



## UAS and SmallSat Weekly News

### Contents

- 2 Skydio's New Partnership will Revolutionize Drone Design and Manufacturing
- 3 Russia is developing a drone destroying helicopter drone
- 3 Drones swarm a forest while staying in formation
- 4 This drone tilt-shift video is next-level good
- 4 What you can see with a drone: Amazing photographs
- 5 Flyability raises millions in funding to help drive innovation
- 5 OneWeb emerges from bankruptcy with launch of 36 internet satellites
- 6 FAA Slaps Drone Pilot With \$182,000 Proposed Fine
- 6 SkyPixel And DJI Call For Entries For The SkyPixel 6th Anniversary Photo & Video Contest
- 7 Canada Selects Elbit Systems' Hermes StarLiner UAS for Environmental Protection
- 8 FAA and Kansas establish high-altitude flight corridor to test supersonic unmanned aircraft
- 8 Los Angeles launches one-year program to engage residents around electric urban aircraft
- 9 Drug smugglers turn to drones, advancing operations
- 10 Windracers UAV completes heavy payload medical delivery run in UK
- 10 Sterblue Performs the First US Drone Inspection of Hyperbolic Cooling Towers
- 11 Drone Market Report
- 12 Iris Automation secures \$13 million funding round
- 12 Israel's Percepto announces three regulatory milestones
- 13 High Tech Campus Eindhoven launches lab for autonomous drones in the European Union
- 14 NASA teams reach milestones in drone-related flight programs
- 14 Skyward helps Great River Energy build its drone program
- 15 Congress resurrects MQ-9 Reaper program, adding 16 drones for the Air Force
- 15 DRONE INDUSTRY ON FIRE AFTER US BLACKLISTS DJI OVER CHINESE GOVERNMENT TIES
- 16 Boeing Australia pushes 'loyal wingman' maiden flight to 2021
- 16 Volansi to help the U.S. Air Force build its Skyborg drone
- 17 Winner of the inaugural Drone Show Choreography Competition announced
- 18 Nearthlab Enters Taiwanese Offshore Wind Turbine Market
- 18 DroneShield's counter-drone tech supports U.S. Army exercise
- 19 FAA Issues Santa Special Operating Authority to Engage in Interstate Air Cargo Delivery
- 19 COMMERCIAL DRONE COMPANIES END 2020 WITH A SLEW OF VC FUNDING
- 20 In Virginia Beach, Santa waits inside a snow globe for visitors



## UAS and SmallSat Weekly News

19Dec20

### Skydio's New Partnership will Revolutionize Drone Design and Manufacturing

Miriam McNabb December 17, 2020



Drones manufactured in the U.S. are gaining traction – and a new partnership between U.S. manufacturer [Skydio](#) and [Arris](#), a leader in advanced manufacturing of high-performance products, could help to revolutionize drone design and manufacturing.

Skydio and Arris “have redefined airframe design leveraging Additive Molding™, Arris’s breakthrough carbon fiber manufacturing technology,” says a press release. Arris’s Additive Molding™ is “...a high-speed composites manufacturing technology, combining continuous aligned fibers and electronic components within topology-optimized structures.” Skydio says the new design and manufacturing process will result in better aircraft and faster manufacturing.

Skydio will implement the new design and manufacturing process starting with the new Skydio X2 drone. The new carbon fiber tech will mean “lighter, longer-range, and more robust aircraft structures at scale.” <https://dronelife.com/2020/12/17/drones-manufactured-in-the-u-s-skydios-new-partnership-will-revolutionize-drone-design-and-manufacturing/>

### TransGrid turns to drones to complete powerline installs

Josh Spires Dec. 18th 2020



The drones were recently used to [install bird diverts](#) to powerlines, allowing birds to see the powerlines while flying. The hardware was also installed in less time as no one had to climb up the tower or fly above it in a helicopter and connect it.

The drones were also modified by drone provider Infravision to disable to obstacle avoidance system, which would stop them from getting close to the powerlines and equipping them with propeller guards to get even closer.

In the year, TransGrid worked with Infravision to **install powerlines along 922 transmission poles** in Burrinjuck Gorge in the regional NSW. The task was completed by using heavy-lift drones and breaking the powerlines into two sections. The first section was installed between



## UAS and SmallSat Weekly News

two towers located in steep and rocky terrain not accessible from the ground. The second, a more challenging cable was run along an 800 meter stretch above the Burrinjuck gorge, with the cable terminating at the Burrinjuck substation.

Previously, this sort of work would have been completed by helicopters, which cost much more to fly and require people to watch closely from the air and the ground. The drones can complete the same job in less time at a much lower cost.

<https://dronedj.com/2020/12/18/transgrid-turns-to-drones-to-complete-powerline-installs/#more-44235>

### **Russia is developing a drone destroying helicopter drone** Josh Spires Dec. 18th 2020



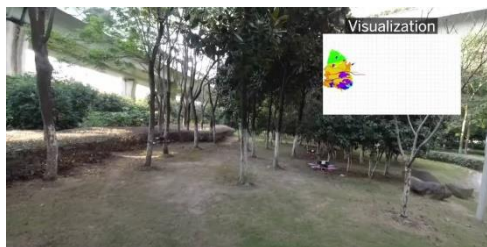
[Russia](#) is reportedly developing its own drone-destroying helicopter drone to work alongside anti-aircraft systems. The program is said to have been pushed forward due to the recent war between Armenia and Azerbaijan that saw Russia join.

