



## UAS and SmallSat Weekly News

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### **AirVuz Video of the Week: What Does The Flight of a Golf Ball Look Like?** Harry McNabb June 25, 2020

As summer sports start to come back, golf is back too. Will drones be the newest accessory on the course? This video of a golf ball in flight went viral – and it's our pick of the week from our friends at [Airvuz](#), the largest collection of drone videos on the web.

From the AirVuz description: "You won't want to be the one person who missed this cool first person view (FPV) video of a moving golf ball by AirVuz contributor and pilot Rosshasadrone! Watch as he takes off for each long drive and chases down the links to give us all the best perspective on that ball traveling from 'club to tee.' Rosshasadrone said he's wanted to do this ever since he got into FPV, and we're betting he's got more creative and cool flights to come, and we put on the FPV Pilots to Watch list in March 2020 to prove it."

See the video at <https://dronelife.com/2020/06/25/airvuz-video-of-the-week-what-does-the-flight-of-a-golf-ball-look-like/>

### **Drone video: Great white shark swims within inches of surfers** [Josh Spires](#) Jun. 25th 2020



A [drone](#) has captured a [great white shark](#) swimming within inches of surfers paddling through the water in South Africa. Luckily no one was injured by the shark who was just investigating the surfers, according to Sarah Waries from the City of Cape Town Shark Spotters program.

The shark was [spotted](#) by drone in Plettenberg Bay in South Africa's Western Cape Province on Tuesday. The video sent out a warning to many around the area to be extra cautious when in the water. Waries shared that the shark was aware of the surfers above and was just checking them out due to their inquisitive nature. She added that shark bites are rare, but people must understand the risk of being in the water with an Apex predator.

Shark sightings have increased over the last few weeks around South Africa's Western Cape Province with authorities asking surfers to get out of the water. See the video at: <https://dronedj.com/2020/06/25/drone-video-great-white-shark-swims-within-inches-of-surfers/#more-30905>



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### Russia is taking on drone swarms to protect oil reserves Josh Spires Jun. 25th 2020



world's oil supply.

State-run [Russian](#) cybersecurity developer Concern Avtomatika JSC is now working on technology to deter [drone swarms](#) from flying over oil facilities. The move comes as a direct response to the drones that were used to take out the oil facility in Saudi Arabia, **knocking out around 5% of the**

The [developer](#) has already started selling anti-drone technology to Russian energy customers and is currently exploring the international market. Concern Avtomatika currently has nine anti-drone products ranging from the portable Luch-PRO with the ability to suppress drones up to 6 km to the Rubezh-Avtomatika, a stationary system that is able to take down drones 15 km away. The company also has a gun variant, like [DroneShield](#), with a range of 2 km.

According to the Russian watchdog Rosaviatsia, the number of drones in the skies went up by around 500,000 with the number expected to hit 1 million by 2025. These anti-drone systems have large up-front costs but save money in the long run by protecting valuable assets that would cost way more to rebuild or aren't able to be rebuilt.

<https://dronedj.com/2020/06/25/russia-is-taking-on-drone-swarms-to-protect-oil-reserves/#more-30703>

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### We're About to See the Golden Age of Drone Delivery – Here's Why Jun 25, 2020

Harrison Wolf, Lead, Aerospace and Drones, World Economic Forum



The way the world views drones is changing. Once a nuisance buzzing around our heads, drones are now life-saving tools in the battle against Covid-19. Instead of nuisance or novelty, they are becoming **necessary**. Drones are shifting from a hyped-up super technology that can solve every challenge to a tool that can allow us to meet specific needs. This shift allows us to focus on specific implementations that drive the greatest return.

Dire times drive innovation. In this instance, the innovation is not in technology, but in **policy**. While some argue that drone technology wasn't mature enough to be trusted at large scale – and cultural questions around privacy, noise and annoyance have hampered the expansion of flights – a societal and governmental shift in evaluating acceptable risk is driving greater



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implementation. With [air travel down nearly 90%](#) and dramatically fewer cars on the road due to shelter-in-place orders, the **risks** drones might present in the air and on the ground **are significantly reduced**. Meanwhile, pressure has been mounting to deliver vital goods, support social distancing and enable essential workers to operate with greater efficiency and efficacy.

The times call for new technologies that connect the disconnected, provide resilience to at-risk supply chains and promote social distancing in last-mile delivery. Here's how drones can play an important role – and why this crisis might usher in **the Golden Age of drone delivery**.

