



UAS and SmallSat Weekly News

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Airvuz Drone Video of the Week: Chile Harry McNabb July 19, 2019

As the U.S. suffers from a heatwave, you might be dreaming of skiing in the summer... and Chile is the place to do it. Here's a drone video to get you in the mood, from our friends at [AirVuz](#): the largest collection of drone videos on the web. <https://dronelife.com/2019/07/19/airvuz-drone-video-of-the-week-chile-can-you-edit-the-size-a-featured-image-and-publish/>

"Stretching over 4300km along the coast of South America, Chile's landscapes are an adventurer's dream. Let these breathtaking aerial views be your travel guide around this incredible country. The Atacama desert is the world's driest desert features a Mars-like landscape and is a prime location for stargazing. The Valle de la Luna is located in Los Flamencos National Reserve, this "Moon Valley" is famous for its rugged terrain. Salar de Surire is a Chilean natural monument in the Andes, this large salt flat is home to several species of wildlife. Patagonia is famous scenic region of Chile has pristine lakes, beautiful mountains and stunning glacial fjords. Easter Island is a volcanic island famous for its almost 1000 monumental statues called Moai. Chile's largest city and its capital, Santiago, is located in the central valley between the Andes and the coast. Valparaíso, an important seaport city on the Pacific Ocean, is full of colorful buildings. Vina del Mar is a coastal resort city, often called "TheGarden City," is known for its beautiful beaches. Witness the famous Chilean fjords and channels on Chile's southern coast by cruise ship. Torres del Paine National Park is a picturesque park that's popular with tourists for its mountains, glaciers, lakes and rivers. San Alfonso del Mar is the world's largest swimming pool and it belongs to a private resort in Algarrobo, Chile. Altiplano is the widest point in the Andes Mountains, it's home to Chilean wildlife like llamas, vicunas and condors." <https://dronelife.com/2019/07/19/airvuz-drone-video-of-the-week-chile-can-you-edit-the-size-a-featured-image-and-publish/>

FAA Drone Webinar: How to Navigate UAS Facility Maps

Please join the Federal Aviation Administration (FAA) on Thursday, August 1 at 4:00 p.m. (ET) for a free LIVE webinar, "[How to Navigate UAS Facility Maps](#)."

[UAS Facility Maps](#) show areas and altitudes in controlled airspace around airports where drone pilots can receive an authorization to fly below the maximum altitude depicted on the map, and up to 400 feet.



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Join us as FAA expert Langston Majette explains everything you need to know about UAS Facility Maps — and we'll demonstrate how to access them through our [data visualization tool](#). **Register Here!**

- Registration is on a first-come, first-serve basis.
- Webinar sessions are hosted in audio and visual format via GoToWebinar.
- You must [download the GoToWebinar software](#) on your computer, smartphone/tablet app.
- Upon registration, you will receive a unique URL that you will use to access the webinar. Please note: your confirmation email will come from "EON Team (ash-axe-c3-eon-training@faa.gov)."
- On the day of the webinar you can access the session via the join link in your confirmation email, or using your 9-digit Webinar ID.
- You are encouraged to read the [GoToWebinar How-To Guide](#) ahead of the webinar.
- Questions and answers received during all of our webinars are available online [here](#).

Questions about the webinar? Please email socialmedia@faa.gov.

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

Drone detection and tracking with counter-unmanned aerial systems (C-UAS) capability NAVY



Drone swarm. Image Credit: U.S. Army Photo

Scientists at the Naval Surface Warfare Center – Crane have recently invented a system for drone detection, tracking, and controlling. The patented technology is available via license agreement to companies that would make, use, or sell it commercially.

Radio Controlled Model Aircraft (RCMA) equipped with video systems are increasingly being used by adversaries or unauthorized persons for undesirable and illegal activities. As commercial RCMA technology becomes more advanced, cheaper, and readily available, the need to detect and respond to threats will continue to grow.



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Those who wish to be informed of an unauthorized drone presence and its activity need to scan, track, intercept video feed, acquire line of bearing, and slew-to-cue (integration of radar or other target detection device that tells a PTZ camera where to point) for identification and defeat of the intruding drone. Navy researchers have developed such a system utilizing the specific frequency transmitted from a drone, dramatically increasing the probability of detection and resulting in a more reliable system.

The technology has the ability to not only receive signals but also transmit. For C-UAS missions the system can transmit signals to jam the command and control, telemetry, video, and GPS of the UAS. The system can also send legitimate but spoofed signals to deceive.

https://techlinkcenter.org/technologies/drone-detection-and-tracking-with-counter-unmanned-aerial-systems-c-uas-capability/?utm_source=uas_newsletter&utm_medium=email&utm_campaign=technology

Amazon Prime Air — from eCommerce to drone delivery [Josh Spires](#) Jul. 19th 2019



Originally announced during a 60 Minutes interview in 2013, CEO Jeff Bezos let the world in on Amazon's plan to [use drones to deliver products](#) bought via [Amazon.com](#). Amazon Prime Air estimates a delivery time of around thirty minutes to select addresses, a capacity of around five pounds, a large amount of the eCommerce giant's product catalog.