The helicopter drone is expected to track down smaller enemy drones flying at lower altitudes and relay the information to the relevant people. It is unclear if the drone will carry any ammunition to shoot enemy drones out of the sky after locating them.

The drone is said to have begun development in November, with a representative stating that it was pushed forward due to the “increasing role of attack drones during the last local conflicts.” Nothing specific about the drone was shared, but it is expected that the drone is being built on existing technologies to speed up the manufacturing process and get it in the air.

<https://dronedj.com/2020/12/18/russia-is-developing-a-drone-destroying-helicopter-drone/#more-44257>

### **Drones swarm a forest while staying in formation** Josh Spires Dec. 17th 2020



[Researchers from Cornell University](#) and arXivLabs have shown off their latest drone-related project that uses a decentralized and asynchronous systematic solution to dynamically avoid obstacles while flying in a swarm.

Each drone is equipped with vision sensors that create a virtual map of the world. All the data is collected to create one large map available to all the drones, allowing each one to know exactly where to fly. The system has been tested on drones



## UAS and SmallSat Weekly News

with very little processing power and poor wireless connections, making it a great solution for rural areas and areas without a great internet connection.

So far, they have tested 10 drones. The more drones in the air, the more data can be collected in less time, making the drones perfect for surveying areas of land and running search and rescue missions. Just think how much faster someone can be found if 50 drones were scanning the area at once, compared with a few drones, a helicopter and some people on the ground.

<https://dronedj.com/2020/12/17/drones-swarm-a-forest-while-staying-in-formation/#more-44102>

### **This drone tilt-shift video is next-level good** Scott Simmie Dec. 17th 2020



A tilt-shift lens is a highly specialized piece of gear. You can get them for DSLR cameras, and they allow you to take very precise control over what portion of the screen remains in focus. If you're patient with adjusting it, and if you ramp up the speed of a video, it creates the illusion that you're looking at a miniature scene. This

is particularly true when you see people and vehicles moving about. They look almost like toys.

Flying most drones doesn't lend itself to using a real tilt-shift lens, unless you happen to have a heavy lift drone carrying a camera with swappable lenses. Some of our readers have that capability, but most who are playing around with tilt-shift use software in postproduction to obtain the effect.

After we posted [our original story](#), a pilot and creator named [Lloyd Garden](#) reached out to us on Facebook. They offered a link to their own video. And, wow, here it is:

<https://dronedj.com/2020/12/17/drone-tilt-shift-video/#more-44190>

**20Dec20**

### **What you can see with a drone: Amazing photographs** 118 PHOTOS Dec. 10, 2020



Vehicles line up to enter a COVID-19 testing site at Dodger Stadium on the first day of new stay-at-home orders on Dec. 7, 2020 in Los Angeles, Calif. Under state order, 33 million residents of California have entered into regional shutdowns in an attempt to contain the spread of the coronavirus as ICU capacity has dipped below 15 percent in most regions of the

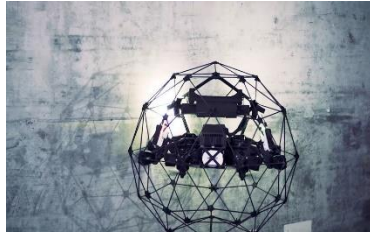
state. Barbershops, hair and nail salons, museums, zoos, movies theaters are closed while restaurants are open for takeout or delivery only.



## UAS and SmallSat Weekly News

A very nice collection of aerial images... <https://www.usatoday.com/picture-gallery/tech/news/2018/07/03/what-you-can-see-with-a-drone-amazing-photographs/36581467/>

**Flyability raises millions in funding to help drive innovation** HEADLINE NEWS JOE PESKETT DECEMBER 20, 2020



Flyability has raised **EUR 7 million** in a Series C co-led by Future Industry Ventures and Swisscom Ventures. Existing investor, ETF Partners, is also participating in the round. Flyability specializes in technology that optimizes indoor inspections in the industrial sector. With the investment, Flyability will focus on the development of their market-leading and innovative products and accelerate global expansion.

Founded in 2014 by Patrick Thévoz and Adrien Briod, Flyability specializes in drone-based B2B solutions for companies with a focus on energy, power generation, chemical, mining and maritime industries. With its technology, the company enables the indoor exploration and inspection of inaccessible and confined spaces. As a result, safety risks for energy workers can be significantly reduced, as well as labor costs incurred from complex manual inspections. In addition, environmental risks associated with the inspection of critical infrastructures can also be identified and prevented.

In the past 6 years, Flyability has grown from a spin-off of EPFL in Switzerland to a company with **100 employees** pioneering indoor research and inspections with drones. The company became a global market leader with offices in Europe and the USA and a network of over 50 resellers including China and Japan. <https://www.commercialdroneprofessional.com/flyability-raises-millions-in-funding-to-help-drive-innovation/>

**21Dec20**

**OneWeb emerges from bankruptcy with launch of 36 internet satellites** WILLIAM HARWOOD DECEMBER 18, 2020 CBS NEWS

Bouncing back from bankruptcy, OneWeb resumed building out its constellation of internet satellites Friday, launching 36 broadband relay stations atop a Russian Soyuz rocket to boost the company's orbital constellation to **110**.