<https://www.forbes.com/sites/worldeconomicforum/2020/06/25/were-about-to-see-the-golden-age-of-drone-delivery--heres-why/#165588054430>

### The Skydio 2 self-flying drone is back on sale, with a fix we've been waiting for

Sean Hollister@StarFire2258 Jun 25, 2020

The \$999 Skydio 2 self-flying drone is one of the most incredible gadgets I've ever touched, but [it's got its fair share of limitations](#). Two of them: It's been practically impossible to buy, and we found the nearly crash-proof drone *could* crash during some landings. The carrying case that comes with your drone now doubles as an **autonomous landing pad**.



Skydio CEO Adam Bry tells me that landing's been a tricky problem for an autonomous drone because most people expect them to descend straight down to earth. In our testing, we found that making landings predictably vertical left the Skydio 2 with a weakness: it wouldn't necessarily avoid obstacles after you told it to land, and it could even crash if you weren't careful

about where you set it down.

Now, every Skydio 2 comes with a dedicated landing pad, obstacle avoidance stays on until you're three meters away from the ground, and there's an additional manual failsafe: you can "nudge" the drone left, right, forward, or backward if you see that, despite its best efforts, it still might nick something on its way down. Bry says the drone will lock onto its carrying case within about a 6-foot radius, so you don't need to be *exactly* over it to safely land, either.

<https://www.theverge.com/2020/6/25/21303316/skydio-2-self-flying-drone-update-on-sale-covid>



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### **The Army is working on Shape-Shifting Autonomous Drones** Jason Reagan June 26, 2020



Researchers with the U.S. Army's Combat Capabilities Development Command's [Army Research Laboratory](#) and [Texas A&M University](#) recently presented findings from a two-year study at the [AIAA Aviation Forum and Exposition](#)'s virtual event.

The research project will "be able to rapidly optimize the structural configuration for Future Vertical Lift vehicles while properly accounting for the interaction between air and the structure."

"Consider a mission where the vehicle needs to get quickly to station and then stay on station for as long as possible. "During dash segments, short wings are desirable in order to go fast and be more maneuverable, but for loiter segments, long wings are desirable to enable low power, high endurance flight."

One challenge is finding a "balance between sufficient bending stiffness and softness to enable [shape shifting]," Phillips said. "If the wing bends too much, the theoretical benefits of the morphing could be negated and also could lead to control issues and instabilities."

To overcome these challenges, researchers developed a process that decouples the fluid and structural solvers, which can reduce the computational cost for a single run by as much as 80 percent. <https://dronelife.com/2020/06/26/army-autonomous-drones/>

### **New Algorithm Allows Drones to React in 3.5 Milliseconds, Avoiding Fast Moving Obstacles** Harry McNabb June 26, 2020



A team of three researchers at the Department of Informatics, University of Zurich, have created a method of sense and avoid for drones using event cameras so the drones can safely avoid obstacles at very close range.

Today's autonomous drones have reaction times in tens of milliseconds. The new method reduces the overall latency to 3.5 milliseconds so drones can more reliably detect and avoid relatively fast-moving obstacles.



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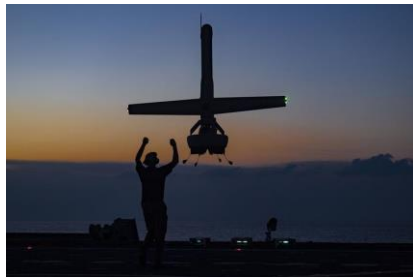
As described in [Science Robotics](#), “To safely avoid fast moving objects, drones need low-latency sensors and algorithms.” “We departed from state-of-the-art approaches by using event cameras, which are bioinspired sensors with reaction times of **microseconds**. Our approach exploits the temporal information contained in the event stream to distinguish between static and dynamic objects and leverages a strategy to generate motor commands necessary to avoid the approaching obstacles. ” The video below demonstrates and explains the new research.

<https://dronelife.com/2020/06/26/sense-and-avoid-for-drones/>

### **US Navy looks for new small ship-borne UAV for possible \$1bn program** Garrett

Reim 26 June 2020

The effort is being run by Innovation and Modernization Patuxent River, a partnership between the Naval Air Warfare Center Air Division AirWorks prototyping group and Georgia Tech Research Institute.



