



## UAS and SmallSat Weekly News

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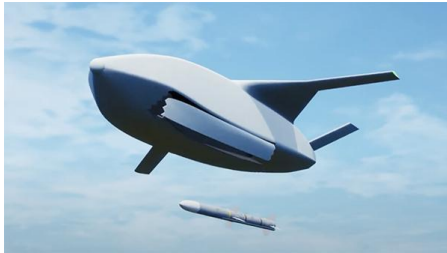


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1Aug20

### U.S. Air Force Launches Three-Year Fielding Plan For Skyborg Weapons Steve

Trimble July 07, 2020



*An Air Force concept of a future Skyborg system depicts an unmanned aircraft firing an AIM-120 missile from an internal weapons bay, signaling an **air-to-air** role.*

The next combat aircraft to enter the U.S. Air Force inventory will not be a manned sixth-generation fighter or even the Northrop Grumman B-21. By fiscal 2023, the Air Force expects to deliver the first operational versions of a new unmanned aircraft system called Skyborg, a **provocative** portmanteau blending the medium of flight with the contraction for a cybernetic organism.

The Skyborg family of aircraft is expected to fill an emerging “attributable” category for combat aircraft that blurs the line between a reusable UAS and a single-use cruise missile.

As the aircraft are developed, Skyborg also will serve as the test case of a radical change in acquisition philosophy, with ecosystems of collaborative software coders and aircraft manufacturers replacing the traditional approach with a supply chain defined by a single prime contractor. [https://aviationweek.com/ad-week/us-air-force-launches-three-year-fielding-plan-skyborg-weapons?utm\\_rid=CPEN1000003332045&utm\\_campaign=24954&utm\\_medium=email&elq2=d4ee2771236d41ecbf39b58170a07ff8](https://aviationweek.com/ad-week/us-air-force-launches-three-year-fielding-plan-skyborg-weapons?utm_rid=CPEN1000003332045&utm_campaign=24954&utm_medium=email&elq2=d4ee2771236d41ecbf39b58170a07ff8)

### ‘Mama’ drone used to deliver food to rare vulture Scott Simmie Jul. 31st 2020



[This story](#) begins with conservationists monitoring a site where two mature Griffons were raising a chick. The female parent, of course, was doing a fair share of the hunting, bringing back carrion for the young one.

But then, disaster struck. The mother Griffon flew into power lines and was electrocuted. The father Griffon would not be able to feed and protect this chick on its own. *How* would they get food up to the chick? Someone suggested using a drone.



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The Israeli army was contacted, and soon, it was training for the delicate task of delivering and dropping its payload in a very precarious location. An outside firm specializing in augmented reality and technology, [Xtend](#), was brought into the mix. With the company's help, the army prepared for the mission by making a mock-up of the nest site. Operators conducted practice flights for hours to prepare for the real thing.

The first delivery was a success. And then, every two or three days, the "Mama" drone kept dropping food. The chick gobbled it up — and the father bird did not perceive the drone as a threat. You can get a better idea of the whole operation with this video:

<https://dronedj.com/2020/07/31/mama-drone-used-to-deliver-food-to-rare-vulture/>

### **NASA helicopter could be first vehicle to fly on another planet** Josh Spires Jul. 31st 2020



[NASA](#) has just launched its Perseverance Mars rover that will feature a new helicopter that could be the **first** man-made vehicle to take flight on another planet. The helicopter features a dual rotor design capable of flying in the thin Mars atmosphere.

The helicopter, Ingenuity, will allow scientists to capture high-definition images to prepare for future missions where a rover or human would land on the spot. The key objects are to demonstrate powered flight in the thin Mars atmosphere, demonstrate miniaturized flying technology on another planet and get the helicopter to operate autonomously.