## UAS and SmallSat Weekly News



Fifteen more Soyuz launches, purchased through the European company Arianespace, are currently planned by OneWeb. Arianespace oversees Soyuz launches from the Guiana Space Center in South America while a subsidiary, Starsem, handles commercial Soyuz launches at Vostochny and the Baikonur Cosmodrome in Kazakhstan. Friday's launch was the **first fully commercial flight** to take off from Vostochny, Russia's newest spaceport.

SpaceX has launched 995 of its Starlink internet relay stations atop Falcon 9 rockets and **plans to launch thousands more in multiple orbital planes**, providing direct high-speed internet service to any point on the planet. Beta testing is currently underway in the northern United States and Canada. <https://www.cbsnews.com/news/oneweb-emerges-from-bankruptcy-with-launch-of-36-internet-satellites/>

### FAA Slaps Drone Pilot With \$182,000 Proposed Fine Dec 17, 2020,09



Jonathan Rupprecht Contributor Aerospace & Defense *I'm an aviation lawyer, commercial pilot, & flight instructor.*

The FAA was gracious enough to give me a copy of the proposed penalty letter which went much more into detail as to the alleged violations they are citing him with. No, I'm not going to call him out by name. He has 182,000 problems and I don't need to give another one. I'm doing this story to educate the drone community on what can happen if you do not respect the Federal Aviation Regulations.

It was not just one flight. The proposed penalty letter lists at least 26 times when the drone pilot flew around the Philadelphia area from December 2019 to August 2020. During those flights, the FAA is alleging that the pilot violated multiple regulations at the same time on each flight. This is how you can rack up a \$182k fine pretty quickly.

<https://www.forbes.com/sites/jonathanrupprecht/2020/12/17/drone-pilot-received-182000-proposed-fine/?sh=7ffa02192fe0>

### SkyPixel And DJI Call For Entries For The SkyPixel 6th Anniversary Photo & Video Contest December 21, 2020 News



Running from December 18, 2020 to February 18, 2021, this year's contest introduces five new categories including Vlog, FPV, Showreel, Hometown and Environment. The goal is to expand

Robert Rea | Axcel Innovation | Charlottesville and Portsmouth, VA  
[robert.rea@axcel.us](mailto:robert.rea@axcel.us) | 757-309-5869 | [www.axcelinnovation.net](http://www.axcelinnovation.net)



## UAS and SmallSat Weekly News

creative possibilities for content creators and storytellers to share and showcase their unique perspective of the world.

This SkyPixel 6th Anniversary Aerial Photo & Video Contest consists of 11 categories in two formats, one in photography and the other using video. There is no restriction on the type or brand of shooting equipment, and participants can submit as many photos or videos as they wish. This year's judging panel is composed of award-winning filmmakers, photographers and videographers

SkyPixel and DJI will give away more than 55 awards with prizes valued at \$83,000. The grand prize winners in the photo and video category will each receive a cash prize of \$7,500, and prizes in other award categories include the Mavic 2, Mavic Air 2, RS 2, Pocket 2 and other DJI products. [https://uasweekly.com/2020/12/21/skypixel-and-dji-call-for-entries-for-the-skypixel-6th-anniversary-aerial-photo-video-contest/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=skypixel-and-dji-call-for-entries-for-the-skypixel-6th-anniversary-aerial-photo-video-contest&utm\\_term=2020-12-21](https://uasweekly.com/2020/12/21/skypixel-and-dji-call-for-entries-for-the-skypixel-6th-anniversary-aerial-photo-video-contest/?utm_source=rss&utm_medium=rss&utm_campaign=skypixel-and-dji-call-for-entries-for-the-skypixel-6th-anniversary-aerial-photo-video-contest&utm_term=2020-12-21)

## Canada Selects Elbit Systems' Hermes StarLiner UAS for Environmental Protection

December 21, 2020 News



[Elbit Systems](#) announced today that following a competitive procurement process, Public Services and Procurement Canada, on behalf of Transport Canada, selected the Hermes™ StarLiner Unmanned Aircraft System to support maritime environmental protection missions in the Arctic and along the Canadian Eastern and Western coasts, as part of the Canadian National Aerial Surveillance Program.

**Fully certified to operate in civilian airspace**, the Hermes StarLiner UAS will **take-off and land in civilian airfields** to perform a wide range of operations to reduce harmful environmental impacts, including detection of oil pollution, Ice Patrol and Reconnaissance, wildlife survey and Fisheries Patrol.

Adverse weather conditions and short endurance degrade the search and surveillance capabilities of manned aircraft, often preventing them from executing their missions. Deploying the Hermes StarLiner will enable Transport Canada to maintain **persistent** surveillance over vast bodies of water and long coastlines. Capable of continuous flight, the Hermes StarLiner can operate in adverse weather conditions in both day and night, improving mission effectiveness and increasing the number of missions that can be safely executed.



## UAS and SmallSat Weekly News

[https://uasweekly.com/2020/12/21/canada-selects-elbit-systems-hermes-starliner-uas-for-environmental-protection/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=canada-selects-elbit-systems-hermes-starliner-uas-for-environmental-protection&utm\\_term=2020-12-21](https://uasweekly.com/2020/12/21/canada-selects-elbit-systems-hermes-starliner-uas-for-environmental-protection/?utm_source=rss&utm_medium=rss&utm_campaign=canada-selects-elbit-systems-hermes-starliner-uas-for-environmental-protection&utm_term=2020-12-21)

### **FAA and Kansas establish high-altitude flight corridor to test supersonic unmanned aircraft** December 21, 2020 Jenny Beechener UAS traffic management news



The Kansas Supersonic Transportation Corridor is a 770-nautical-mile racetrack-shaped corridor above 39,000 feet. The FAA's Kansas City Air Route Traffic Control Center assessed this route to protect the safety and efficiency of the National Airspace system. The corridor is entirely in federal airspace above Kansas, running the length of the state, just north of the Kansas-Oklahoma border. The

route will support sustained flight up to Mach 3 and is within reach of numerous airports equipped to provide fuel, ground and technical support.

