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More Access to Airspace to Fly Drones



and Capability system.

Starting today more than [100 control towers and airports](#) will be added to the hundreds of Federal Aviation Administration air traffic facilities and airports that currently use the Low Altitude Authorization

LAANC is a collaboration between the FAA and industry that directly supports the safe integration of Unmanned Aircraft Systems into the nation's airspace. It expedites the time it takes for a drone pilot to receive authorization to fly under 400 feet in controlled airspace. Drone pilots will have access to more than 400 towers covering nearly 600 airports.

Contract towers are air traffic control towers that are staffed by employees of private companies rather than by FAA employees. The expansion to more than 100 contract towers means the FAA has further increased drone pilots' access to controlled airspace safely and efficiently.

LAANC is currently used by commercial pilots who operate under the [FAA's small drone rule](#). The FAA is upgrading it to allow recreational flyers to use the system and in the future, recreational flyers will be able to obtain authorization from the FAA to fly in controlled airspace. For now, recreational flyers who want to operate in controlled airspace may only do so at [fixed sites](#). For updates to LAANC capabilities, visit www.faa.gov/go/laanc.
<https://mail.google.com/mail/u/0/#inbox/WhctKJVRKFHcdVkJFHJRGJQNmHxNwbPPhbxvFCGMmlXmNdxSWTLsdHlWWkTbgWkxICsPJRdb>

Vigilant Spirit UAV ground control software

The Air Force developed a new, non-proprietary UAV software that can control multiple groups and types of UAVs that can be customized for individual operators or missions. It's called the Vigilant Spirit Control Software.



The VSCS suite was written using publicly available software development tools. Emphasis was placed on designing applications to be run on the Microsoft Windows operating system. The bulk of the software was written in the C# language and to a lesser extent C++ and OpenGL graphics language.



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The 711th Human Performance Wing is using an information transfer agreement or a license agreement to provide private companies with access to its Vigilant Spirit Control Station software package.

Vigilant Spirit Control Station comprises a multitude of tools to aid both the researcher and UAS operator. (Air Force illustration)



Interested parties can find out more on how to obtain the software from Brian Metzger, senior technology manager at TechLink, by contacting him at brian.metzger@montana.edu.

https://techlinkcenter.org/technologies/vigilant-spirit-uas-control-software/?utm_source=uas_newsletter&utm_medium=email&utm_campaign=technology

Percepto Raises \$15m to Accelerate Adoption of Autonomous Drone-in-a-Box Solution

Malek Murison May 23, 2019

Israeli drone-in-a-box provider Percepto has announced a \$15m Series A funding round led by U.S. Venture Partners. The company has to date raised a total of **\$27.5m**, with previous investors including R&R Venture Partners and Hyundai Motors.



Since launching in 2014, Percepto's focus has been autonomous inspections. The company's technology has been deployed by energy, oil & gas, and mining organizations. Their drones **operate without human intervention**. The company's Sparrow system comes with a drone and a recharging base station that allows it to carry out flights around the clock. Their combination of computer vision and AI

technology enables the real-time detection of threats, safety hazards and anomalies, as well as mapping, 3D modelling and emergency response. All can be remotely managed through the cloud.

Many previous estimations of how the global commercial drone industry will shape up have been extremely optimistic. A recent [study](#) cited in the Percepto press release points to a global market worth \$17b by 2026. <https://dronelife.com/2019/05/23/percepto-accelerate-autonomous-drone-in-a-box-solution/>



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NASA's first-of-kind tests look to manage drones in cities Scott Sonner AP May 24



RENO, Nev. — NASA has launched the final stage of a four-year effort to develop a national traffic management system for drones, testing them in cities for **the first time beyond the operator's line of sight**. Multiple drones took to the air at the same time above downtown Reno this week in a series of simulations testing emerging technology that someday will be used to manage hundreds of thousands of small unmanned commercial aircraft delivering packages, pizzas and medical supplies.

An autonomous drone took off Tuesday from the rooftop of a five-story casino parking garage and landed on the roof of another out of view across the street. It hovered as onboard sensors adjusted for gusty winds before returning close to the center of the launchpad. Equipped with GPS, others flew at each other no higher than city streetlights but were able to avoid colliding through onboard tracking systems connected to NASA's computers on the ground.