Mars has an atmosphere that is only 1% as thick as the Earth's, making it hard to generate lift. The helicopter will be able to fly as high as 15 feet and as far as 160 feet with the longest flight duration being 90 seconds. Ingenuity spins its propellers between 2000 and 3000 rpms. It also comes equipped with a solar panel to charge itself back up, onboard flight computers, navigation sensors, a color camera and a black and white camera. Engineers will have to learn how to fly it with the control delay, but eventually have hopes for it to fly, land, communicate, manage its energy, and keep warm autonomously. <https://dronedj.com/2020/07/31/nasa-helicopter-could-be-first-vehicle-to-fly-on-another-planet/>

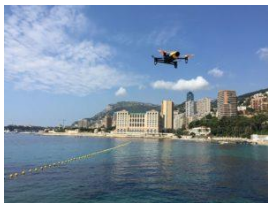


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### UTM in the U.K.: Major Providers Come Together to Build an Open Framework

Miriam McNabb July 30, 2020

UTM in the U.K is moving forward. The project reads like a Who's Who from the [unmanned traffic management](#) industry: [Wing](#), [GE Technology's AiRXOS](#), [ANRA Technologies](#), [Altitude Angel](#), and Raytheon's [Collins Aerospace](#) will work with the [U.K.'s Connected Places Catapult](#) to develop an open-access UTM framework for drones in the U.K.



The project represents a shift in approach for the U.K. government, explains Lia Reich, Marketing and Communications UTM for Wing. This partnership moves the UTM framework to an **open model** that allows many vendors to participate rather than working with a single provider of airspace services. It's a model that the U.S., France, Switzerland, and Australia have also adopted. As a wide variety of enterprises and agencies develop drone operations, it may be nearly impossible for a single vendor to provide a workable solution for all types of missions and all types of aircraft.

"The key underlying principle of the proposed UTM system is its open nature – that is, open to multiple businesses and stakeholders, between whom data can be exchanged, to foster an innovative ecosystem that encourages businesses to deliver innovative services which safely opens the airspace for the commercial and societal exploitation of drone technology," said Mark Westwood, Connected Places Catapult CTO.

Bringing in top experts from all over the world with a variety of expertise should not only allow for consideration of many different stakeholders, but will provide a fast start for the development of UTM in the U.K. All of these players have been major participants in projects developing UTM solutions all over the world for several years.

<https://dronelife.com/2020/07/30/utm-in-the-u-k/>

### Google's Drones Will Drop Library Books to Students COURTNEY LINDER JUN 11, 2020



Thanks to a middle school librarian, children in **Christiansburg, Virginia** will be the first to find out what that's like. Google's parent company, Alphabet, operates an experimental air delivery service called Wing, which will soon begin using its fleet of drones to deliver library books to kids who need to complete their summer reading lists.



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"I think kids are going to be just thrilled to learn that they are going to be the **first in the world** to receive a library book by drone," Kelly Passek, a librarian who works for Montgomery County Public Schools, told the *Post*.

After receiving groceries through Wing's drone delivery service, she petitioned Wing to deliver books to kids in her school district. Deliveries will begin this week, and there are about 600 children who live in Wing's delivery zone who could benefit from the service. Passek will take students' book orders through a Google Form, pick them up from district libraries, package them and bring them to Wing's delivery center where the drones will deliver the books by lowering them to the ground on a string.

As for the returns? There's no word yet on whether Passek or Google will pick them up. But we really, really hope the local library spares these kids any late fees.

<https://www.popularmechanics.com/technology/infrastructure/a32840540/google-wing-drone-delivery-library-books/>

## Video: Drones in Public Safety and Emergency Response Since the Pandemic

Danielle Gagne JULY 29, 2020



When Chief Charles Werner, Director of [DRONERESPONDERS](#), and Christopher Todd, Executive Director of AIRT, initiated their 2020 Public Safety Survey earlier this summer, they anticipated that drone programs would be the first on the chopping block in the face of steep budgetary cuts nationwide. The final results were far more promising with many agencies reporting a renewal of funding or even expressing intent to buy more drones and expand their programs. Although most agencies are working on shoestring budgets of \$10,000 or less, drones are proving to be an essential tool in law enforcement and fire and rescue.