Bob Brock, KDOT Director of Aviation, said the SSTC gives innovators like Boeing, Lockheed Martin, Aerion, Spike and Boom Aerospace the airspace necessary to test aircraft designs that reduce the **impact of sound** on nearby communities. Brock said the Kansas supersonic corridor also offers logistical advantages by being the first and only such commercial supersonic flight test route in the nation's interior.

Industry forecasts show a market for as many as 300 supersonic aircraft over a 10-year period, representing as much as \$40 billion in revenue and requiring a "deep bench of skilled manufacturing talent," according to Kansas state officials.

<https://www.unmannedairspace.info/latest-news-and-information/faa-and-kansas-agreement-establishes-high-altitude-flight-corridor-to-test-supersonic-unmanned-aircraft/>

### **Los Angeles launches one-year program to engage residents around electric urban aircraft** December 17, 2020 Jenny Beechener UAS traffic management news, Urban air mobility



The public-private Urban Air Mobility Partnership between the Mayor's Office, the Los Angeles Department of Transportation, and Urban Movement Labs aims to enable urban air mobility.

According to a press release by the City of Los Angeles, the initiative will help Los Angeles map out challenges identified by





## UAS and SmallSat Weekly News

local, diverse stakeholders surrounding public airspace and property rights — and implement solutions to these issues. Working together, UML and the City will lead a multi-stakeholder effort to visualize a “vertiport,” a new piece of LA’s transportation network where people can go to fly on an urban air mobility aircraft. The one-year partnership will culminate in a **policy toolkit** that can be utilized and deployed by cities, counties and tribal governments across the country.

With financial support from the Urban Air Mobility Division of Hyundai Motor Group, this partnership will also see UML work hand-in-hand with Estolano Advisors to hire an Urban Air Mobility Fellow who will be charged with advancing a public engagement strategy around urban air mobility — how it will strengthen our economy, when we might see vehicles take flight, and how it will impact and improve Angelenos’ daily lives.

<https://www.unmannedairspace.info/latest-news-and-information/los-angeles-launches-one-year-programme-to-engage-residents-around-introduction-of-electric-urban-aircraft/>

### **Drug smugglers turn to drones, advancing operations** Josh Spires Dec. 21st, 2020



Over the last few months, drones have been the go-to method of [smuggling drugs](#) across the U.S.-Mexico border.

The main reason cartels have turned to drones is the new border wall being constructed, but the wall isn’t an obstacle for the cartels using drones.

The border patrol struggles to track down the drones as it relies on visually spotting them, resulting in almost zero leads coming from investigations. The drones are similar to those used to drop drugs off in prisons. The cartels could also be using the tech to monitor the area and guards along the border. If they really want to get something across the border, decoy drones could also be used as a distraction to allow the main drone to make its way through.

We have seen many government agencies and the air force using the technology to keep drones out of sensitive areas. The same could be used along the border to catch the rogue drones, control them, and seize the drugs autonomously. <https://dronedj.com/2020/12/21/drug-smugglers-turn-to-drones-advancing-operations/#more-44526>



## UAS and SmallSat Weekly News

A big issue with installing counter-drone systems is the funding and the amount of time it would take to line the whole border with them. <https://dronedj.com/2020/12/21/drug-smugglers-turn-to-drones-advancing-operations/#more-44526>

### **Windracers UAV completes heavy payload medical delivery run in UK** HEADLINE NEWS JOE PESKETT DECEMBER 21, 2020



Windracers ULTRA completed a 50kg payload UAV flight between Land's End and the Isle of Scilly in the UK as part of a response to support the NHS with COVID-19 logistics. The drone is **the only operational UAV** with the capacity to carry a **100 kg payload over 1000 km**.

The UAV's 50kg payload consisted entirely of medical supplies, which it delivered directly to St Mary's NHS in **30 minutes**.

Charles Scales, CEO of Windracers, said: "This will be **the first time** a large, useful, economic, load carrying UAV is used between the Isles of Scilly and mainland Cornwall.

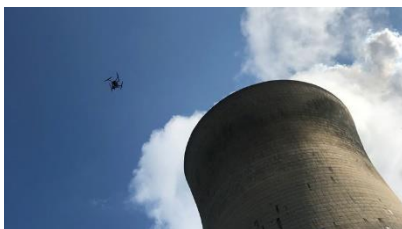
Normally, medical supplies are transported between the Cornwall and the Isles of Scilly via ferries, which are currently operating on a reduced service as a result of Covid-19.

<https://www.commercialdroneprofessional.com/windracers-uav-completes-heavy-payload-medical-delivery-run-in-uk/>

**22Dec20**

### **Sterblue Performs the First US Drone Inspection of Hyperbolic Cooling Towers**

João Antunes Infrastructure & Transport



Instead of having human operators hanging off ropes to inspect huge hyperbolic cooling towers, [Sterblue](#), a software developer for industrial asset inspections and management, developed a **fully automated** drone solution.