The Federal Aviation Administration has authorized individual test flights in cities before but **never for multiple drones or outside the sight of the operator**.

https://www.washingtonpost.com/business/technology/nasas-first-of-kind-tests-look-to-manage-drones-in-cities/2019/05/24/da74b980-7ddb-11e9-b1f3-b233fe5811ef_story.html?utm_term=.bbe9445ab068

25May19

Flying Taxi Startups Target Asia Debut Using European Technology Richard Weiss and Stefan Nicola May 23, 2019



[Volocopter GmbH](#) of Germany said Thursday it will open a landing facility in Singapore later this year for trial flights, while Austria's [FACC AG](#) is working to produce hundreds of passenger drones for Chinese partner [EHang Inc.](#) by the end of next year.

While the bulk of air-taxi projects are based in Europe and North America, there's concern that progress may be slowed by regulatory hurdles. In Asia, EHang is controlled by state-owned AVIC, while **governments** in Singapore and territories including Dubai are **enthusiastically embracing** autonomous transport.



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Volocopter, backed by Intel Corp. and [Daimler AG](#), has partnered with U.K. developer Skyports to build a \$1.7 million, 550-square meter “Volo-Port” in Singapore after conducting test flights in Dubai and Las Vegas. Chief Executive Officer Florian Reuter said the facility in the city state will be “accessible and convenient.”

The 216, which sells for 300,000 euros, can currently fly for 44 miles at speeds of up to 160 kilometers an hour. In addition to urban shuttle services, it could carry tourists, serve offshore oil platforms and provide support flights after natural disasters. The seating area could also carry cargo. <https://sg.finance.yahoo.com/news/flying-taxi-startups-target-asia-debut-using-european-technology-100310866.html>

Investors’ Appetite for Drone Technology Still Strong [Miriam McNabb](#) May 24, 2019



It seems to be the season for funding announcements, and a recent spate of press releases from drone companies indicates that the sector is still desirable. The drone industry has seen some noted consolidations and exits in the last few years. Those failures, while high profile (and probably not the last we’ll hear), are not the dominant story.

From the beginning of the year, medical drone delivery company [Zipline](#) announced [new funding](#) that brought the company valuation to \$1.2 billion. Automated drone-in-a-box solution Percepto [announced a new round](#) of \$15 million. Vertical take-off and landing drone producer [Wingtra](#) announced another \$10 million. Enterprise drone solution provider Kespry saw [new investment](#) from software giant Salesforce.

Earlier stage startups are also still raising money. Just this week, drone insuretech startup [Skywatch.ai](#) closed on \$5 million in funding to support their expansion. Earlier this spring, South African enterprise drone company [Aerobotics raised](#) \$2 million. Sabrewing Aircraft [raised](#) almost \$2 million.

The list goes on. Far from being over, the appetite for investment in the drone industry seems to be heating up again. Add in related technologies such as AI, counter drone technology, sensors, unmanned traffic management and drone safety systems, the numbers are even higher. As the industry moves past winning innovation awards to winning clients, strategic investment is fueling growth and expansion. <https://dronelife.com/2019/05/24/investors-appetite-for-drone-technology-still-strong/>



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FAA Announces Expansion of the LAANC Program – More Access to Airspace for Drones Miriam McNabb May 24, 2019



The FAA has announced the expansion of the [Low Altitude Authorization and Notification Capability \(LAANC\)](#) program to more than 100 new control towers and airports. The announcement comes on the heels of the implementation of [new rules for recreational fliers](#), which will prohibit flight in restricted airspace around airports except at identified flying fields. This arrangement is a temporary fix until the LAANC program can be updated to accommodate recreational pilots.

