. 22nd 2022



The Civil Aviation Authority of Israel (CAAI) says it will allow drone-in-a-box solutions provider Percepto to operate its drones beyond visual line of sight (BVLOS) at three industrial sites in the country, including one which is owned by national water company Mekorot.

Percepto's Israeli customers can now use their drones from a remote location without BVLOS-certified observers on the site. This designation was originally created for operators of military drones with criteria so rigorous that it would become extremely challenging to obtain.

However, Percepto has done a great job at proving the safety of its Autonomous Inspection and Monitoring (AIM) system, which was recently acclaimed by *TIME* magazine in its list of "100

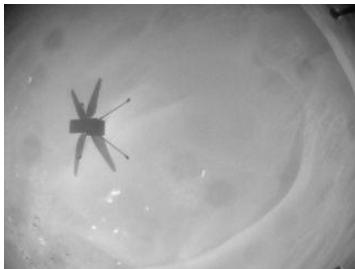


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Best Inventions of 2021.” <https://dronedj.com/2022/03/22/regulatory-breakthrough-allows-percepto-drones-to-fly-bvlos-without-onsite-observers/#more-78253>

23Mar22

Mars helicopter Ingenuity soars on 22nd Red Planet flight Mike Wall published about 14 hours ago



The 4-pound Ingenuity stayed aloft for 101.4 seconds and reached a maximum altitude of 33 feet during the sortie, which took place on Sunday (March 20), according to a Monday tweet by NASA's Jet Propulsion Laboratory (JPL) in Southern California, which manages Ingenuity's mission.

Ingenuity and NASA's Perseverance rover landed together inside Mars' Jezero Crater in February 2021. The little chopper quickly aced its five-flight original mission, which was designed to show that aerial exploration is possible on Mars. After this success, NASA granted Ingenuity a mission extension, during which the rotorcraft has been serving as a scout for Perseverance.

The rover's handlers are currently steering Perseverance toward an accessible part of the ancient delta, and Ingenuity's observations are helping them pick the best route, mission team members have said.

During its first 21 flights, Ingenuity flew a total of 15,247 feet and stayed in the air for nearly 39 minutes, according to a flight log maintained by the mission team. <https://www.space.com/nasa-mars-helicopter-ingenuity-flight-22>

Boeing's Newest AI Combat Drone Gets a Spooky Animal Name: Ghost Bat Matt Novak Monday 6:00AM



Boeing announced the name of its newest combat drone on Monday: the MQ-28A Ghost Bat. The drone, which is being produced in Australia, utilizes artificial intelligence and is part of what was previously known as the Loyal Wingman project—an initiative to give fighter pilots an uncrewed partner in the sky.



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“The introduction of the new popular name is a rare and special moment in aviation history for our RAAF partners and industry team of over 35 Australian suppliers,” Glen Ferguson, director at Australia’s Boeing Airpower Teaming System, said in a [statement](#) on Boeing’s website.

This new generation of drones is intended to fly alongside crewed fighter jets and assist in everything from jamming radar to conducting surveillance to firing on targets.

The Ghost Bat is **the first combat aircraft to be manufactured in Australia in over 50 years**. Australian politicians have grown more hawkish in recent years as they confront an increasingly hostile China. <https://gizmodo.com/boeings-newest-ai-combat-drone-gets-a-spooky-animal-name-1848678798>

UAM infrastructure specialist Skyports raises \$23 million in Series B funding

Bruce Crumley - Mar. 23rd 2022



In addition to its worldwide activity in preparing infrastructure to facilitate UAM services, Skyports operates a thriving UAV transportation unit that played a vital role delivering vaccines and other critical medical supplies to remote UK locations during COVID-19 surges.

Participants in its Series B funding round included previous investors Deutsche Bahn Digital Ventures, Groupe ADP, Solar Ventus, Irelandia, and Levitate Capital. Joining those backers are Japanese conglomerate Kanematsu Corporation, global industrial property concern Goodman Group, Italian airport platform 2i Aeroporti, Ardian’s Infrastructure Fund, F2i Italian Infrastructure Fund, and US-based venture capital firm GreenPoint.