Using an off-the-shelf drone connected to Sterblue's mobile app, the company performed an exterior inspection of a power plant's hyperbolic cooling tower concrete shell at a major American utility's site, which they began working with when they were selected through Electric Power Research Institute's [Incubatenergy Labs program](#). With a height of 330 ft and a diameter ranging between 164 and 246 ft, inspecting a cooling tower is



## UAS and SmallSat Weekly News

not an easy task. However, in over three days, Sterblue uploaded around 10,000 pictures to its cloud platform, where **dedicated AI models** automatically detected and quantified cracks, spalling, and other anomalies in the concrete infrastructure.



Apart from the obvious safety advantages it presents, Sterblue's drone solution can now inspect an entire cooling tower in less than a day and detect and visualize **0.011 in. precision defects**, representing a **time saving of more than 50%** on the overall process. While the company's focus was mostly on wind turbine and power grid inspections, the cooling tower's inspection will help expand their product. [https://www.commercialuavnews.com/infrastructure/sterblue-performs-the-first-us-drone-inspection-of-hyperbolic-cooling-towers?utm\\_source=marketo&utm\\_medium=email&utm\\_campaign=newsletter&utm\\_content=newsletter&mkt\\_tok=eyJpIjoiTVRrMk5tTmInbVksTnpnNCIsInQiOiJWcWclJ1Nkk3YUVUVUVTI2RFpIOFVxOVwvZndFekQ3SGRodHhsenBEQUdkV0RWWHJVtZnQcWdnSGF5MVVMR1FZbFZTSEh6anVTdkdOWlINRIErQ05sXC9NMFNHd2hRVWwzVIU5a0t1STNpUETsz0FuZGVtXC9iZm9PSWRJXC9adzlsYWU5RUJifQ%3D%3D](https://www.commercialuavnews.com/infrastructure/sterblue-performs-the-first-us-drone-inspection-of-hyperbolic-cooling-towers?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiTVRrMk5tTmInbVksTnpnNCIsInQiOiJWcWclJ1Nkk3YUVUVUVTI2RFpIOFVxOVwvZndFekQ3SGRodHhsenBEQUdkV0RWWHJVtZnQcWdnSGF5MVVMR1FZbFZTSEh6anVTdkdOWlINRIErQ05sXC9NMFNHd2hRVWwzVIU5a0t1STNpUETsz0FuZGVtXC9iZm9PSWRJXC9adzlsYWU5RUJifQ%3D%3D)

---

## Drone Market Report



Snapshot of insights from the global drone market report:

- Drone market is forecast to grow to **\$42.8 billion by 2025 at 13.8% CAGR**
- **Inspection is top application of drones with drone deliveries growing fast**
- **Asia to remain the biggest drone market driven by China and Japan**
- **India is expected to be the third-largest drone market in the world by 2025**



## UAS and SmallSat Weekly News

<https://mail.google.com/mail/u/0/#inbox/WhctKJWJHdLJkRkgsNCjFdpbmrGcvqmjnTVkkwvBJdzzTQTCrCMclPZdJhtHVqxKkLWLGg>

### **Iris Automation secures \$13 million funding round** HEADLINE NEWS JOE

PESKETT DECEMBER 22, 2020



Founded in 2015, Iris Automation develops detection systems used to help provide Detect-and-Avoid capabilities that enable safe commercial drone operations including Beyond Visual Line of Sight missions.

The funding includes follow-on investment by Bessemer Venture Partners, Bee Partners, OCA Ventures and new investors Sony Innovation Fund and Verizon Ventures. The addition of this strategic investment acknowledges the criticality of collision avoidance and safety technology to the future aviation community.

<https://www.commercialdroneprofessional.com/iris-automation-secures-13-million-funding-round/>

### **Israel's Percepto announces three regulatory milestones** HEADLINE NEWS JOE

PESKETT DECEMBER 22, 2020



Percepto completed the Type Certification and D&R test flight phase for the US' FAA, and gained countrywide EVLOS in Australia and BLOS in Norway.

Completing the TC D&R testing phase is a **major achievement** in the Type Certification process for Percepto and for the Type Certification of UAS in general. Percepto is pursuing its second TC approval which will include full Beyond Visual Line of Sight flights, allowing remote operations for its customers.

One of the first sUAS to join the exclusive FAA process, its rigorous D&R stage declared Percepto's Sparrow drone-in-a-box system worthy of a Type Certificate, incorporating 150 hours of test flights under all weather conditions in the USA and Israel.

The recently announced ASTM compliant **integral parachute** enabled the regular testing time of 375 hours to be reduced significantly.

The EVLOS waiver in Australia, granted by CASA, allows Percepto's Sparrow drone to fly at a total distance of 1500m from an observer with multiple visual observers. Full BVLOS approvals



## UAS and SmallSat Weekly News

in the country are expected in Q1 2021. The waiver is in line with some of Percepto's largest customers in Australia, seeking to remotely manage inspection missions without needing a pilot on site. <https://www.commercialdroneprofessional.com/israels-percepto-announces-three-regulatory-milestones/>

### High Tech Campus Eindhoven launches lab for autonomous drones in the European Union December 22, 2020 News



High Tech Campus Eindhoven (HTCE) initiates the rollout of a new generation of advanced autonomous aviation digital infrastructure. This will benefit the Urban Air Mobility of cities in a safe, secure and regulated way. HTCE has appointed [SERENDIPITY B.V.](#) to execute the technical coordination of its field lab.