*Martin UAV V-Bat landing on USNS Spearhead*

The Naval Air Warfare Center Air Division plans to sponsor a technology demonstration for select UAVs between 30 November and 18 December 2020 at Yuma Proving Ground in Arizona. After that the USN may award prototyping contracts to more than one manufacturer to improve their drones. “Any

has the potential to become a part of a future program of record estimated to be worth up to \$1 billion.

The service wants a UAV that could be flown from austere environments without dedicated launch or recovery equipment. It wants a drone that could be launched and recovered with a 25lb payload; have 300W of electrical power available for payloads; have a 12h flight endurance; have a 70nm line of sight range for command and control; be able to launch and recover within a 23ft diameter area. The UAV also should be able to send back full-motion video in day or night. And, it should have encrypted command and control and data links.

<https://www.flightglobal.com/military-uavs/us-navy-looks-for-new-small-ship-borne-uav-for-possible-1bn-programme/139029.article>





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### **ASTRA wins contract to study weather cubesat constellation** [Debra Werner](#) June 26, 2020



SAN FRANCISCO – Atmospheric & Space Technology Research Associates LLC announced June 24 a National Oceanic and Atmospheric Administration contract for a design study of a cubesat constellation to provide weather data.

NOAA awarded ASTRA a \$599,885 contract in April for a six-month study called GEO-utilization of Common LEO Architecture for Weather (G-CLAW). ASTRA intends to meet NOAA requirements for gathering weather observations in both low Earth and geostationary orbit with sensors on cubesats in low Earth orbit.

Louisville, Colorado-based ASTRA plans to conduct the G-CLAW study with Science and Technology Corporation and Lockheed Martin. Through the study, ASTRA plans to show how a common 12-unit satellite could host an imager, a suite of infrared and microwave sounders, and a Global Navigation Satellite System sounder.

ASTRA's G-CLAW architecture will attempt to satisfy most but not all of NOAA's future satellite weather data requirements. <https://spacenews.com/astra-noaa-cubesat-study/>

### **UAVaid and Halkin Group support Kenya COVID recovery with drones**

APPLICATION INTERNATIONAL NEWS ALEX DOUGLAS JUNE 29, 2020



The memorandum of understanding MOU signed between the two organizations is aimed at leading to the deployment of UAVaid's multi-role HANSARD drone to Kenya, providing the country with a new airborne capability for medical deliveries, agriculture development, infrastructure inspection, public safety and wildlife protection across the country.

This agreement follows the recent announcement that Kenya Civil Aviation Authority has passed a key piece of legislation that will authorize drones to start operating in Kenya.

The HANSARD drone is capable of delivering cargo of up to 10kg at a time over journey distances of up to **300 km** in a single flight developed by UAVaid in the UK and EU, specifically for African requirements. <https://www.commercialdroneprofessional.com/uavaid-and-halkin-group-support-kenya-covid-recovery-with-drones-for-national-healthcare/>



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### Beautiful blue whale video shot by drone Scott Simmie Jun. 29th 2020



On June 19, the owner of the San Diego company [Gone Whale Watching](#) was out on a run looking for whales. Domenic Biagini noticed that a blue whale began to check out his boat and popped a drone in the air to capture the moment. The resulting video is truly spectacular and wound up being picked up by Fox News.

"We've been lucky to see blue whales almost every day for the past week, and in this amazing moment, this giant whale came over to check out our boat," Fox quotes Biagini as saying. And Biagini's drone was there to record the magic.

Blue whales are the largest creatures on earth, and according to Wikipedia, the largest animal to have ever existed. How big? Well, they've been measured at up to 29.9 meters, or 98 feet in length. It was once abundant in nearly all oceans on the planet, until hunting pushed it to the brink of extinction. In 1967, the International Whaling Commission banned all hunting, though many ignored the ban.

It's now estimated that 10,000-25,000 blue whales exist around the planet, just a small fraction (around 3-12%) of the numbers that existed just over a century ago. See the video at: <https://dronedj.com/2020/06/29/beautiful-blue-whale-video-shot-by-drone/>

### IAI adds Iron Drone Intercepting Drones to Drone Guard June 29, 2020 Counter UAS



[Israel Aerospace Industries Ltd.](#) and Iron Drone today announced a collaboration agreement for the integration of interception capabilities into IAI's anti-drone system Drone Guard. The intercepting drone can be launched day or night from a docking station that hosts several ready-to-use drones. Several can be launched simultaneously to

address different targets or swarms.