Amazon Prime Air is still in the development stage testing various drone prototypes and finalizing their internet-connected [drone management system](#) built alongside Google. In March of 2015, Amazon Prime Air was given permission to begin testing their prototype systems. They made their first official delivery on the 7th of December 2016, delivering a parcel to a house within ten miles of their Cambridge fulfillment center.

In recent news last month, Amazon Prime Air showcased their newly designed drone in a [sub-two-minute video](#), similar in nature to the original flight video back in 2016.



Amazon Prime Air's drone is a complete [redesign from previous models](#) with a unique hexagonal enclosing six motors. The drone is equipped with four motors with a tri-blade configuration and two motors with a dual-blade configuration allowing the drone to



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switch between vertical and horizontal flight.

The drone has a maximum range of fifteen miles and can deliver packages under five pounds in less than thirty minutes. It comes packed with sensors and [onboard AI](#) to allow for adaptive obstacle avoidance in flight, during take-off and landing. While landing the drone detects humans and animals to adjust its position as well as a specialized wire detection algorithm to miss clotheslines and power lines. <https://dronedj.com/2019/07/19/amazon-prime-air-drone-delivery/>

Drone Rescue System Meets ASTM Standards and Important FAA Criteria July 18, 2019 News



In June 2019, Drone Rescue Systems GmbH tested their parachute safety solution according to the specifications of the ASTM F3322-18 standard. The successful completion of the test makes it possible for the Federal Aviation Administration to issue permits for use over

crowds.

The system is lightweight at 430g and works without pyrotechnics. The system can be immediately reused by simply attaching and detaching it via a bayonet mechanism. The parachute was to be certified for a project in which the transportation and delivery of food to approx. **1500 households in North Carolina** was to be made possible and safe. The drones used are from the DJI M600 series.

The standard is the **first** for parachute systems designed specifically for small UAVs. Compliance is necessary for the FAA to permit beyond visual line of sight flights and flights over crowds. In addition to structural requirements, the standard defines **45 test flight scenarios** which must be successfully completed with the parachute. These include combinations of releasing when hovering and in full forward flight with the minimum and maximum take-off weight, automatic and manual release as well as a shock load test. Here the drone is brought into free fall for 3 seconds and only then is the parachute released. All test flights must be documented with videos. https://uasweekly.com/2019/07/18/drone-rescue-system-meets-astm-standards-and-important-faa-criteria/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_19_2019&utm_term=2019-07-19

General Atomics Aeronautical Systems's Predator A RPA Turns 25 July 19, 2019 Military News



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General Atomics Aeronautical Systems, Inc. marks the 25th anniversary of its Predator A unmanned aircraft this month. It completed its first flight in July 1994 and made its operational debut in 1995. More than **320** have been delivered to customers, and the product line remained in production until 2011. They have flown **141,000 missions** and two million total flight hours. More than 90 percent of those hours were flown supporting combat missions.

GA-ASI won its first program award for the Predator A in 1994 from the U.S. Joint Program Office, which was later transferred to the U.S. Air Force. In addition to the U.S., it was purchased by the Italian Ministry of Defense for the Italian Air Force and later in a modernized version for the United Arab Emirates.

Over its 25 year history, the Predator fleets have flown close to **six million flight hours**. The newest version of the series, SkyGuardian, complies with airworthiness certification and air traffic management requirements that will **enable the aircraft to operate in the National Airspace System** https://uasweekly.com/2019/07/19/general-atomics-aeronautical-systemss-predator-a-rpa-turns-25/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_19_2019&utm_term=2019-07-19

Terra Drone Gains Footing In Central Asia with Investment in KazUAV July 19, 2019 News



Japan-based [Terra Drone Corporation](#) is announcing the continuation of its global expansion with investment in a UAV company in Kazakhstan, [KazUAV](#). With this investment, the company joins Terra Drone's network of **25 group companies** and technology partners committed to providing services across the globe.

In 2018, at the request of the International Civil Aviation Organization, KazUAV mapped six airports in the country, totaling a surveyed area of **4 million hectares**. The company is also registered to provide surveillance services to Kazakhstani special forces.

Services include power line inspection and vegetation management for the energy sector, onshore/offshore infrastructure inspections, tanks inspections, and nondestructive testing for the oil and gas industry and open-pit and **underground** mapping services for the mining sector.