The LAANC program alleviates the burden of a lengthy manual authorization process for both regulators and pilots. Through a [growing list of technology partners](#), drone pilots can request authorization to fly in restricted airspace in covered areas and receive that authorization in near real-time. The latest roll-out continues the expansion of [coverage for LAANC](#) which currently covers about 600 airports. Commercial pilots who wish to fly near airports not currently part of the LAANC program can still use the manual process. <https://dronelife.com/2019/05/24/faa-announces-expansion-of-the-laanc-program-more-access-to-airspace-for-drones/>

DJI's presentation – Elevating Safety: Protecting the skies in the drone era Haye Kesteloo May 24, 2019



On Wednesday, May 22nd, DJI held an event in Washington DC to outline DJI's actions and suggestions to improve the safety in the air for all participants, both manned and unmanned. DJI's Vice President of Policy & Legal Affairs, [Brendan Schulman](#) announced that DJI will install ADS-B receivers in all DJI drones over 250 grams starting on 1/1/2020. This will be the single **largest ADS-B deployment in the world** as the number of drones in the air is much larger than the number of airplanes and helicopters combined. The introduction of ADS-B for DJI drones and other safety improvements were explained in a presentation titled '[Elevating Safety: Protecting the Skies in the Drone Era.](#)'

Including ADS-B is only the first of 10 steps that DJI, other drone manufacturers and governments around the world can and should make to improve safety in our skies. The 10 points are:

1. DJI will install ADS-B receivers in all new drones above 250 grams
2. DJI will develop a new automatic warning for drone pilots flying at extended distances



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3. DJI will establish an internal Safety Standards Group to meet regulatory and customer expectations
4. Aviation industry groups must develop standards for reporting drone incidents
5. All drone manufacturers should install geo-fencing and remote identification
6. Governments must require remote identification
7. Governments must require a user-friendly knowledge test for new drone pilots
8. Governments must clearly designate sensitive restriction areas
9. Local authorities must be allowed to respond to drone threats that are clear and serious
10. Governments must increase enforcement of laws against unsafe drone operation

You can watch the video of the presentation below and download DJI's white paper [here](#).

Please watch the video. It's important. <https://dronedji.com/2019/05/24/dji-elevating-safety-protecting-the-skies-in-the-drone-era-ads-b-drone/#more-16625>

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Terra Drone Indonesia shows worth of aerial LiDAR in construction APPLICATION BUSINESS INTERNATIONAL MINING AND AGGREGATES NEWS ALEX DOUGLAS MAY 22, 2019



As well as completing the work, the mapping demonstrated to the construction companies how drones can be beneficial.

Using drones equipped with LiDAR technology, Terra Drone Indonesia carried out two survey-grade topographic mappings for two different dam construction projects in the country.

The first was in Bogor, West Java, a dam project. The company covered 20 hectares a day to capture high-resolution images to help with planning and measuring work in progress.

The second, in Central Java over a period of four days, was also a dam project. The company carried out LiDAR topographic mapping for a dam construction project in an area with dense vegetation to capture data and images for facilitating construction. Read the full story [here](https://www.commercialdroneprofessional.com/terra-drone-indonesia-shows-worth-of-aerial-lidar-in-construction/):
<https://www.commercialdroneprofessional.com/terra-drone-indonesia-shows-worth-of-aerial-lidar-in-construction/>



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French Based Azur Drones Raised \$10 Million for Autonomous Drones Harry

McNabb May 27, 2019



Following the [recent rush of financing](#) announcements, [Azur Drones](#), a European developer of autonomous drones, announced that it has received 3 successive rounds of financing with a French private investor for a total amount of \$10 million dollars. The group has raised nearly **\$23 million since 2016**.

This new funding should enable the company to consolidate its leadership in the autonomous drone segment and support its international expansion. In particular, the company plans to open an office in Dubai. Based in Mérignac, Azur Drones collaborates with major clients in Europe and the Middle East and aims to win new contracts in these areas, as well as in the **United States** and Asia. A pioneer in drone-in-a-box systems, Azur Drones has been working on autonomous drone for more than 4 years. <https://dronelife.com/2019/05/27/french-based-azur-drones-raised-10-million-for-autonomous-drones/>

My Wingman is an AI and his name is Skyborg Mark Strauss AIR & SPACE MAGAZINE JUNE

2019



Soon pilots may have a wingman called Skyborg, an autonomous AI under development at the Air Force Research Lab. The goal is not to replace pilots, but to provide support that will enhance their warfighting capabilities.

Skyborg would train and learn alongside its human pilot. The Air Force is eyeing a list of unmanned vehicles as candidates for housing the AI, including one of the BQM target drones or the XQ-58A Valkyrie, a long-range unmanned vehicle capable of flying close to the speed of sound that completed a 76-minute maiden flight in early March.