The additional capital influx – and the formidable balance sheets of both previous and new investors – will allow Skyports to kick its work with the world’s leading electric air taxi manufacturers and operators into higher gear. The company has been active over the past year securing contracts to build UAM infrastructure in cities in Europe, Asia, and the US that are already preparing for the launch of services like [air taxis](#) as soon as 2024. <https://dronedj.com/2022/03/23/uam-infrastructure-specialist-skyports-raises-23-million-in-series-b-funding/>



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Suzuki to back SkyDrive's development of eVTOL flying cars Bruce Crumley - Mar. 23rd 2022



The two firms announced their tie-up in a laconic communiqué Tuesday, revealing little detail beyond their objective to develop SkyDrive's eVTOL flying car concept toward scaled production and marketing. As one of Japan's top automotive companies, Suzuki's manufacturing and marketing heft would logically offer its new startup partner serious muscle once the project – now in prototype

stage – clears certification and enters the commercial manufacturing phase.

SkyDrive has previously said it is aiming to navigate that process in time to introduce its eVTOL flying car into air taxi service during Osaka's 2025 World Exposition.

SkyDrive was founded in 2018 by former Toyota executives with the ambition of "leading a once-in-a-century mobility revolution." Since then, the company has been developing both passenger carrying eVTOL craft and selling its industrial-grade cargo drones with 30 kg maximum payload capacity.

Last year it announced its application for type certification of its two-seat SD-05 flying car prototype had been accepted by Japanese authorities – the first craft of its kind to reach that milestone in the country. <https://dronedj.com/2022/03/23/suzuki-to-back-skydrives-development-of-evtol-flying-cars/#more-78362>

Terra Drone raises \$70 million in Series B funding Ishveena Singh - Mar. 22nd 2022



The company, which was ranked as the "top drone service provider in the world" by market research firm Drone Industry Insights in 2019 and 2020, is now looking at establishing a US office and pushing out its uncrewed traffic management (UTM) offerings to the global market.

In addition to gaining the confidence of new investors Mitsui, SBI Investment, Tokyu Land Corporation, Kyushu Electric Power T&D, and Seika Corporation, and tapping into existing investor Venture Lab Investment, Terra Drone has received backing from the Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN) – a public-



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private infrastructure fund by the Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT).

The fresh funding brings Terra Drone to a total of **\$83 million raised**. And this has got company founder and CEO Toru Tokushige eyeing a major chunk of the lucrative UAM market pie. Here's Tokushige:

A press statement by the company details that Terra Drone has achieved growth at a CAGR of 87% since it was founded in 2016. Profitability was first recorded in 2019 and a spike in the revenue has been maintained ever since, a global pandemic notwithstanding.

<https://dronedj.com/2022/03/22/terra-drone-70-million-series-b-funding/>

14 amazing drone photos from DJI SkyPixel contest winners Ishveena Singh – March 22, 2022



DJI and SkyPixel received over 30,000 submissions from 124 countries and regions for their seventh annual drone photo and video contest. The Grand Prize winner in the Photo Category is an epic capture by Zhu Jianxin who framed up an otherworldly sight of a frozen lake after heavy snow fell in

the Taklamakan Desert. With a simple change in perspective, several cracks on a frozen lake magically come together into a portrait of an elegant orchid.

Jianxin had this to say about the drone photo: Photography as an art form always comes from life. It is born from nature. I am amazed by how a drone changes my perspective and helps me capture the beauty of our world. <https://dronedj.com/2022/03/22/dji-skypixel-drone-photo-contest-winners-2021/#more-78230>



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UMAV announces its lighter than air detachable drone completing final avionics installation March 22, 2022 News



Over the past three years UAV Corp's wholly owned subsidiary Skyborne Technology, Inc. has designed, developed, and is currently completing the manufacturing of innovative technology to provide disaster relief, communications, agriculture assessment, public safety, defense, and other functions for domestic and

international customers.

The LTATDD SA-70 semirigid structure encompasses a helium-filled, lighter-than-air (LTA) drone, fixed site mooring and tether controls as well as the LTA Drone is unique in that it allows the command-and-control personnel to release the tether and initiate flight as a **remotely piloted unmanned airship**.