"With the rise of drone use, flying taxis and autonomous last-mile delivery, we need to prepare ourselves for the future," says Jan-Willem Neggers, HTCE Managing Director.

The field lab will be part of the Flying Forward 2020 consortium, a three-year collaborative innovation and research project recently funded by the European Commission. The consortium consists of public and private organizations, universities, and international multi-disciplinary teams of experts such as Digie, EUROUSC Italia, Nalantis, Serendipity, University of Maastricht and VERSES. FF2020 is supported by several large institutions including the European Space Agency, NXP, VDL, Microsoft, Nokia and LUMO labs.

**High Tech Campus Eindhoven** is the smartest km<sup>2</sup> in Europe with more than **220 companies, startups and institutes**. More than **12,000** researchers, developers and entrepreneurs are working on developing future technologies and products that will affect the lives of billions of people. The ecosystem of open innovation helps companies based at HTCE accelerate innovation by offering easy access to high tech facilities and international networks. [www.hightechcampus.com](http://www.hightechcampus.com). [https://uasweekly.com/2020/12/22/high-tech-campus-eindhoven-launches-first-field-lab-for-autonomous-drones-in-the-european-union/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=high-tech-campus-eindhoven-launches-first-field-lab-for-autonomous-drones-in-the-european-union&utm\\_term=2020-12-22](https://uasweekly.com/2020/12/22/high-tech-campus-eindhoven-launches-first-field-lab-for-autonomous-drones-in-the-european-union/?utm_source=rss&utm_medium=rss&utm_campaign=high-tech-campus-eindhoven-launches-first-field-lab-for-autonomous-drones-in-the-european-union&utm_term=2020-12-22)



## UAS and SmallSat Weekly News

### **NASA teams reach milestones in drone-related flight programs** Josh Spires Dec. 22nd 2020



The massive list of milestones the agency has achieved over the last year is impressive. You can head [here](#) to check them out. This post will focus on several drone-related items in the yearlong achievements.

**Advanced Air Mobility National Campaign** - NASA has [continued to work with the FAA](#) throughout the year to ensure drones can fly in harmony with current aircraft in the sky.

**Unmanned traffic management** - Around the middle of the year, NASA took to the sky at its Ames Research Center in California to begin test flights of a new drone monitoring method called [Time-Based Conformance Monitoring \(TBCM\)](#). The system can know if the drone stays on path or needs to be brought back.

**Augmented reality air traffic management** - NASA has created an [augmented reality solution](#) that can run on commercially available headsets. The software allows pilots and air traffic controllers to see key information about aircraft in the air and the flight path of each one.

**Scalable Traffic Management for Emergency Response Operations** - NASA began a new research activity to use drones as a way of responding to natural disasters such as wildfires and hurricanes.

**Ingenuity Mars helicopter** - Earlier in the year, NASA sent up its Perseverance Mars rover along with a special [Ingenuity helicopter drone](#) to demonstrate powered flight in the thin Mars atmosphere, demonstrate miniaturized flying technology on another planet and get the helicopter to operate autonomously. <https://dronedj.com/2020/12/22/nasa-teams-reach-milestones-in-drone-related-flight-programs/#more-44613>

### **Skyward helps Great River Energy build its drone program** Josh Spires Dec. 22nd 2020



The company now has 11 certified drone pilots and a fleet of 13 aircraft used to cut down costs and improve workplace safety. It has had a drone program in place since 2015.

The company was set up with Skyward's aviation management



## UAS and SmallSat Weekly News

platform to oversee drone operation from flight planning and management to airspace access and real-time monitoring. The Great River team uses the drones for transmission line inspections, structural photography, nest inspections, 3D mapping, thermal imaging, rope pulling, LiDAR and marketing materials. The company has also become a drone advocate by participating in industry events and helping others with their drone programs.

<https://dronedj.com/2020/12/22/skyward-helps-great-river-energy-build-its-drone-program/#more-44596>

23Dec20

### Congress resurrects MQ-9 Reaper program, adding 16 drones for the Air Force

Valerie Insinna December 22, 2020



WASHINGTON — Buried inside the massive [\\$2.3 trillion spending package](#) passed by Congress on Monday was a **\$286 million** lifeline for General Atomics that will keep the Air Force buying [MQ-9 Reaper drones](#) at least one more year.

In its fiscal 2021 budget request, the Air Force eliminated funding to procure the Reaper, instead requesting about \$172 million to begin shutting down General Atomics' production line in Poway, California. Luckily for General Atomics, Congress has formally rejected the Air Force's plan.

In its \$696 billion spending bill for the Defense Department, lawmakers added about \$286 million to buy 16 MQ-9 Reaper drones for the Air Force. That sum brings total procurement funding for the MQ-9 to approximately \$344 million in FY21. Both chambers approved the legislation Monday evening, and it now awaits President Donald Trump's signature.

<https://www.airforcetimes.com/air/2020/12/22/congress-resurrected-the-mq-9-reaper-program-adding-16-drones-for-the-air-force/>

### DRONE INDUSTRY ON FIRE AFTER US BLACKLISTS DJI OVER CHINESE GOVERNMENT

TIES December 23, 2020 Sally French The Drone Girl News



been weary of the company's potential Chinese government ties.