As it learns and proves itself in combat situations, Skyborg might also be embedded in a pilot's cockpit as a co-pilot responding to voice commands, performing multiple tasks such as target recognition, navigation and weapons deployment. Read more at

<https://www.airspacemag.com/airspacemag/my-wingman-ai-180972257/#VwrFoOX0guhqWLHM.99> <https://www.airspacemag.com/airspacemag/my-wingman-ai-180972257/#VwrFoOX0guhqWLHM.99>



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[180972257/?spMailingID=39783746&spUserID=NjYyMTc4MDIxMjMzS0&spJobID=1522005338&spReportId=MTUyMjAwNTMzOAS2](https://www.axcelinnovation.com/180972257/?spMailingID=39783746&spUserID=NjYyMTc4MDIxMjMzS0&spJobID=1522005338&spReportId=MTUyMjAwNTMzOAS2)

AerialX “finalizing development of counter-UAS armed DroneBullet drone” May 27, 2019 Philip Butterworth-Hayes Counter-UAS systems and policies



Jane's reports that Canadian counter UAS company AerialX is finalizing the development of DroneBullet, “an intuitive, high-speed multi-rotor kinetic energy interceptor solution designed to counter small multirotor and fixed-wing unmanned aerial system threats.”

“In development for the past 18 months, DroneBullet is “a hybrid between a missile and a quadcopter”, Noam Kenig, Chief Executive of Vancour, Canada-based AerialX told *Jane's*. “It’s more like a missile in terms of its design, flight behavior, and approach speed to the target. It also has the capability to do things that a missile cannot do: stop, land, attack from above or below and change position. It doesn’t fly like a normal quadcopter, it flies in a hybrid, high-speed mode.” It has a take-off weight of 910 g, is 269 mm in length, and 160 mm in diameter. Housed in a carbon fiber casing, the system is furnished with a nose-mounted day/night camera and a GPS/INS/IMU navigation assembly. Terminal guidance is delivered by an onboard ‘deep learning and machine vision’ system.” <https://www.unmannedairspace.info/counter-uas-systems-and-policies/aerialx-finalising-development-of-counter-uas-armed-dronebullet-drone/>

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Federal Aviation
Administration



Presented by:

June 3 — 5, 2019

The Baltimore Convention Center

The FAA is getting down to business. We’re not waiting for what’s next, we’re creating it.

<http://faauas.auvsi.net/home>

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SASC bill directs DoD to make use of commercial spaceports for small satellite launches Sandra Erwin — May 27, 2019



An engineering test model of the Vector-R rocket at Pad 0B of the Mid-Atlantic Regional Spaceport at Wallops Island, Virginia

WASHINGTON — The Senate Armed Services Committee approved three amendments in its version of the National Defense Authorization Act for Fiscal Year 2020 related to the **burgeoning**

small launch industry. The provisions require the Defense Department to lay out a plan for how it could make greater use of commercial spaceports to launch small satellites and to develop a strategy to integrate commercial capabilities into DoD space operations. The committee also directs DoD to investigate **China's investments** in its small satellite and small launch industries.

The provisions, if they make into the final version of the NDAA, would address [longtime concerns of commercial small launch providers](#) about integrating military launch requirements into their business plans and ensuring launch facilities can support those demands. The bill authorizes a **new** Defense Department program to modernize infrastructure for launching small and medium payloads. This program would support the Pentagon's strategy to make military space systems harder for enemies to target by deploying smaller, less expensive satellites using commercial launch vehicles. Several U.S. companies are developing small space vehicles to meet this projected demand. <https://spacenews.com/sasc-bill-directs-dod-to-make-use-of-commercial-spaceports-for-small-satellite-launches/>

Elon Musk Says It's 'So Far, So Good' for SpaceX's 1st 60 Starlink Satellites Mike Wall 3 days ago Spaceflight

The first 60 members of the company's Starlink network [launched last night](#) (May 23) atop a Falcon 9 rocket. The satellites deployed smoothly about an hour after liftoff, and they came online shortly thereafter, SpaceX founder and CEO [Elon Musk](#) announced via Twitter last night. Musk gave us another update this afternoon (May 24), tweeting "[So far, so good](#)" in response to a follower's question about Starlink's status. The satellites deployed at an altitude of 273 miles and are making their own way to their operational altitude of **342 miles**.