The LTATDD SA-70 will be equipped with a modular pod system which includes the flight deck and housing for up to **two unmanned drones for in-flight launch**. Our first LTATDD SA-70 will be utilized for FEMA Disaster Relief efforts for the **State of Florida** through the Triumph Fund-Gulf/Coast State College Program. Our market research after Hurricane Michael and ongoing dialog with government agencies such as Homeland Security, Customs and Border Patrol, Naval Warfare Center, FEMA, Air Force, and other government agencies led to new advanced designs for the build. https://uasweekly.com/2022/03/22/umav-announces-its-lighter-than-air-detachable-drone-is-completing-final-avionics-installation/?utm_source=rss&utm_medium=rss&utm_campaign=umav-announces-its-lighter-than-air-detachable-drone-is-completing-final-avionics-installation&utm_term=2022-03-23

24Mar22

Joby Submits First Certification Plan Russ Niles March 23, 2022



Rather than present the finished aircraft for certification, Joby is conducting the **first ever** "area-specific certification plan" for the tilt rotor design. The first plan covers cabin safety and involves the integrity of the materials, seats, and restraints. There are several more area-specific plans to be submitted but Joby didn't detail those in its news release. It hopes to be flying paying

passengers in the aircraft by **2024**.



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"Today's milestone is the result of many years of hard work by both the Joby team and the FAA," said Didier Papadopoulos, head of Programs and Systems at Joby. "With more than two thirds of our means of compliance now agreed with the FAA, we're looking forward to maintaining that momentum with the submission of further certification plans in the near future." Earlier this year, the company completed its first set of conformity tests on the composite structure of the aircraft. https://www.avweb.com/aviation-news/joby-submits-first-certification-plan/?MailingID=860&utm_source=ActiveCampaign&utm_medium=email&utm_content=MAX+Tech+Pilot+Acquitted%2C+Sanctions+Fallout&utm_campaign=MAX+Tech+Pilot+Acquitted%2C+Sanctions+Fallout-Thursday%2C+March+24%2C+2022

U.S. Air Force B-21 and NGAD Programs Spawn Autonomous Shadow Aircraft

Steve Trimble Brian Everstine March 18, 2022



A **new proposal** by the U.S. Air Force is transforming the concept of a "Loyal Wingman" for the Northrop Grumman B-21 bomber and future Next-Generation Air Dominance aircraft.

Rather than a small, reusable, autonomous aircraft that is cheap enough to sacrifice on any given

mission, two new classified programs set to be proposed in the fiscal 2023 budget may call for new types of long-range uncrewed aircraft systems capable of carrying **thousands of pounds** of munitions, with a price tag higher by an order of magnitude compared to the low-cost, attritable systems shown to date.

A new proposal for the Air Force's "wingman" UAS concepts for the B-21 and Next-Generation Air Dominance (NGAD) aircraft instead recalls the operational versions that were supposed to follow DARPA's pioneering Joint Unmanned Combat Air Systems program before its termination in 2006. They will be designed to accompany and support crewed B-21s and NGAD fighters but will be powerful weapon systems in their own right, costing up to **hundreds of millions of dollars each**. https://aviationweek.com/defense-space/budget-policy-operations/us-air-force-b-21-ngad-programs-spawn-autonomous-shadow?utm_rid=CPEN1000003332045&utm_campaign=32189&utm_medium=email&elq2=53909fbb0



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DRONE COMPANY NAMED ONE OF 10 MOST INNOVATIVE SPORTS COMPANIES March 22, 2022 Sally French



Drone-minded readers would likely think about the Drone Racing League as a sports company. But for the rest of the world, the company famous for putting on highly produced drone races is being perceived largely as a sports company. And one of the best sports companies, at that.

Business media magazine Fast Company this month announced the winners of its prestigious annual list of the World's 10 Most Innovative Sports Companies for 2022. And Drone Racing League is one of the 10 sports companies on the list. The list is primarily made up of companies that seemingly advance more traditional sports. For example, Surfline is a wave forecasting and surf report service. Golftec brings state-of-the-art analytics to weekend duffers. Abbott designs glucose monitors designed for all sorts of athletes to help better gauge and maintain optimal glucose levels.

But perhaps refreshingly, Drone Racing League is a monumental addition to the Fast Company list in that it has effectively **created a new sport**, entirely.