Commercial UAV News reached out to Werner, Todd and Grant Guillot, Partner and the Leader of the UAS Practice Team at [Adams and Reese LLP](#). During the video interview, we discussed their most recent survey results, how to generate public acceptance, their views on foreign drone policy, their plans for leveraging virtual and digital platforms to bring agencies together, the pandemic and everything in between. Watch the video:

[https://www.commercialuavnews.com/public-safety/video-discussing-responsible-drone-use-for-public-safety?utm\\_source=marketo&utm\\_medium=email&utm\\_campaign=uav\\_news\\_public%20&utm\\_content=newsletter&mkt\\_tok=eyJpIjoiTVRaa09UaGxObU14WkRvVeslslNQiOiJpYmlwTUFcl0Z5cENFNlFSOThcLOY](https://www.commercialuavnews.com/public-safety/video-discussing-responsible-drone-use-for-public-safety?utm_source=marketo&utm_medium=email&utm_campaign=uav_news_public%20&utm_content=newsletter&mkt_tok=eyJpIjoiTVRaa09UaGxObU14WkRvVeslslNQiOiJpYmlwTUFcl0Z5cENFNlFSOThcLOY)



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### Drones are still a new technology, but the research is spreading its wings



For 10 years, mass market drones have been flying the friendly skies. As with any new technology, consumers include both avid and casual fans whose understanding of their new toy varies widely. With

this varied knowledge, coupled with evolving laws and technology and increasing demand, the challenges surrounding Unmanned Aircraft Systems are likely to increase.

The Transportation Research Board's new [Standing Committee on New Users of Shared Airspace](#) will offer guidance on the topic, helping research stay ahead of the curve. Daniel Friedenzohn, Associate Dean of the College of Aviation and Associate Professor of Aeronautical Science at Embry-Riddle Aeronautical University is the chair of the new committee. Committee members and friends of the committee will focus on three topics: **urban air mobility, commercial airspace, and UAS.**

"It's important to have a diverse committee to foster ideas and discussion," says Friedenzohn. "The committee has representatives that are working right in the thick of these topics. It's important for regulators to have a seat at the table as well as future-facing private industry and academic researched understandings. Among the three topics there are unique facets, but there are overarching ideas that can be integrated into each aspect."

<https://www.nationalacademies.org/trb/blog/drones-are-still-a-new-technology-but-the-research-is-spreading-its-wings>

### Audi implements drone vehicle location system at German facility APPLICATION

DRONES AT WORK EUROPE NEWS SAM LEWIS JULY 28, 2020



The Neckarsulm site in its native Germany uses an autonomous drone to fly over the vehicle dispatch site. The drone used is a custom-designed autonomous hexacopter. Four Audi employees have been trained and have the necessary drone license.

The drone uses GPS and RFID technology to identify and save the exact position of all vehicles it flew over. Audi then uses this information in planning the completion and delivery of the vehicles. Many different Audi models roll off the lines at the



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Neckarsulm site every day, including the A4 Sedan, the A5 Cabriolet, the A6, the A7, and the A8 and R8.

Steffen Conrad, project manager in innovation management at the site, said: “The fast locating of the vehicles creates even higher process quality and is a further stepping stone on the path to digital production.” <https://www.commercialdroneprofessional.com/audi-implements-drone-vehicle-location-system-at-german-facility/>

**3Aug20**

**EHang Launches a Firefighting Drone for High-Rise Fires [VIDEO]** Miriam McNabb July 31, 2020



EHang’s firefighting drone, the EHang 216F, is specially designed for high-rise firefighting. EHang describes the 216F as “the world’s first large-payload intelligent aerial firefighting solution.” While the firefighting capabilities of the 216F are impressive, EHang’s ability to translate their platform from the future application of passenger transportation to current applications like [search and rescue](#), [cargo transport](#), and emergency services is even more impressive. Drone taxis may be years away from mainstream implementation, but firefighting drones offer a critical tool for **right now**.