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The company will also continue to provide mapping and GIS services to the construction and agriculture sectors, apart from offering surveillance in emergencies like wildfires and floods. The company will also sell drones, sensors, and other related hardware to local customers. https://uasweekly.com/2019/07/19/terra-drone-gains-footing-in-central-asia-with-investment-in-kazuav/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_19_2019&utm_term=2019-07-19

21Jul19

2020 INTERNATIONAL CONFERENCE ON UNMANNED AIRCRAFT SYSTEMS JUNE 9-12, 2020 DIVANI CARAVEL HOTEL ATHENS, GREECE



ICUAS '20, will be held for the first time outside the U.S.A., in Athens, Greece.

The major themes are: **integration of manned-unmanned aviation into the national airspace**, **benefits of unmanned aviation to society**, and, **UAS/RPAS** (unmanned aerial system/remotely piloted air system) **design for safety, reliability and resilience**, all contributing to building high-confidence systems. National and international organizations, agencies, industry, military and civilian authorities are working towards defining roadmaps of UAS/RPAS expectations, technical requirements and standards that are prerequisite to their full utilization, as well as legal, policy and ethical issues.

The next generation of UAS/RPAS is expected to be used for a wide spectrum of civilian and public domain applications. Challenges to be faced and overcome are many. Innovative solutions will pave the way towards full integration of UAS/RPAS with manned aviation. http://www.uasconferences.com/2020_icuas/call-for-papers/

22Jul19

UK Reveals High-Tech Programs in Air, Space and Propulsion Chris Pocock

July 19, 2019



Virgin Orbit performed its first drop test of a satellite-launching rocket earlier this month.

The UK Ministry of Defence and Royal Air Force will invest in hypersonic propulsion, **small satellites**, and so-called flying wingmen and **swarming drones**. The R&D programs



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were announced in front of 40 air force chiefs and military commanders at the [Air and Space Power Conference](#) in London.

An alternative means of launching satellites at lower cost than ground launch is provided by Virgin Orbit, which is developing a Boeing 747 as a launch platform for a rocket. The first drop test was performed last week at 35,000 feet. The RAF is planning to send a test pilot to join this project at the Mojave Space Port, California.

British Defence Minister Penny Mordaunt announced a \$37.5 million investment in a small-satellite demonstrator that will be launched within a year. This would lead to a small-satellite constellation for multiple purposes. This project would be supported by a transatlantic team of UK and U.S. defense personnel named Team ARTEMIS. A number of U.S. commercial companies are already offering small-satellite constellations, but an earlier military program run by the National Reconnaissance Office was an expensive failure. <https://www.ainonline.com/aviation-news/defense/2019-07-19/uk-reveals-high-tech-programs-air-space-and-propulsion>

Drones lauded as XAG explains the driving force behind smart Ag growth in China

AGRICULTURE APPLICATION INTERNATIONAL NEWS ALEX DOUGLAS JULY 22, 2019



As an official member of the World Economic Forum, XAG engaged with attendees to elaborate on the driving forces behind China's accelerated development of smart agriculture.

Justin Gong, co-founder and VP of XAG, gave a keynote speech at the meeting's session. He detailed how **drone tech and AI** are reshaping the smallholder economy as it is helping them obtain new competitive advantages through improving cost-efficiency and producing more diversified, high-quality agricultural products. China's agriculture drones and smart farming solutions are also helping them manage their farmland and lower production costs.

XAG also referenced how it is introducing its drone-based smart agriculture solutions into **38 countries** around the world, especially Southeast Asia, Latin America and Africa.

https://www.commercialdroneprofessional.com/drones-lauded-as-xag-explains-the-driving-force-behind-smart-ag-growth-in-china/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307880-Commercial+Drone+Professional+DNA+-+2019-07-22

'Flying saucer' drone can fly twice as long as regular models Steve Dent, @stevetdent 07.16.19 in Robots



The biggest problem with drones is their [lack of endurance](#), but Swiss researchers have developed a new model that helps reduce that problem. It has just two propellers, letting it **fly twice as long** as regular models.

It has a 12 inch wide cowl with **two props stacked one on top of the other**, turning in opposite directions. That considerably reduces drag while increasing efficiency compared to four-blade designs. The problem, though, is that such craft tend to be unstable and difficult to handle.

The team developed a simple, algorithm-powered stabilization mechanism that calculates how much to offset the rotation and tilt of each prop for maneuvering or straight flight. That makes it as easy to pilot as any other drone using conventional joystick controls.

With a relatively small size and foam coating that can absorb mild collisions, the drone is ideal for inspecting dangerous, hard to reach areas, said research lead Samir Bouabdallah.