IAI ELTA Systems, which develops and manufactures Drone Guard anti-drone systems, has sold over 100 units that detect, identify, and disrupt the operation of malicious drones. ELTA's collaboration with Iron Drone is part of its strategy to collaborate with startups to leverage their innovative technologies for their existing systems to improve performance. ELTA is a global leader in remote sensing and RADAR systems.. <https://uasweekly.com/2020/06/29/iai-adds->





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[iron-drone-intercepting-drones-to-drone-guard/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=iai-adds-iron-drone-intercepting-drones-to-drone-guard&utm\\_term=2020-06-29](#)

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### DJI Drone Rescue Map Tracks Life-saving Success Stories Jason Reagan June 29, 2020



**Drone giant DJI** today launched a new mapping solution to optimize [rescue drones](#). [Drone Rescue Map](#) is an online reference that globally tracks events involving life-saving [drones](#).

The map has already depicted rescue drones helping more than **400 people in more than 200 emergency situations**.

“Each entry on the map includes the location and date of the incident, a brief description, a link to the original story or post and an easy way to share those incidents online,” a DJI spokesperson explained. “To make the map as definitive as possible, DJI encourages [public-safety agencies](#) to share additional drone rescues so they can be included.”

“The DJI Drone Rescue Map is now the best global reference for how effective drones are in emergencies and allows the world to see the tremendous impact drones have had in finding lost people, shortening searches, reducing risks to rescuers and saving lives,” DJI Senior Director of Public Safety Integration Romeo Durscher said in a press release.

The map includes instances of [drones](#) finding people lost in forests, fields and mountains. Often, UAVs find missing persons at night, thanks to thermal imagery. Drones can also drop life preservers to potential drowning victims. <https://dronelife.com/2020/06/29/dji-drone-rescue-map/>

### Exolaunch and NanoAvionics sign contracts for SpaceX flights Debra Werner June 30, 2020



SAN FRANCISCO – German launch services provider Exolaunch announced contracts June 29 to integrate NanoAvionics cubesats on SpaceX’s rideshare missions. Under the agreements, Exolaunch is procuring the launch, handling integration and deploying in orbit two six-unit cubesats built by NanoAvionics, a Lithuanian nanosatellite manufacturer.

The first NanoAvionics cubesat covered by the new contract is scheduled to reach orbit on a



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SpaceX Falcon 9 dedicated rideshare mission in December 2020. The second is scheduled for a 2021 SpaceX flight.

NanoAvionics, a spinoff of Lithuania's Vilnius University, has established facilities in Vilnius, the United Kingdom and the United States to satisfy growing demand for small satellites.

<https://spacenews.com/exolaunch-nanoavionics-contrac/>

**Drone night flights approved to protect India against locusts** Josh Spires Jun. 30th 2020



[India's](#) Civil Aviation Ministry has given the go-ahead for the first time for drones to fly during nightfall to help fight locusts swarming on large trees across northwest and central India.

The [drones](#) have been specifically built by Anna University in Chennai, India, with a pesticide tank that is 60% larger and an overall weight of 50kg (~110 pounds). The drones are powered using a dual system – petrol and battery – with a maximum flight time three times longer than the drones previously used. The new drones are equipped with thermal cameras to better locate the locusts in the dark by detecting the heat signatures created by the small insect.

To date, three drones have been deployed to detect and destroy the locust swarms, with another 15 planned to be built soon. The drones have also proven as a possible tool in the fight against [COVID-19](#), thanks to the long endurance and large tank size.

<https://dronedj.com/2020/06/30/drone-night-flights-approved-to-protect-india-against-locusts/>

1Jul20

**Cargo Drones: Canada Proposes to Allow Low Risk BVLOS Operations for Large Drones** Harry McNabb June 30, 2020



Transport Canada has issued a [proposal](#) that would allow very large drones, such as [cargo drones](#), to fly beyond the remote pilot's visual line of sight when traveling in remote areas. The proposal takes a risk-based approach.

The proposal to accommodate very large drones, weighing 650 kg or 1,433 pounds, would allow for expanded operations in Canada's large sparsely populated areas – areas where the energy industry is engaged, and drone delivery might be most useful. The proposal is a direct effort to make these operations more viable for the drone industry.