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A view of SpaceX's first 60 Starlink satellites in orbit, still in stacked configuration, with the Earth as a brilliant blue backdrop on May 23, 2019.

Starlink is designed to provide affordable internet access to people around the world. Last night's launch was the first of many for the project; about 400 satellites are needed for "minor" coverage and 800 for "moderate" coverage. The Federal Communications Commission has given SpaceX permission to launch nearly **12,000** Starlink satellites. (There are only about 2,000 operational spacecraft in Earth orbit today.) <https://www.space.com/elon-musk-says-spacex-starlink-satellites-doing-well.html>

Eight Firms to Further Develop Tech Platforms under DHS Smart City Innovation Program

Matthew Nelson May 28, 2019 News, Technology



The Department of Homeland Security has selected eight companies to further develop **unmanned aerial system**, in-building sensor and communications technology prototypes under the second phase of the Smart Cities Internet of Things Innovation Labs initiative.

DHS [said Wednesday](#) its operational units, industry partners and first responders will test the platforms through a series of soft-target and search-and-rescue scenarios over the next 12 months. Under phase 2, the developers will aim to implement an approach to **simplify the commercialization process** for their offerings.

"This process provides an 'integrate-test-apply' development and deployment approach to the much-needed mission capabilities to help meet homeland security needs," said Jeff Booth, SCITI Labs program lead at DHS's S&T directorate. The participating companies are:

- Airgility
- Coolfire Solutions
- Datakwip Holdings
- EcoDomus
- Excession Technologies
- Mutualink
- One Engineering



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- Third Insight

<https://blog.executivebiz.com/2019/05/eight-firms-to-further-develop-tech-platforms-under-dhs-smart-city-innovation-program/>

Parrot to Develop Short Range Reconnaissance Drone for U.S. Army 28 May 2019

Mike Rees



The U.S. Army is partnering with the Pentagon's internal startup accelerator to adapt small commercial drones for the battlefield. Parrot, a European drone group, is one of the 6 companies¹ that have met the standards set in the solicitation issued in November 2018² to develop and prototype the next generation of small-unit

surveillance drone.

The Short Range Reconnaissance effort has recently awarded **\$11 million** in funding to **six companies** to prototype and evaluate drones that can provide the Soldier on the ground with a rapidly deployable scouting capability to gain situational awareness beyond the next terrain feature. The drones would be expected to fly for **30 minutes over three kilometers**. The aircraft should weigh three pounds or less, take less than 2 minutes to assemble and fit inside a soldier's standard-issue rucksack. https://www.unmannedsystemstechnology.com/2019/05/parrot-to-develop-short-range-reconnaissance-drone-for-u-s-army/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=a92dda6ca7-eBrief_2019_May_28&utm_medium=email&utm_term=0_6fc3c01e8d-a92dda6ca7-119747501

Drones as a First Responder: Tijuana Public Safety Department Launches Program Miriam McNabb May 28, 2019



The Tijuana Public Safety Department and Cape will partner to launch Mexico's first "Drone as a First Responder Program."

It could revolutionize law enforcement – and contribute significantly to the safety of both officers and communities. It's a simple idea: launch a drone as your ground team approaches the

scene of an incident. **The drone gets there first** and provides aerial data to commanders and the ground-based team.

Check out the video to see a real-life example of how it works in apprehending a suspect – while the video looks like something out of a Hawaii Five-O episode, it's for real. Now, Cape-enabled drones will support emergency response as part of a border city agreement with the



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city of San Diego, California in Tijuana – and perhaps soon, throughout both Mexico and the U.S. <https://dronelife.com/2019/05/28/drones-as-a-first-responder-tijuana-public-safety-department-launches-program/>

29May19

'We're Not Being Paranoid': U.S. Warns Of Spy Dangers Of Chinese-Made

Drones May 29, 2019 BRIAN NAYLOR



The Department of Homeland Security is warning drones manufactured by Chinese companies could pose security risks, including the data they gather could be stolen.

The department sent out an alert on the subject on May 20, and a [video on its website](#) notes that drones in general pose multiple threats, including "their potential use for terrorism, mass casualty incidents, interference with air traffic, as well as corporate espionage and invasions of privacy."