<https://www.thedronegirl.com/2022/03/24/drl-fast-company-sports-companies/>

NASA Workshop Defines Progress and Goals for Advanced Air Mobility Integration Jessica Reed | March 23, 2022



NASA's Advanced Air Mobility (AAM) Ecosystem Working Groups hosted a virtual workshop this week featuring discussions on AAM integration. Starting in June, the working groups will develop more formal roadmaps based on the priorities and sequencing discussions taking place during this week's workshop. Robert Pearce, NASA's Associate Administrator, Aeronautics Research Mission Directorate, shared his perspective on AAM integration strategies.



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NASA's Robert Pearce emphasized that **safety, sustainability, and scalability are top priorities** for developing and integrating AAM. At the most basic level, AAM connects individuals to resources, services, employment, and community. As AAM evolves, Pearce stated, it will begin with providing air taxi services and delivery of goods, but the community is bound to find endless ways that AAM can add value. He sees access to healthcare as one area that will offer the most benefit for individuals. https://www.aviationtoday.com/2022/03/23/nasa-workshop-defines-progress-goals-advanced-air-mobility-integration/?oly_enc_id=7021F0632090D7B

Skyports raises \$23 million in first close of Series B funding round March 23, 2022 News



All existing institutional shareholders participated in the round including Deutsche Bahn Digital Ventures, Groupe ADP, Solar Ventus, Irelandia and Levitate Capital with a number materially increasing their stake. These investors were joined by Japanese conglomerate Kanematsu Corporation, global industrial property group Goodman Group, Italian

airport platform 2i Aeroporti, backed by Ardian's Infrastructure Fund and F2i Italian Infrastructure Fund, and US based VC firm GreenPoint.

The new capital and the sizeable balance sheets of the investors enables Skyports to accelerate its work with the world's leading electric air taxi manufacturers and operators, providing take-off and landing infrastructure in key launch markets. Skyports will also materially scale its Drone Services operations in new and existing markets, building on active operations in the UK, Europe and Asia. https://uasweekly.com/2022/03/23/skyports-raises-usd-23-million-in-first-close-of-series-b-funding-round/?utm_source=rss&utm_medium=rss&utm_campaign=skyports-raises-usd-23-million-in-first-close-of-series-b-funding-round&utm_term=2022-03-24

25Mar22

Draganfly Medical Response, Search and Rescue Drones Go to Ukraine Miriam McNabb March 24, 2022 DRONELIFE Staff Writer Ian M. Crosby

Today, drone solutions and systems developer Draganfly Inc. announced that it has received an order for its Medical Response and Search and Rescue Drones from temperature-sensitive delivery leader Coldchain Delivery Systems to be immediately deployed by Ukrainian non-profit organization Revived Soldiers Ukraine (RSU).



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Draganfly will initially supply ten Medical Response and Search and Rescue Drones, as well as three more the company itself will be donating to RSU, with a planned total order of up to **200 units**. The drones come equipped with a temperature-managed, top-mounted Medical Response Payload Box capable of transporting as much as 35 pounds of medical supplies, such as blood, pharmaceuticals, vaccines, water, and wound care kits.

“We are extremely honored to work with RSU and Coldchain Delivery Systems to support those affected by the ongoing crisis in Ukraine,” said Draganfly CEO Cameron Chell. “Draganfly has a long and proud history of supporting EMS services and humanitarian aid operations globally. Our Medical Response and Search and Rescue Drones will help RSU deliver critical supplies, equipment, and visual oversight.” <https://dronelife.com/2022/03/24/draganfly-medical-response-search-and-rescue-drones-go-to-ukraine/>

BRINC Donates Drones, Training for Ukrainian Pilots: “BRINC Exists to Do This Kind of Work” _Miriam McNabb March 24, 2022



For the last several days, the BRINC team has worked just over the Ukrainian border at a secret location, training more than a dozen Ukrainian emergency responders on the use of **10 donated LEMUR drones**. The LEMUR drones, used here during peacetime as a critical public safety and SWAT operation tool, offer a valuable solution for search and rescue and defense work.

BRINC’s drones are equipped to enter difficult environments and enable two-way communication, which makes them ideal for search and rescue in complex environments. In cities undergoing continuous Russian attacks, rescues are increasingly dangerous – and the BRINC drones offer responders a valuable tool for finding survivors without putting pilots at risk. Designed to operate in GPS-deprived environments, the LEMUR navigates by laser-based LiDAR, making it less easily hacked or located by oppositions troops. <https://dronelife.com/2022/03/24/brinc-donates-drones-training-for-ukrainian-pilots/>