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<https://dronelife.com/2020/06/30/cargo-drones-canada-proposes-to-allow-low-risk-bvlos-operations-for-large-drones/>

### **General Atomics launches Altius-600 drone from MQ-1C Gray Eagle** Garrett Reim 29 June 2020

The test launch of the Altius-600 from the MQ-1C was part of a roughly two-week demonstration activity to show new uses for the US Army's largest UAV as an intelligence, surveillance and reconnaissance tool to be used against sophisticated adversaries, such as China or Russia.



Against China and Russia, countries which have sophisticated anti-aircraft missile batteries, the slow flying and easy-to-spot UAVs are vulnerable to being shot down. General Atomics and the US Army are experimenting with ways to retrofit the MQ-1C so that it can fly just beyond the reach of enemy missiles and use sensors, as well as air-launched drones, to peer into other countries' territories.



In the recent demonstrations, the Altius-600 drones, which also are called air-launched effects by the US Army, were launched and controlled via the Gray Eagle Extended Range UAVs. Using what the company calls a "Tactical Scalable Mobile" communications network, the larger aircraft relayed real-time, full-motion video from the drone to the ground.

In concept, air-launched drones would fly into hostile airspace to gather intelligence, thus keeping the more vulnerable and expensive MQ-1C out of harm's way. The air-launched vehicles would be disposable. <https://www.flightglobal.com/military-uavs/general-atomics-launches-altius-600-drone-from-mq-1c-gray-eagle/139049.article>

### **New Parrot ANAFI USA drone for first responders** APPLICATION EMERGENCY SERVICES MANUFACTURER NEW PRODUCTS PARROT SAM LEWIS on JULY 1, 2020



The European Parrot said that the next-generation drone offers 32x zoom, 4K HDR video, thermal imaging, a rugged airframe and advanced data security. Two 21-megapixel cameras give the ability to see details at more than **three miles** away. It can be mobilized for takeoff in as little as **55 seconds**.



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It is designed for use by first responders, firefighters, search-and-rescue teams, security agencies, surveying and inspection professionals. Manufactured in the US, ANAFI USA comes with the same security, durability and imaging capabilities as Parrot's short-range reconnaissance (SRR) drone designed for the US Army.

<https://www.commercialdroneprofessional.com/new-parrot-anafi-usa-drone-for-first-responders/>

### **Skygauge inspection drone now available for pre-order** [Josh Spires](#) Jul. 1st 2020



The drone is equipped with a 4k 30 fps camera, a Olympus 38DL PLUS® ultrasonic thickness gauge, and a dual transducer to **measure the thickness of paint and the metal behind it.**

The [Skygauge inspection drone](#) is a little different from the drones you are used to seeing flying on commercial jobs. The inspection drone always remains horizontal, even when slowing down and speeding up. The drone is able to do this thanks to its thrust vectoring joints. Each set of propellers has two rotatable arms capable of moving up and down, allowing the motors to be tilted forward, backward, left and right without the whole drone doing the same. The arms are able to tilt, thanks to eight servo motors that automatically move based on stick movements on the controller.

The benefit of using a system like this instead of a traditional drone is stability, precision flight, angled inspections and wind resistance. Instead of the whole drone adjusting when a strong gust of wind comes in, the Skygauge drone stays in place while the movable joints adjust to keep the drone in place. This allows for better control over the drone and lessens the risk of crashing into an expensive asset. You can see the thrust vectoring joints in action below.

<https://dronedj.com/2020/07/01/skygauge-inspection-drone-now-available-for-pre-order/>

### **New South Wales to spend \$5.5 million on shark-spotting drones** Josh Spires Jul. 1st 2020



The New South Wales government will be using a fleet of drones to continuously monitor the coastline and act as an early shark detection system that will allow beachgoers to be removed from the water earlier than before. The drones will be deployed at **34 beaches** sharks are known to frequent and will be flown by Surf Life Saving NSW drone pilots. The drones **automatically** detect the size and species of a shark and pinpoint swimmers



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in distress. Drones and drumlines will be used at 21 shark detection stations. Shark meshing is currently installed at 51 beaches between Newcastle and Wollongong.

Drones are being used by Australian lifeguards to monitor and track sharks swimming in and around popular beaches. The drone known as [the Little Ripper](#) uses AI to detect sharks, alerting lifeguards, emergency services, and swimmers. The shark-spotting drone has a **90% accuracy rate**, while current manned aircraft have accuracy rates of around 20%.