The biggest talk of the drone industry this week: news that the U.S. government has added DJI to a list of companies on its restricted trade list. DJI is a Chinese drone manufacturer, and government officials have



## UAS and SmallSat Weekly News

Dozens of Chinese companies, including DJI, were put on a restricted trade list Friday. China's top chipmaker, SMIC, was also placed on the list. While it's not entirely clear why exactly DJI was added to the list, some have suggested that it was DJI's [reported work](#) for the Chinese government, while others have suggested DJI is involved in potential human rights violations. <https://www.thedronegirl.com/2020/12/23/blacklist-dji-chinese-government/>

### **Boeing Australia pushes 'loyal wingman' maiden flight to 2021** Greg Waldron 20 December 2020

The Boeing Australia Airpower Teaming System loyal wingman aircraft is moving closer to its maiden flight, after completing its first high-speed taxi test.



Boeing and the Royal Australian Air Force will resume final taxi tests and preparations for flight in early 2021. Plans had originally called for the first flight of the ATS before the end of 2020. Program director Shane Arnott attributes the delay to the coronavirus pandemic.

"Boeing and the Royal Australian Air Force agreed to pause operations for the remainder of the year due to unique challenges related to the global Covid-19 pandemic," he says. "We will commence flight testing when the range reopens in 2021. Given the very dynamic nature of the global situation, we've had to do some things differently."

Boeing and the RAAF undertook the taxi tests at "a remote test location in Australia". During the high-speed taxi they monitored aircraft performance and instrumentation from a ground control station. [https://www.flightglobal.com/defence/boeing-australia-pushes-loyal-wingman-maiden-flight-to-2021/141691.article?utm\\_campaign=FG-DEFENCE-FILLER-231220-DE&utm\\_medium=email&utm\\_source=newsletter&utm\\_content=newsletter](https://www.flightglobal.com/defence/boeing-australia-pushes-loyal-wingman-maiden-flight-to-2021/141691.article?utm_campaign=FG-DEFENCE-FILLER-231220-DE&utm_medium=email&utm_source=newsletter&utm_content=newsletter)

### **Volansi to help the U.S. Air Force build its Skyborg drone** [Josh Spires](#) Dec. 23rd 2020



[The Air Force](#) Life Cycle Management Center has announced VOLY Defense Solutions, a subsidiary of Volansi, as its Skyborg drone program's official vendor. The new contract is worth a massive **\$400 million** and will produce specific parts for the program.

[As a Skyborg vendor](#), VOLY will be tasked with designing and producing specific drone aspects, which are still to be decided. The program's goal is to have various vendors working on the drone to have a diverse selection of parts that make for a competitive environment.





## UAS and SmallSat Weekly News

This is different from previous programs that would use a single vendor to create the drone. The vendors working alongside VOLY include **Boeing, General Atomics Aeronautical Systems, Kratos Unmanned Aerial Systems, and Northrop Grumman.**

The Skyborg program is being used as a foundation to build future autonomous technologies that will eventually create a family of drones for the U.S. Air Force. This program will also allow it to operate, while keeping the costs low, an aircraft that can outperform any other in its class.

This program will put Volansi and VOLY Defense Solutions in the limelight, especially as they work alongside some of the biggest aeronautical companies in the world.

<https://dronedj.com/2020/12/23/volansi-to-help-the-u-s-air-force-build-its-skyborg-drone/>

**Winner of the inaugural Drone Show Choreography Competition announced** Josh Spires Dec. 23rd 2020



The inaugural [International Drone Show Choreography Competition](#) winner has been chosen, with their drone show being played back in the real world for the first time. The winner, Angelito from the Philippines, won an iPhone 12, a live drone performance and a drone show training course.

The competition required participants to create a drone show no longer than five minutes long with exactly 50 drones. They had around a month to develop an idea and animate it.

Earlier this week, the winners were announced by SPH Engineering, the company behind the Competition. The winning show took on a Christmas theme, displaying a Christmas tree, a card, a heart with mistletoe in the background, a candy cane and some other awesome flying designs.

The second-place winner, Isabel from Mexico, took home a new 6th Gen Apple Watch and a drone show training course. You can check out her [flight here](#), a fast-paced show with a New Year's theme.

Fu from China, the third-place winner, followed along with a New Year's theme, creating some cool images with the drones. You can check that [out here](#). See the winner here:

<https://dronedj.com/2020/12/23/winner-of-the-inaugural-drone-show-choreography-competition-announced/#more-44758>



## UAS and SmallSat Weekly News

### **Nearthlab Enters Taiwanese Offshore Wind Turbine Market** December 23, 2020 News



[Nearthlab](#), an autonomous drone solution provider for wind turbine inspection, announced today that the company successfully completed an offshore wind turbine inspection off the coast of Taiwan in partnership with Siemens Gamesa Renewable Energy and Formosa I Wind Power Ltd.

The turbines inspected in Taiwan are 6MW-class turbines with blades reaching over 75 meters. Offshore wind turbines are harder to inspect and repair as they have lower accessibility compared to onshore wind turbines. Drone inspection has become a favorable option for farm owners and operators, and more so for those located in the offshore sites.