<https://www.engadget.com/2019/07/16/flybotix-dual-prop-drone-fly-longer/?guccounter=1>

The U.S. Air Force awarded AX Enterprize a \$7.7 million contract for research on integrating drones into airspace management systems

AX Enterprize LLC., Yorkville, New York, has been awarded a \$7,753,015 modification to previously awarded contract for collaborative low-altitude Unmanned Aircraft Systems integration. The objective is to research the needs and challenges of the integration of unmanned aircraft operations in UAS Traffic Management as well as the relevance and impact of UTM on manned and unmanned aircraft operations. Work will be performed at Yorkville, New York, and is expected to be completed by Sept. 30, 2020. The Air Force Research Laboratory – Information Directorate's Information Grid and Systems Contracting Branch, Rome Research Site, Rome, New York, is the contracting organization.

<https://dod.defense.gov/News/Contracts/Contract-View/Article/1908210/>

Tiny UK startup takes on Google's Wing in the race to a drone traffic control system Mike Butcher@mikebutcher / 3 days ago



[Wing LLC](#), an offshoot of the Alphabet / Google-owned X company, has announced a platform it

ation | Charlottesville and Portsmouth, VA
57-309-5869 | www.axcelinnovation.com



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calls [OpenSky](#) that it hopes will become the basis for a full-fledged air-traffic control system for drones. So far, it's only been approved to manage drone flights in Australia, although it is also working on demonstration programs with the U.S. Federal Aviation Administration.

But this week, [Altitude Angel](#), a U.K.-based startup backed by [Seraphim Capital](#) and with **\$4.9 million** in funding, has launched its own Unmanned Traffic Management system. Its Conflict Resolution System is an **automatic** collision-avoidance technology. By being automated, this technology will prevent any mid-air collisions, simply because by knowing where everything else is in the sky, there'll be no surprises.

During the planning stages of a flight, the system analyses the proposed route and cross-references it with any other flight plans that have been submitted, along with any restricted areas on the ground, to then propose a reroute to eliminate any flight-plan conflicts. Eventually, a drone operator does this from an app on their phone, and the approval to fly is automated.

While the drone is in flight, the system continuously monitors the airspace around the aircraft both for other aircraft and for changes in the airspace and automatically adjusts the route.

Drone pilots can store flight plans with a globally distributed service without needing to exchange private or potentially sensitive data with each other while benefiting from immediate pre-flight conflict resolution advice. <https://techcrunch.com/2019/07/19/tiny-uk-startup-takes-on-googles-wing-in-the-race-to-a-drone-traffic-control-system/>

Police use of drones is expanding in Washington State [Haye Kesteloo](#) Jul. 22nd 2019



The Washington State Patrol is now believed to have **the largest drone fleet** of any law enforcement agency in the country, with over **100** unmanned aircraft in service.

One area where drones benefit police departments is when they need to map a crime scene. Both the Washington State Patrol as well as the Renton Police Department said that previously mapping a crime scene took about **three to four hours**, but with a drone, it only takes **20 minutes**. The Renton Police Department, according to Karlewicz, is probably averaging 30 to 40 drone missions a month.

"If we can fly a drone in and clear the majority of a house with a machine instead of putting a human in there, possibly in danger, we do that," he said. "Same thing for a high-risk stop and the subject is refusing to get out of a car. So we might fly a drone up and look inside the car and see what he is doing, and if he presents a danger to us, tell if he's armed."



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Just like hobbyists and commercial drone pilots, the police have to follow the same rules when they are flying drones. They too need to keep their aircraft below 400 feet. For most police operations, the drones fly at around 50 feet to capture quality video and photo material. All the imagery collected by the unmanned aircraft is public record. <https://dronedj.com/2019/07/22/police-use-of-drones-is-expanding-washington-state/#more-17711>

23Jul19

The Drone Manufacturer Ranking Report 2019 2019-07-22 Lukas Schroth



Following numerous requests by our clients, customers and readers, DRONEII is delighted to present you our Drone Platform Manufacturer Ranking 2019 Report. It ranks the top drone manufacturers in the world using company size, market shares and public attention as key parameters.

Upon popular demand, we've pooled all of our resources, data and expertise to create the report. It answers your questions about who the top drone hardware manufacturers in the world are, where they're from, which industries their drones are used in, how much disclosed funding they have, and who they're partnered with. You need this report if you are a:

- Drone/UAV platform manufacturer looking to see how you rank against your competitors
- Industry stakeholder currently using drones
- Enterprise considering adopting drones into your business model, looking for the right manufacturer
- Current or potential investor in drones looking for a hardware manufacturer to invest in
- Drone Service Provider seeking to explore new platforms
- Industry organization or association which needs to know about latest drone hardware market trends

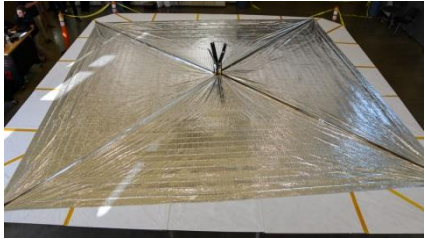


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- Government agency in need of reference data in order to formulate policy standpoints on commercial drones and get in contact with key stakeholders

<https://www.droneii.com/drone-manufacturers-ranking-2019>

Planetary Society's LightSail poised to unfurl CAT HOFACKER JULY 19, 2019



The Planetary Society is about to command a Mylar sail to unfurl from a **cubesat** the size of a loaf of bread, and some lucky space watchers will be able to see the sail from the ground as the sunlight reflects off it.