Most drones bought in the U.S. are manufactured in China, with most of those drones made by one company, DJI Technology. In a statement, DJI said:

"At DJI, safety is at the core of everything we do, and the security of our technology has been independently verified by the U.S. government and leading U.S. businesses. DJI is leading the industry on this topic and our technology platform has enabled businesses and government agencies to establish best practices for managing their drone data. We give all customers full and complete control over how their data is collected, stored, and transmitted.

<https://www.npr.org/2019/05/29/727612692/we-re-not-being-paranoid-u-s-warns-of-spy-dangers-of-chinese-made-drones?ft=nprml&f=1001>

Drone Industry Insights Publishes US Drone Market Report Malek Murison May 29, 2019



In an [article](#) published today, DII shared **five insights** from its findings. The first is the US represents the largest drone market in the world. The article goes on to predict that "the Chinese drone market is slowly closing that gap."



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Second is a bold prediction: that the US commercial and private drone market will almost **triple** in size over the next five years. In part that will be reflected by prediction number three: that US commercial drone unit sales will **quadruple** between 2018 and 2024.

Drone Industry Analysts says America is currently home to more than 50% of global drone investments. This dominance dipped slightly under 50% last year, but no other country comes close to the level of disclosed drone investment.

The final headline point refers to the ongoing work of the FAA, which is putting the pieces together to integrate drone operations into US airspace. As well as the various initiatives coming together to build a UTM, DII points to the recent milestone that was the FAA's approval of Wing to **launch drone delivery** services in the state of Virginia later this year.

<https://dronelife.com/2019/05/29/drone-industry-insights-publishes-us-drone-market-report/>

Airbus Aerial and Swiss Re Corporate Solutions collaborate on flood assessment scheme APPLICATION BUSINESS EUROPE NEWS ALEX DOUGLAS MAY 29, 2019



Swiss Re Corporate Solutions' flood assessment tool, FLOAT, will be powered by drone imagery and data from Airbus Aerial. It uses drones to capture elevation data which is transformed into a visualization of the facility, including a simulation that shows vulnerabilities and low-points.

Philip Brandl, manager of risk engineering services, EMEA at Swiss Re Corporate Solutions, said: "Aerial's ability to deliver drone imagery and data makes them a match for Swiss Re Corporate Solutions' goal to help clients protect their businesses. FLOAT is a service that shows clients where they are at risk for flood so they can take steps to protect themselves."

https://www.commercialdroneprofessional.com/airbus-aerial-and-swiss-re-corporate-solutions-collaborate-on-flood-assessment-scheme/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-303099-Commercial+Drone+Professional+DNA+-+2019-05-29

Edinburgh-based Ecometrica deploys LiDAR drones to protect Scottish forests APPLICATION NEWS UK ALEX DOUGLAS MAY 29, 2019

The LiDAR technology enables the drones to see through the forest canopy and are used to look native Scottish plants threatened by invasive species.



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According to a report from the BBC, the Ecometrica-led project has received funding from the Forestry Commission Scotland, Scottish Orienteering, Woodland Trust and Edinburgh University.



It went on to describe how support has also come from the UK's Science and Technology Facilities Council.

The LiDAR work has been carried out in the west of Scotland in the Lochgilphead, Ardfern, Auchterawe, Arisaig, Achdaluie and Mandally forests.

<https://www.commercialdroneprofessional.com/terra-drone-indonesia-shows-worth-of-aerial-lidar-in-construction/>

VIDEO: 526-drone show lights up Chinese expo APPLICATION VIDEO ALEX DOUGLAS MAY 28, 2019



The show features 526 unmanned aerial vehicles and is held several times each night until the end of the show. It takes place in southern China's Guizhou province and finishes on May 31.

Take a look at a rehearsal of the light show videoed on Wednesday before the start of the Expo.

Watch [here](https://www.commercialdroneprofessional.com/video-526-drone-light-show-lights-up-chinese-expo/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-302949-Commercial+Drone+Professional+DNA+-+2019-05-28): https://www.commercialdroneprofessional.com/video-526-drone-light-show-lights-up-chinese-expo/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-302949-Commercial+Drone+Professional+DNA+-+2019-05-28

30May19

Hydrogen-powered flying vehicle touted as Southern California traffic tonic Omar Younis, Steve Gorman



LOS ANGELES (Reuters) - Developers of a multi-rotor hover craft billed as the **first** flying vehicle to be powered by hydrogen fuel cells unveiled a full-scale model on Wednesday in a show-and-tell that raised some eyebrows but never left the ground.