Founded in 2015, Nearthlab provides **AI-powered** O&M solutions for the infrastructure inspection market. With extensive experience in wind turbine blade inspection, Nearthlab's autonomous drone takes **fifteen minutes** of flight time to finish the inspection for one wind turbine. [https://uasweekly.com/2020/12/23/nearthlab-enters-taiwanese-offshore-wind-turbine-market-with-siemens-gamesa-renewable-energy/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=nearthlab-enters-taiwanese-offshore-wind-turbine-market-with-siemens-gamesa-renewable-energy&utm\\_term=2020-12-23](https://uasweekly.com/2020/12/23/nearthlab-enters-taiwanese-offshore-wind-turbine-market-with-siemens-gamesa-renewable-energy/?utm_source=rss&utm_medium=rss&utm_campaign=nearthlab-enters-taiwanese-offshore-wind-turbine-market-with-siemens-gamesa-renewable-energy&utm_term=2020-12-23)

**24Dec20**

### **DroneShield's counter-drone tech supports U.S. Army exercise** Josh Spires Dec. 23<sup>rd</sup> 2020



[Counter-drone company DroneShield](#) has shared that it successfully demonstrated its technology during the recent U.S. Army Defense in Depth Exercise. The company's DroneSentry, DroneSentry-X, RfPatrol, and DroneGun were all in action, demonstrating their capability.

DroneShield's [DroneSentry system](#) detected radio frequencies coming off the drones and triangulated each one's location thanks to the RfOne sensors built into the system. The demonstration took place at the Mercedes-Benz Superdome in New Orleans, Louisiana. The system was also able to work with the U.S. Army's Forward Area Air Defense Command and Control software, allowing DroneShield's range of sensors to be supported easily.



## UAS and SmallSat Weekly News

The FAAD C2 software was approved by the Department of Defense Joint Counter Small-Unmanned Aircraft Systems Office earlier in the year. It will allow for seamless integration with DroneShield's counter-drone solutions. <https://dronedj.com/2020/12/23/dronesields-counter-drone-tech-supports-u-s-army-exercise/#more-44711>

### **FAA Issues Santa Special Operating Authority to Engage in Interstate Air Cargo Delivery** Miriam McNabb December 23, 2020



There are no Grinches at the FAA. “The Federal Aviation Administration today announced it has granted Santa Claus and his reindeer-powered sleigh special operating authority to engage in interstate air-cargo-delivery services directly to rooftops throughout the United States on Christmas Eve.”

This year, Santa's sleigh has been superpowered – and the FAA has worked to adjust their licensing accordingly. This season, “for the first time ever, the FAA issued Santa a special [commercial space license](#) for a crewed mission to the International Space Station using his StarSleigh-1 space capsule powered by the Rudolph Rocket,” says the press release. “The mission license includes both launch and reentry operations and will occur from a U.S.-based spaceport.”

“We are pleased to help Santa safely navigate through the National Airspace System to bring his unique and universal brand of good will and joy to children and adults of all ages—even to those orbiting the Earth,” said FAA Administrator Steve Dickson. “Let's face it, 2020 was a difficult year and we all could use some special holiday cheer that only Santa can deliver.” <https://dronelife.com/2020/12/23/faa-issues-santa-special-operating-authority-to-engage-in-interstate-air-cargo-delivery/>

### **COMMERCIAL DRONE COMPANIES END 2020 WITH A SLEW OF VC FUNDING** December 24, 2020 Sally French The Drone Girl News



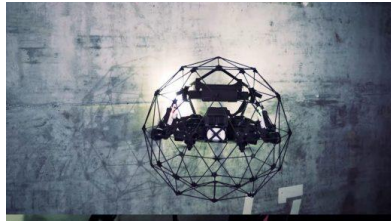
Here's one bout of good news to close out 2020 on a relatively strong note for the drone industry: two strong VC funding rounds, announced this month.

Indoor inspection drone company Flyability



## UAS and SmallSat Weekly News

announced in December that it had raised 7 million euros (about **\$8.5 million**) in a Series C funding round. That announcement came just days after computer vision-based technology company Iris Automation closed **\$13 million** in Series B venture capital financing.



*Flyability's Elios 2 drone in action*

Flyability's roughly \$8.5 million Series C round was co-led by Future Industry Ventures and Swisscom Ventures. Existing investor, ETF Partners, also participated in the round.

<https://www.thedronegirl.com/2020/12/24/vc-funding-flyability-iris/>

## In Virginia Beach, Santa waits inside a snow globe for visitors KIMBERLY PIERCEALL THE VIRGINIAN-PILOT DEC 23, 2020



Santa Claus waves at Elena Urban, 3, from inside Santa's Snowglobe at Town Center in Virginia Beach on Tuesday, Dec. 22, 2020.

It's not too surprising that even the big man who normally had us sit on his lap as we whispered our gift list in his ear had to recalibrate in 2020.

He, too, learned to work from home, taking video calls every day for weeks, and when he has made in-person visits to his usual indoor mall haunts, his bearded face has been bedecked in a mask, and he has kept his distance. No lap sitting. Instead, visitors have typically found him on a bench sitting behind a thick plastic barrier.

In one Virginia Beach spot, though, he's had his own bubble — a large inflatable snow globe in the heart of Town Center. There, the North Pole's finest could still radiate warmth and love through his plastic shell, putting on a 3-4 hour, one-man stage show with brief intermissions for a milkshake. Most importantly, for the man protected inside, is not needing to mask his merry dimples, his rosy cheeks, his cherry nose and his genuine joy at seeing each new girl and boy.

<https://www.pilotonline.com/holidays/vp-bz-santa-mall-covid-20201223-r5oqxucnczd7boucpa6vlp6oi-story.html>