Deployment of the sail from LightSail 2 is tentatively scheduled for 2:22 p.m. EDT Tuesday. The deployment will be streamed [here](#). Viewers can also check the project's online [mission control dashboard](#) for updates, as well as see when the cubesat could be passing over their locations.

The Planetary Society, a California nonprofit that advocates for space exploration, launched LightSail 2 to prove that a spacecraft can be propelled by photons from the sun striking its sails.

<https://aerospaceamerica.aiaa.org/planetary-societys-lightsail-ready-to-unfurl/>

Blue Bear launches Mobile Command and Control System APPLICATION BUSINESS MANUFACTURER NEW PRODUCTS NEWS UK ALEX DOUGLAS JULY 23, 2019



The company says the launch has brought together Blue Bear's capability in ground control stations, C2 and mission systems, Geospatial Information Systems, imagery exploitation and dissemination, air picture, and maritime picture technology.

The new product can provide a mobile solution for unmanned systems operation **anywhere** in the world. It also features a Live, Virtual and Constructive suite, providing Concepts of Operations experimentation, training, mission rehearsal, and After Action Review capabilities.

New types of sensors can also be plugged in to further enhance the systems capability as technology evolves. Launched this month, the MCCS is set to be deployed for the next 6 months on key trials around the UK and on NATO trials in 2020.

https://www.commercialdroneprofessional.com/blue-bear-launches-mobile-command-and-control-system%ef%bb%bf/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-307995-



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[Commercial+Drone+Professional+DNA+-+2019-07-23](#)

FAA to Further Expand Opportunities for Safe Drone Operations



The [Federal Aviation Administration \(FAA\)](#) beginning on July 23 will expand the [Low Altitude Authorization and Capability \(LAANC\)](#) system to **include recreational flyers**. This action will significantly increase the ability of drone pilots to gain access to controlled airspace nationwide.

[LAANC](#), a collaboration between the FAA and industry that directly supports the safe integration of [Unmanned Aircraft Systems](#) into the nation's airspace, expedites the time it takes for a drone pilot to receive authorization to fly under 400 feet in controlled airspace.

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. LAANC capability is accessible to all pilots who operate under the [FAA's small drone rule](#) (Part 107). For updates to LAANC capabilities, visit <https://www.faa.gov/go/laanc>

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

24Jul19

UPS just formed its own drone operation company — and it's another edge against Amazon, FedEx, and Uber in the quest for unmanned deliveries Rachel Premack



A UPS drone

Big names from Intel to Amazon to Uber to Walmart have rushed into the drone logistics market — a sector that's on track to reach \$29 billion [by 2027](#). Many of these pushes into drone testing have been highly-publicized, but lacking in terms of actually generating any money for the companies.

And, in March, UPS beat out its competitors to become **the first company to achieve regular, revenue-generating drone deliveries**. It wasn't from delivering an e-commerce parcel or a box of pizza — but blood and organ samples.



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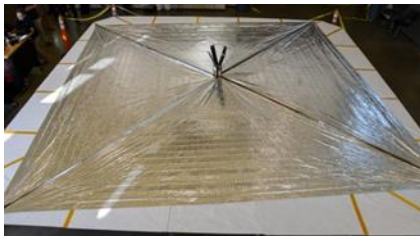
"Our focus is on healthcare, just-in-time, real urgent movements, life-changing events in hard-to-reach locations," Bala Ganesh, the vice president of the Advanced Technology Group at UPS, told Business Insider in July. Since then, UPS has made five to 10 deliveries a day around WakeMed's medical campus in Raleigh, North Carolina. Drone delivery cut the transport time from up to 30 minutes to three minutes and 15 seconds.

On July 23, UPS flexed its muscles in drone delivery **again** with the announcement that a newly created subsidiary of the company, **UPS Flight Forward Inc.**, has applied for Part 135 certification with the US Federal Aviation Administration. That certification would allow the logistics giant to expand its drone operations from North Carolina to **nationwide**.