Hanvey said he expects to win FAA certification for initial production vehicles by the end of next year, and to make its first



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aircraft available for sale in early 2021, before ramping up production. In the long run, the company foresees producing more than 10,000 vehicles a year with a sticker cost that would “approach the price of a luxury car.” Powered by six hydrogen fuel cell batteries - one for each rotor engine - the aircraft are designed for a range of 300 miles but are envisioned mainly for short urban hops or flights between nearby cities.

For safety, they will be equipped with a redundant autopilot system, a propulsion design that can fly with the loss of at least one motor and a parachute attached to the vehicle’s airframe.

Although FAA rules will require pilot operation, developers expect the vehicles ultimately will be flown **autonomously** by pre-programmed guidance systems. <https://www.reuters.com/article/us-usa-hydrogen-aircraft/hydrogen-powered-flying-vehicle-touted-as-southern-california-traffic-tonic-idUSKCN1T0078>

IBM is giving away 1,500 DJI drones to help with natural disasters TRISTAN GREENE 16 hours ago in ARTIFICIAL INTELLIGENCE



IBM’s [Developer Drone Drop 2019](#) contest is officially underway. Now through June 16 the company will give away 1,500 drones to developers who enter. Why is IBM giving away free drones? It hopes you’ll use them to deliver AI-powered solutions to the problems caused by natural disasters.

The contest officially started last week, but there’s plenty of time to sign up. You don’t have to be an expert or have any code built already to enter – the winners will be selected at random, not by judges. Winners will receive more than just a robot, [according to IBM](#):

The DJI Tello drone is more than just a cool prize. We’ll give you code patterns to unlock its potential, and introduce you to new skills around visual recognition, AI and machine learning. <https://thenextweb.com/artificial-intelligence/2019/05/29/ibm-is-giving-away-1500-dji-drones-to-help-with-natural-disasters/>



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N.D. 'epicenter of drone innovation' in fast-growing UAS industry Helmut

Schmidt May 29th 2019



FARGO - Thanks to investments in drone technology, including another **\$33 million** in the last legislative session, North Dakota is the leader in the unmanned aircraft industry, Drone Focus Conference attendees were told Wednesday, May 29.

"North Dakota is dedicated to leading in this space," Gov. Doug Burgum said in opening the fifth annual event. North Dakota has invested more than \$77 million in the drone industry over the years, Burgum said.

Recently, the Legislature approved \$28 million for a sensor system to allow beyond visual line of sight (BVLOS) drone operations, \$2 million for the Northern Plains Unmanned Aircraft Systems Test Site in Grand Forks, and \$3 million to upgrade infrastructure at the Grand Sky UAS business and aviation park at the Grand Forks Air Force Base.



Drone Focus Conference attendees look over the expo displays at the Avalon Events Center in Fargo

North Dakota is "the epicenter of drone innovation in the United States," said David Short, the U.S. deputy assistant secretary of transportation. He predicted Americans will see more innovations in transportation in the next five years than has been seen in the last 50, thanks to drones. But that will require addressing safety, security and privacy issues. <https://www.inforum.com/business/1353798-N.D.-epicenter-of-drone-innovation-in-fast-growing-UAS-industry>

Delair Teams with Phenome to Improve Plant Breeding, Variety Testing with Drones Betsy Lillian May 29, 2019



At the annual ISF World Seed Congress on June 3-5 in France, Phenome and Delair will present their collaboration, offering a system to accelerate plant breeding and variety testing. Seed breeders and variety testers will benefit from merging PhenomeOne software with plant data collected by Delair drones.

Data needs to be aggregated from hundreds of field trials, and the corresponding analysis must consider genetic connections in different generations among large seed populations, with traits observed and measured over a range of locations and time.