EHang demonstrated the 216F at a launch event in Yunfu, China. The 216F can carry up to 150 liters of firefighting foam and 6 fire extinguisher bombs in one trip: the 216F can reach altitudes of 600 ft. Using a visible light zoom camera to quickly identify the location of fire, the 216F “hovers precisely in position and uses a laser aiming device to fire (in succession) a window breaker, the fire extinguishing “bombs” and then a full-range spray of firefighting foam,” the EHang release explains. “Multiple 216Fs can be deployed to rapidly extinguish the fire.” See the video: <https://dronelife.com/2020/07/31/ehang-launches-a-firefighting-drone-for-high-rise-fires/>

**Drones for this Hurricane Season: Getting States Ready** Miriam McNabb July 31, 2020



In a [webinar hosted by AUVSI NC](#), a panel of experts gave their best advice to state agencies preparing to use UAV for hurricane response.

Drones play a crucial role in allowing public safety agencies to evaluate hurricane damage quickly. Florida Power and



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Light [recently announced](#) that they will implement Percepto’s automated drone system to evaluate damage to the power infrastructure immediately after the storm. State agencies across the country are putting drone programs together to get as many eyes in the sky as possible to plan community response.

In this webinar, experts from NC DOT, FEMA, the FAA, the U.S. Army, and more explained how to get ready to deploy UAS in disasters. You can view the entire recorded webinar at the [NC AUVSI website](#) – we’ve highlighted a few of the top insights agencies experienced in the process had to offer about using drones this hurricane season. <https://dronelife.com/2020/07/31/drones-for-this-hurricane-season/>

### Increasing 3D Mapping Productivity, Ease of Use and Your Bottom Line



Wednesday, **August 19, 2020** | 11:00AM - 12:00PM Eastern Time

Learn how to vectorize map features quickly and easily to get your work done faster. Whether it's curb and gutter lines from point clouds, or digitizing road infrastructure with stereo photogrammetry, this webinar

will give you tips on how to increase the efficiency of your drone mapping workflow and increase your business's bottom line. [https://www.commercialuavnews.com/webinars/increasing-3d-mapping-productivity-ease-of-use?utm\\_source=marketo&utm\\_medium=email&utm\\_campaign=uav\\_webinar\\_3d&utm\\_content=newsletter&mkt\\_tok=eyJpIjoiWTJJd1lqSTVORGN3TVRjNCIsInQiOiJHWXJ5ajVNNWtwTGR0VmZHZzdWbGVvcjBtZlplkejlkWTNjS0dBcjE4cj1aUFWUDR4SHFiOVd2UnJiK3doQXFXNkJKd08ydVdmRnhRTVZ6cTVUUE82S0VRYURGeUNubINmbEhTdU1DVINRYWpoXC9nYlplJaVZDa1ltMEFQbkxLZ2gifQ%3D%3D](https://www.commercialuavnews.com/webinars/increasing-3d-mapping-productivity-ease-of-use?utm_source=marketo&utm_medium=email&utm_campaign=uav_webinar_3d&utm_content=newsletter&mkt_tok=eyJpIjoiWTJJd1lqSTVORGN3TVRjNCIsInQiOiJHWXJ5ajVNNWtwTGR0VmZHZzdWbGVvcjBtZlplkejlkWTNjS0dBcjE4cj1aUFWUDR4SHFiOVd2UnJiK3doQXFXNkJKd08ydVdmRnhRTVZ6cTVUUE82S0VRYURGeUNubINmbEhTdU1DVINRYWpoXC9nYlplJaVZDa1ltMEFQbkxLZ2gifQ%3D%3D)

### Primoco UAV sees “eightfold” business growth during lockdown BUSINESS

FINANCIAL SAM LEWIS AUGUST 3, 2020



Czech drone manufacturer Primoco UAV has announced a successful first half of 2020. An almost eightfold increase compared to 2019 saw its revenues reach nearly £342,000 through the first and second quarters.