This move from UPS shows that there's consistent money to be made from unmanned delivery operations — but there are regulatory hurdles to overcome in order to implement drone deliveries. <https://www.businessinsider.com/ups-flight-forward-drone-company-2019-7?r=UK&IR=T>

SAIL DEPLOYMENT COMPLETE! We're sailing on SUNLIGHT!!!! 3:17 PM - Jul 23, 2019

Planetary Society ✓@exploreplanets



A spacecraft the size of a loaf of bread has finally turned itself into a [solar sail](#).

On Tuesday (July 23) at about 2:47 p.m. EDT a motor onboard [the small LightSail 2 cubesat](#) began deploying the mission's 344-square-foot solar sail, which is about the size of a boxing ring. LightSail 2 is the passion project of The Planetary Society, and the space advocacy organization wants to demonstrate that solar surfing is a viable propulsion technique for spacecraft.

"We're very excited to be past this huge milestone," Jennifer Vaughn, Chief Operating Officer at The Planetary Society said during a livestream of the deployment from the spacecraft's control center in California. "We now have a sail. It's time to go sailing! ... We now start the very difficult process of sailing in space." https://www.space.com/lightsail-2-solar-sail-deployment-success.html?utm_source=sd-newsletter&utm_medium=email&utm_campaign=20190724-sdc

Global drone market estimated to reach US \$14 billion by 2029 Haye Kesteloo Jul. 24th 2019



Dominated by Chinese manufacturers, the global, non-military drone market is estimated to reach \$14.3 billion by 2029,

| Axcel Innovation | Charlottesville and Portsmouth, VA
[@axcel.us](#) | 757-309-5869 | www.axcelinnovation.com



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according to a report released on Wednesday. The increase would represent an almost **300% growth** of the current global drone sales, which are estimated to be around \$4.9 billion in 2019.

The gradual opening of the US airspace by the Federal Aviation Administration and the increase of the use of drones by businesses are expected to be the main drivers according to a study by aerospace analysis company Teal Group. Phil Finnegan, author of the report, said that **Chinese** drone manufacturers supply **three-quarters** of the world commercial and consumer markets by units.

Earlier this year, the Department of Homeland Security warned US firms of the security risks involved when using Chinese-made drones. At the center of the criticism is [DJI](#). The Chinese drone maker called the security concerns **“false” and “misguided.”** DJI spokesman Michael Oldenburg said that DJI customers have “full and complete” control of their data.

The use of drones for **industrial inspection** is the leading market segment. This includes construction, energy, and mining, where drones are used to monitor construction sites, transmission lines and stockpiles. The second-largest segment is **agriculture**. Here drones are used to spray crops and analyze the health of plants and fields.

<https://dronedj.com/2019/07/24/global-drone-market-14-billion/#more-17765>

Altitude Angels L.A.A.N.C. Service Now Freely Available To Users In The United States July 24, 2019 News



Altitude Angel today announced it has expanded access to its implantation of the Low Altitude Authorization and Notification Capability (L.A.A.N.C.) service in its products, meaning its U.S.-based commercial drone pilots can now use the company’s capabilities to access airspace at around 600 U.S. airports – free of charge. Commercial operations can now gain L.A.A.N.C. approval through Altitude Angel’s [DroneSafetyMap.com](#) without any need to visit a third-party platform.

In addition, Altitude Angel’s implementation of L.A.A.N.C. means pilots can quickly check their ‘options’ before submitting a full authorization request and make any adjustments in a streamlined process to maximize their chances of securing approval.

https://uasweekly.com/2019/07/24/altitude-angels-l-a-a-n-c-service-now-freely-available-to-users-in-the-united-states/?utm_source=newsletter&utm_medium=email&utm_campaign=uasweekly_daily_newsletter_07_24_2019&utm_term=2019-07-24

25Jul19



UAS and SmallSat Weekly News

UAV-IQ starts aerial biocontrol offering AGRICULTURE APPLICATION INTERNATIONAL NEWS

ALEX DOUGLAS JULY 25, 2019



UAV-IQ has confirmed it is offering aerial biocontrol, a new integrated pest management service that uses drones to release beneficial biological control agents bred by Koppert Biological Systems.

The company says that drone-based aerial biocontrol offers a **new way** for conventional and organic growers to combat pests, reduce the environmental impact of pesticide usage and address a growing labor crunch.

Andreas Neuman, CEO at UAV-IQ, stated: "We're extremely excited to team up with the premier company in biocontrol to help address the pest management needs of growers."

Ryan Hill, general manager at Koppert Biological Systems, "After extensive research, development, and field trials I'm confident that we are providing growers a service that will become a standard component of effective, modern integrated pest management plans."