Drones are playing an increasingly important role in shark spotting and protecting beachgoers. It seems a safe bet drones will continue to be added to the arsenal of lifeguards around the world. <https://dronedj.com/2020/07/01/new-south-wales-to-spend-5-5-million-on-shark-spotting-drones/#more-31243>

2Jul20

### DJI's Video with Shell Highlights the Use of DJI Drones in the Energy Industry

[Video] Harry McNabb July 01, 2020



As Parrot introduces the new ANAFI USA and other manufacturers scramble to capture a meaningful share of the market, DJI's industrial drones like the Matrice 300 featured in this video continue to be the major player in the energy market. Shell Global, owned by Royal Dutch Shell, is one of the world's top 10 largest oil companies. Their adoption of DJI drone technology – and willingness to talk about it – is a vote of confidence in the security and resilience of the platform.

The [Matrice 300](#) was introduced in May. It was introduced as DJI's most advanced commercial platform yet: as such, it sets a high bar of functionality for other drone manufacturers. Shell has been a supporter since the platform's release. <https://dronelife.com/2020/07/01/djis-video-with-shell-highlights-the-use-of-dji-industrial-drones-in-the-energy-industry/>

### UAVOS confirms successful test of UVH-170 unmanned helicopter high altitude flight

APPLICATION NEWS ALEX DOUGLAS JULY 2, 2020



The UVH-170 has successfully conducted its first high altitude flight reaching out to the height of **16,400ft** (5000m). The rotary-wing platform was carrying the Gyro-stabilized two-axis gimbal with integrated Radio data link.





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The payload was of 8,800lb (4kg) weight, the flight time was two hours and the climb rate over 1m/s was from 13,120ft to 16,400ft (4000m to 5000m). It can operate in windy conditions with gusts more than 27kts (14mps) while taking off or landing in both land and maritime environments. It can land in autorotation mode in emergency situations and is equipped with an emergency rescue system and satellite communication data link which supports Beyond Visual Line of Sight flights. <https://www.commercialdroneprofessional.com/uavos-confirms-successful-test-of-uvh-170-unmanned-helicopter-high-altitude-flight/>

### **Skyfire Consulting launches new website and expands UAS solutions** APPLICATION HEALTH SAM LEWIS JULY 2, 2020



The company, which has a 75% majority stake in Viking Unmanned Aerial Systems, has also launched a new website as part of the expansion.

To celebrate the launch of its new website, Skyfire is giving visitors a chance to win a full drone program, valued at \$13,000 (£10,400). This includes a program development manual, blanket certificate of authenticity and training for four.

The **Atlanta**-based Skyfire specializes in public safety UAS consulting, catering to a number of industries, including oil and gas, disaster response, private security, global public health and film and TV. <https://www.commercialdroneprofessional.com/skyfire-consulting-launches-new-website-and-expands-uas-solutions/>

### **ANSI publishes version 2.0 of UAS standardization roadmap** June 30, 2020 Wings Staff

**WINGS** The American National Standards Institute (ANSI) on June 30 announced the publication of the Standardization Roadmap for Unmanned Aircraft Systems (Version 2.0). The roadmap was developed by the Institute's Unmanned Aircraft Systems Standardization Collaborative, a group established to coordinate and accelerate the development of the standards and conformity assessment programs needed to facilitate the safe integration of unmanned aircraft systems into the national airspace system .

More than 400 individuals from 250 public- and private-sector organizations supported the document's development, including representatives of the Federal Aviation Administration, other U.S. federal government agencies, standards developing organizations, industry,





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academia, and others. A webinar with UASSC leaders providing an overview of the roadmap will be held on July 15 at 12 noon Eastern.

The release of the updated roadmap represents the culmination of the UASSC's work over the last nine months to identify existing standards and standards in development, assess gaps and make recommendations for priority areas where there is a perceived need for additional standardization including pre-standardization research and development.

Issues are addressed under the broad headings of airworthiness; flight operations; personnel training, qualifications, and certification; infrastructure inspections; environmental applications; commercial services; workplace safety; and public safety operations. The document also includes brief overviews of the UAS activities of the FAA, other U.S. federal government agencies, SDOs, and various industry groups. <https://www.wingsmagazine.com/ansi-publishes-version-2-0-of-uas-standardization-roadmap/>

### A Revolutionary Unmanned Aerial Technique to Increase Sugar Cane Crops in Brazil

Juan Plaza JULY 1, 2020



Companies such as Trimble, Topcon, and Leica have developed solutions to aid farmers allowing automated planters, irrigation systems and crop harvesters in partnership with heavy machinery manufacturers such as Caterpillar, John Deere and Kumatsu.