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Collecting large-scale, field-based plant phenotypic data with sufficient resolution and accuracy in a reproducible and non-invasive manner is also seen by seed breeders and variety testers as a bottleneck for the effective use of genomic data for crop improvement. The partnership combines the breeding management capabilities of the software with the mapping performance of the drone. https://unmanned-aerial.com/delair-teams-with-phenome-to-improve-plant-breeding-variety-testing-with-drones?utm_medium=email&utm_source=LNH+05-30-2019&utm_campaign=UAO+Latest+News+Headlines

FAA Expands Airspace Access for Remote Pilots through LAANC Betsy Lillian May 29, 2019



On May 23, the Federal Aviation Administration [added](#) more than 100 control towers and airports to the hundreds of FAA air traffic facilities and airports that currently use the Low Altitude Authorization and Capability system.

[LAANC](#), a collaboration between the FAA and industry, expedites the time it takes for a drone pilot to receive authorization to fly under 400 feet **in controlled airspace**. By adding contract towers to the number of LAANC-enabled facilities, drone pilots will have access to more than 400 towers covering nearly 600 airports.

Contract towers are air traffic control towers that are staffed by employees of private companies rather than by FAA employees. LAANC provides air traffic professionals with visibility into where and when authorized drones are flying near airports and helps ensure that everyone can safely operate within the airspace. The expansion to more than 100 contract towers means the FAA has further increased drone pilots' access to controlled airspace safely and efficiently, according to the agency. https://unmanned-aerial.com/faa-expands-airspace-access-for-remote-pilots-through-laanc?utm_medium=email&utm_source=LNH+05-30-2019&utm_campaign=UAO+Latest+News+Headlines

DJI Manifold 2 Onboard Supercomputer Transforms Drones into Autonomous Robots May 28, 2019 News



DJI announced Manifold 2, a compact onboard supercomputer, enables users to process image data onboard and fly autonomously while identifying objects and avoiding obstacles.

“Through partnerships with some of the industry’s leading computing companies and chip manufacturers, we are enabling

DJI drones to become intelligent flying robots that can perform complex computing tasks and



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advanced image processing literally on the fly," said Jan Gasparic, DJI Director of Strategic Partnerships at DJI. "Manifold 2 expands the use cases of drone technology exponentially by allowing businesses, developers and researchers to build the most advanced autonomous aerial robotics solutions for nearly any industry or task." https://uasweekly.com/2019/05/28/dji-manifold-2-onboard-supercomputer-transforms-drones-into-autonomous-robots/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_05_29_2019&utm_term=2019-05-29

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DJI: Drones Dragged Through The Mud With False Collision Claims Nick Zazulia May 30, 2019



A [Boeing investigation](#) — completed at the behest of the National Transportation Safety Board — cleared the hypothetical UAS of any wrongdoing. Engineers determined that no object was the culprit, but that damage was likely the result of pressure differentials during descent.

"People are afraid of hitting drones with planes, but guess what — **it hasn't happened**," said Adam Lisberg, DJI's corporate communications director for North America, noting that the NTSB hasn't conclusively found a single such incident. DJI has released [a report](#) detailing the company's vision for safe skies, in which it collects some dozen baseless accounts in recent years of drones allegedly causing mayhem. At least seven, according to DJI, have entailed a drone being blamed for a collision only to later be cleared by investigating bodies. This is a big deal, the company says, because those false reports stick in people's minds and shape public perception.

<https://www.aviationtoday.com/2019/05/30/dji-drones-dragged-mud-false-collision-accusations/>

Drones Interfere With Oklahoma Flood Response Kate O'Connor May 30, 2019



Helicopters participating in the disaster response efforts surrounding severe flooding in Oklahoma are having trouble with illegal unmanned aircraft system operations interfering with their flights. According to Tulsa Fire Department spokesperson Andrew Little, emergency response personnel encountered approximately **30 drones** flying illegally on Wednesday alone. Little emphasized that emergency response helicopters can't operate when drones have been sighted in the area due to the potential for an accident.



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"We have a much higher than normal rate of low flying helicopters delivering payloads or search and rescue," the Tulsa Police Department said in a statement. "If a UAS is flying in the area they are at tremendous risk." At least 400 homes have been evacuated and six people killed this week due to the flooding and associated storms. <https://www.avweb.com/recent-updates/unmanned-vehicles/drones-interfere-with-oklahoma-flood-response/?MailingID=18>