UAV-IQ outlined killing pests even when they're hiding where chemicals can't reach, more efficient distribution than traditional application techniques and the reduction of chemical pesticides as some of the benefits to aerial biocontrol.

https://www.commercialdroneprofessional.com/uav-iq-starts-aerial-biocontrol-offering/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-308257-Commercial+Drone+Professional+DNA+-+2019-07-25

Flirtey To Begin Drone Delivery Service in 2020 Mark Huber July 24, 2019



U.S.-based drone delivery company Flirtey will begin commercial service in 2020. It was the first drone delivery company to conduct FAA-approved commercial drone delivery demonstrations, a series of deliveries of medications and supplies. The July 2015 demonstrations were conducted in Virginia. The drone used for those demonstrations will soon be on display at the **Smithsonian** National Air and Space Museum in Washington D.C.

It is also participating in the FAA's Unmanned Aircraft System Integration Pilot Program in partnership with the city of Reno, Nevada. It has received FAA approval for multi-drone, single-pilot operations, as well as for beyond visual line of sight operations. Since its founding in 2013, Flirtey launched the first pizza-by-drone delivery model (Domino's in New Zealand), conducted



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the first autonomous drone home delivery (with 7-Eleven stores in the U.S.) and completed the first FAA-approved ship-to-shore drone delivery (with Johns Hopkins University).

To date, the company has received **\$16 million** in funding from investors including Menlo Ventures and Qualcomm Ventures. "Flirtey's Kitty Hawk moment on July 17, 2015, pioneered the commercial drone delivery industry, just as the Wright Brother's flight at Kitty Hawk pioneered the commercial aviation industry," said Flirtey founder and CEO Matthew Sweeny. "Flirtey is now on the fast-track to begin lifesaving automatic electronic defibrillator delivery and commercial package delivery to homes in the U.S. in 2020." <https://www.ainonline.com/aviation-news/business-aviation/2019-07-24/flirtey-begin-drone-delivery-service-2020>

Alaka'i Skai Fuel Cell Powered eVTOL Kate O'Connor July 24, 2019



Alaka'i Technologies debuted Skai, a hydrogen fuel cell powered electric vertical takeoff and landing system last May. In this podcast, recorded at AirVenture, Alaka'i Technologies board member and former NASA director Bruce Holmes discusses fuel cell technology, the challenges involved with certifying a new kind of aircraft and the company's approach to the urban air mobility market.

The aircraft will have an endurance of up to **four flight hours**, payload of 1,000 pounds and range of about 400 miles. The **five-seat** aircraft is designed to fly at speeds of up to 118 MPH and refuel in under 10 minutes. It will be capable of piloted, ground-piloted and **fully autonomous** flight. The company says features will include a whole-airframe parachute, six-rotor propulsion system, triple redundant autopilot and "fly-by-light fiber-optics-based controls for EMI and lightning protection." <https://www.avweb.com/recent-updates/evtols-urban-mobility/podcast-alakai-skai-fuel-cell-powered-evtol/>

Amsterdam Drone Week is Where the UAS Industry Stops Talking and Starts

Building Jeremiah Karpowicz UAS: European Markets July 24, 2019



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The inaugural edition of [Amsterdam Drone Week](#) showcased numerous technologies and innovations that will change the way people think about how manned and unmanned aircraft will operate in the airspace. The meetings, discussions and education that took place at the conference sessions as well as the EASA High Level Conference on Drones proved to be the true highlight for attendees.

At Amsterdam Drone Week 2019, 4-6 December, these notions are set to be taken to the next level, thanks in part to the [common drone rules](#) for all of Europe that have finally been published. However, it's the desire to create a framework for concepts like Urban Air Mobility and drone traffic management systems that will really define this year's event. Everyone is anxious to stop talking and start building, and that yearning is shaping the future of the sky across Europe and the rest of the world. In line with this, the EASA High Level Conference will focus on the topic "scaling drone operations".

"Ultimately, we don't just want to talk about the future," Nynke Lipsius, Director Amsterdam Drone Week, said. "We want to start building now. That's why the U-space discussion is so important, and the sharing of information is such a focus for us. Sharing data and building the infrastructure might not be as alluring as flying taxis, but it's the most important piece for this year." https://www.expouav.com/news/latest/amsterdam-drone-week-uas-industry/?mkt_tok=eyJpIjoiWmpka1lgSXpNVEEyWVdNMCIiOiQilxc1p6bFg4bFICS1BhektpcjkyTndtREdRdmJ5R1pWbGtpTjNkVzIqQhHjUjIU1VUM01QQ3lueE9DaFRWbkJMYnpPbEJQeigwUHNOYW5jKzVJXC9nbHphUjZpRWRxN2Q5SEZldHJcL1FzdmhCbVFWEs4TzdcL0U2dEpNWZh2emZScyJ9

French software startup Sterblue earns IlluminationLAB selection Sam Hill July 23, 2019



Sterblue Engineer & Instructor Ignacio Carnicero with drone Pilot Andrew inspecting wind turbines in Texas.