With the combination of having the precise location of every seed and the ability to map and digitally model farmland, agricultural companies can now expand the arable portions of their properties in hundreds and sometimes thousands of acres.



In Brazil, in particular, where sugar cane is used to produce sugar and ethanol, the size of these agricultural concerns is huge, and the maximization of water and pesticides is not a nice-to-have but a must to remain competitive.

One company, [Vantage Centro SUL-Geo Agri](#), has developed tools to map the arable land of its customers and turn these digital terrain models, elevation maps, contour lines and drainage products into information that can be fed into automatic farm machinery. An interview with Gustavo Streiff, Chief Executive Officer of Vantage Centro Sul, about the symbiosis between high-accuracy mapping and precision agriculture can be found



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here: [https://www.commercialuavnews.com/forestry/a-revolutionary-unmanned-aerial-technique-to-increase-sugar-cane-crops-in-brazil?utm\\_source=marketo&utm\\_medium=email&utm\\_campaign=newsletter&utm\\_content=newsletter&mkt\\_tok=eyJpIjoiWkRFNU9EYzJNems0WIRZMilsInQiOiJNYW9KSkU4enNTOW9CK1JpOUJcL1wvdDNzZ3NaZnNGa2ZiTjJYczFqWmdVK1NINHN6Wk1aSHZxS2pndDARyUROOXIGZ08xR2tXMnVKVHgZUkFSRXMzUE1pSkFHNHFVSDFKZ0xqYWZFYXFBVwvT2tCU3lvdzhuUzhhOXBZNDZvMnIrWiJ9](https://www.commercialuavnews.com/forestry/a-revolutionary-unmanned-aerial-technique-to-increase-sugar-cane-crops-in-brazil?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiWkRFNU9EYzJNems0WIRZMilsInQiOiJNYW9KSkU4enNTOW9CK1JpOUJcL1wvdDNzZ3NaZnNGa2ZiTjJYczFqWmdVK1NINHN6Wk1aSHZxS2pndDARyUROOXIGZ08xR2tXMnVKVHgZUkFSRXMzUE1pSkFHNHFVSDFKZ0xqYWZFYXFBVwvT2tCU3lvdzhuUzhhOXBZNDZvMnIrWiJ9)

### **More than a million delivery drones expected in the skies by 2026** CITIES

TODAY SHIFT



By 2026, more than a million drones could be carrying out retail deliveries, up from 20,000 today, according to new analysis from Gartner.

During the COVID-19 crisis, drones have been used to deliver medication and test samples in Ghana, Rwanda, Chile and Scotland. From today, drones will deliver personal protective equipment and supplies to teams in Charlotte, North Carolina. Unmanned aerial vehicles have also been used in several cities around the world to monitor compliance with virus-related safety measures as well as to spray disinfectant in India and China.

Last year, DHL launched drone operations to tackle last-mile delivery challenges in urban areas of China. DHL claims the service reduces delivery time from 40 to eight minutes for an eight-kilometer distance and can save costs of up to 80 percent per delivery compared with road transportation. "Autonomous drones offer lower cost per mile and higher speed than vans in last-mile deliveries," said Pedro Pacheco, Senior Director Analyst, Gartner. "When they deliver parcels, their operational costs are at least 70 percent lower than a van delivery service."

"In the US and China there have been fast-track approvals to use drones for COVID-19-related purposes. This is an opportunity to show regulators, organizations and citizens that drones are a very useful for several critical missions."

Cities also need to address the privacy issues, and they have a role to play making sure drones and their cargo are not victims of vandalism or theft and making space available for drone package pick-up and drop-off points. <https://thenextweb.com/shift/2020/06/02/more-than-a-million-delivery-drones-expected-in-the-skies-by-2026-syndication/>



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3Jul20

### First-ever Beluga whale spotted in Californian waters by drone Josh Spires Jul. 2nd 2020



In a drone video captured last week by Captain Domenic Biagini from Gone Whale Watching San Diego, we get the first look at a [Beluga whale](#) off the California coastline. The video is especially special as it's the **first time** a Beluga whale has been spotted in Californian waters.