French drone software startup [Sterblue](#) was recently selected as one of **117 start-ups** that will be working with the largest U.S. utility companies through [IlluminationLAB](#), an energy solutions bootcamp hosted by [American Electric Power](#) and the [Electric Power Research Institute](#).

Sterblue builds software to assist drones inspecting wind turbines and power lines, guiding drones along trajectories that wrap tightly around structures, finding anomalies from the collected images and producing reports. During the 10-week program, Sterblue will lead pilot projects to demonstrate uses for their software.



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The company aims to automate time-consuming, costly and [dangerous inspections](#) of power lines, utilizing drones instead of manual inspections completed by operators at ground-level. The company has been proving itself over the past two years in a variety of pilot projects with energy leaders in **14 countries** and is excited to collaborate with other energy start-ups to improve their product while exploring its viability in the U.S.

https://www.expouav.com/news/latest/french-software-startup-sterblue-earns-illuminationlab-selection/?mkt_tok=eyJpIjoiWmpka1lqSXpNVEEyWVdNMClInQiOilxc1p6bFg4bFICS1BhektpcgyTndtREdRdmJ5R15SEZldHJcl1FzdmhCbjVFWEs4TzdcL0U2dEpNWfh2emZScyJ9

26Jul19

Chinese private company reaches orbit for first time July 25, 2019 Stephen Clark



*The Hyperbola 1 rocket lifted off Thursday from the Jiuquan space center in northwestern China's Inner Mongolia region. A startup company named i-Space became the **first** Chinese private firm to achieve orbit Thursday with a successful launch of a light-class Hyperbola 1 booster.*

The Hyperbola 1 rocket carried several **small satellites** and payloads into an orbit approximately 186 miles above Earth. China's state-run Xinhua news agency confirmed the successful launch, which occurred at 0500 GMT (1 a.m. EDT) Thursday.

Orbital tracking data by the U.S. military published Thursday afternoon, U.S. time, showed an object attributed to the Hyperbola 1 launch in a nearly circular orbit at an altitude of around 180 miles with an inclination of 42.7 degrees to the equator.

Thursday's mission was the first launch of the Hyperbola 1 rocket on an orbital flight, following test flights conducted by i-Space of precursor vehicles on suborbital trajectories.

The Hyperbola 1 rocket is capable of delivering up to 573 pounds of payload mass to a 310-mile-high sun-synchronous polar orbit. <https://spaceflightnow.com/2019/07/25/chinese-private-company-reaches-orbit-for-first-time/>

Four Firms to Compete for Tactical UAS Orders Under \$100M Army Contract

Matthew Nelson July 26, 2019 Contract Awards, News



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Four companies have won spots on a three-year, \$99.5M contract to build drones as part of the U.S. Army's Future Tactical Unmanned Aerial Systems program.

Army Contracting Command received 11 bids for the firm-fixed-price contract via the internet and will provide location and funding details upon the award of individual orders, the Department of Defense [said Thursday](#).

The awardees are [Arcturus UAV](#), [Textron](#), [L3Harris Technologies](#) and [Martin UAV](#). Contract work is scheduled to occur through July 24, 2022.

The service branch is seeking a new UAS platform that can align with its Multi-Domain Operations concept and replace its fleet of RQ-7 Shadow vehicles.

<https://www.govconwire.com/2019/07/four-firms-to-compete-for-tactical-uas-orders-under-100m-army-contract/>

Reno mayor tells of commercial drone importance at US Conference of Mayors

APPLICATION BUSINESS NEWS POLITICS TECHNOLOGY UNITED STATES ALEX DOUGLAS JULY 26, 2019



The mayor of Reno told US mayors at their 87th annual meeting in Honolulu how important commercial drone operations can be.

The mayors unanimously approved a Data Protection at the Edge Resolution sponsored by Mayor Hillary Schieve of Reno, Nevada. It called for 'sweeping' improvements to data security and infrastructure.

She said: "As the country's **first** Mayor to oversee the unmanned and autonomous deployment of aerial commercial drones over an urban area in downtown Reno, I know first-hand that the incredible growth of data being generated by the Internet of Things and the continued evolution of smart cities requires the most secure infrastructure possible."

Debra March, mayor of Henderson, commented: "As our cities continue to embrace the rapid adoption of smart city technology through connected devices, deployment of sensors, autonomous vehicles, smart grids and more, we must ensure the massive growth of data infrastructure is as strong and resilient as possible."

<https://www.commercialdroneprofessional.com/reno-mayor-tells-of-commercial-drone-importance-at-us->



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[conference-of-mayors/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-308352-Commercial+Drone+Professional+DNA+-+2019-07-26](https://www.axcelinnovation.com/conference-of-mayors/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-308352-Commercial+Drone+Professional+DNA+-+2019-07-26)