The whale was spotted on Friday morning a few miles west of Mission Bay in San Diego, California. It is still unknown why the whale has ventured so far from its home waters of the Arctic and sub-Arctic. Biagini shared that seeing the whale so far from home is like seeing a polar bear in your backyard, stressing how rare a sighting it was.

The best bet, according to researchers from Alaska, is that the whale ventured off from its pod to explore and found its way all the way in California. If the whale is healthy, it has a good chance of surviving with the abundance of food in the waters.

<https://dronedj.com/2020/07/02/first-ever-beluga-whale-spotted-in-californian-waters-by-drone/>

### Anduril Industries receives \$200 million in latest funding round Josh Spires Jul. 2nd 2020



[Defense technology](#) company Anduril Industries has managed to raise \$200 million in its latest funding round, which was led by Andreessen Horowitz. Anduril will use the money to further its research and development efforts and hire more staff.

Joining Andreessen Horowitz is 8VC, Elad Gil, Founders Fund, General Catalyst, Human Capital, Lux Capital, and Valor Equity Partners, who also played a part in getting the Series C funding to hit the \$200 million mark.

The company has a team who previously worked at Oculus, Palantir, General Atomics, SpaceX, Tesla, and Google. They work to develop technology in national security using computer vision, machine learning and mesh networking.

The company has close ties with the US government and its allies, working with the Northern Command, Royal Marines, and US Customs and Border Protection, providing them with



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products that improve situational awareness to protect military bases, critical infrastructure and borders. <https://dronedj.com/2020/07/02/anduril-industries-receives-200-million-in-latest-funding-round/#more-31338>

### Alabama County to use drones to enhance public safety *Josh Spires Jul. 2nd 2020*



The Baldwin County Sheriff's Office in [Alabama](#) is planning to use drones to enhance public and officer safety after 18 months of training and the purchase of DJI drones.

The drone pilots went through an extensive training course to receive FAA certifications with a fixed-wing pilot receiving 40

hours of training.

The department is using the recently acquired drones for the following jobs:

- Crime scene photography and documentation
- Surveillance planning and operations using zoom cameras that allow officers to stay out of sight
- SWAT call-outs that mean officers can capture images quickly and safely, reducing risk from dogs, traps and people
- Internal shots of buildings, so officers can see room layouts and detect any danger
- Large-scale events to monitor traffic congestion and maintain public safety
- Search and Rescue operations using a FLIR camera to locate missing children, elderly people and others – even in the dark

<https://dronedj.com/2020/07/02/new-york-county-to-use-drones-to-enhance-public-safety/#more-31328>

### Workhorse Group receives \$70m in funding from single investor APPLICATION

DELIVERY INVESTMENT SAM LEWIS JULY 3, 2020



The Senior Secured Convertible Note will be used for current operating working capital and other corporate purposes.

“With this note in place, we have much greater financial flexibility to support our current and future production needs,” said Workhorse

CEO Duane Hughes. Successful vehicle production and delivery should also lead to additional orders as we demonstrate our ability to meet our current demand and provide **road-ready last-mile delivery** EVs.”



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Last-mile delivery is used to speed up the final stage of the delivery process of goods. This is often for consumer packages in remote locations, or for humanitarian aid. Workhorse has its own drone, the HorseFly, for such missions.

<https://www.commercialdroneprofessional.com/workhorse-group-receives-56m-in-funding-from-single-investor/>

### **Flying cars one step closer with new hydrogen cell fuel source** TECHNOLOGY SAM

LEWIS JULY 3, 2020



Next-generation hydrogen fuel cell specialist HyPoint has claimed that its technology could be the key to developing flying cars.

So far contained to the realms of science-fiction, flying cars would require an energy source better than any we use today. HyPoint believes that its hydrogen fuel cell solution, not yet commercially available, could be the answer.

Fuel cells offer zero-carbon emissions, superior energy performance and refuel in minutes, representing a dramatic improvement over existing fuel systems. The company said in addition to flying cars, the technology could help improve drones and electric vertical takeoff and landing vehicles too.

Urban Aeronautics has also contracted HyPoint to develop a hydrogen fuel cell for its CityHawk eVTOL. <https://www.commercialdroneprofessional.com/flying-cars-one-step-closer-with-new-hydrogen-cell-fuel-source-company-says/>