In addition, Primoco is waiting for an export permit for other machines worth more than **£13.7 million**. The start of deliveries is scheduled for the fourth quarter 2020, with full

completion in the first half of 2021.





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Co-founder and director Ladislav Semetkovský commented: “We are performing well thanks to the efforts of all the people on our team, despite the worldwide coronavirus situation and the complications of travelling to negotiate new business contracts abroad. We have signed the largest number of contracts since the establishment of the company in 2015. Five years after starting the company, we are in **operating profit without any bank debt** and after the expense of developing our own aircraft.” <https://www.commercialdroneprofessional.com/primoco-uav-sees-eightfold-business-growth-during-lockdown/>

### **Multirotor drone market spinning towards sales of £6 billion within seven years**

RESEARCH ANDREW SEYMOUR AUGUST 3, 2020



The market UAVs with more than two motors was worth \$1.9 billion (£1.4 billion) last year but is poised to experience **CAGR of 20%** between now and 2027, according to Statistics MRC.

It said key factors propelling the market growth include the increasing need for quick access to mission critical locations, the growing use of UAVs in the military and law enforcement applications and technological advancements to improve the working of multirotor drones. Multirotor drones are regarded as much simpler to operate over other forms of drone as they are controlled by changing the relative speed of the rotor and adjusting the thrust produced by each of the rotor.

The report listed a number of “key” players in the multirotor drones market include Aibotix, 3D Robotics-Drone & UAV Technology, Coptercam, Aerovironment, DJI, IAI, MMC, Draganfly Innovations, Microdrones, Aeryon Labs, Cyberhawk Innovations, Multirotor service-drone, Parrot and Yuneec International. <https://www.commercialdroneprofessional.com/multirotor-drone-market-spinning-towards-sales-of-6-billion/>

### **Rwanda works with HAPSMobile high altitude UAS to expand internet**

**connectivity** August 3, 2020 Jenny Beechener UAS traffic management news



Rwanda’s Ministry of ICT and Innovation has signed a Memorandum of Understanding with HAPSMobile to conduct a Joint Research Project to study the use of High Altitude Platform Stations (HAPS) to provide mobile Internet connectivity in Rwanda.

As part of the joint project, the parties plan to conduct



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demonstration flights using HAPSMobile’s solar powered unmanned aircraft system in Rwanda to provide 4G/5G Internet connectivity. The results of the JRP will be used to guide discussions between HAPSMobile and MINICT on potential commercial services in Rwanda and other African countries.

Junichi Miyakawa, Representative Director & CTO of SoftBank Corp., and also President & CEO of HAPSMobile, commented: “We are very pleased and encouraged that we can work with the Rwandan government, a leading technology power in Africa, to study how our HAPS solution can be used to reach remote communities and enable better access to information. We look forward to working with the Ministry of ICT and Innovation so we can study potential commercial applications in Rwanda, and beyond.” <https://www.unmannedairspace.info/latest-news-and-information/rwanda-works-with-hapsmobile-high-altitude-uas-to-expand-internet-connectivity/>

**4Aug20**

**INSIGHT: ALTI’s VTOL concept** APPLICATION BUSINESS ALEX DOUGLAS AUGUST 4, 2020



While the concept of a VTOL fixed wing is not new to today’s industry, ALTI remains the first company to commercially offer an ultra-long endurance VTOL. Although ALTI is based in the beautiful Knysna (Western Cape South Africa), they have clients around the globe with partners, resellers and distributors in North America and other countries.

ALTI has developed different sized rapidly deployable aircraft. The ALTI Ascend aircraft has a wingspan of two metres with flight speeds of up to 75 km/h. Maximum take-off weight is 9 kg, which includes multiple payload options of just under 600g,. It can stay airborne for up to **six hours** and cover some 450kms.

The medium sized Transition aircraft has a wingspan of three metres, stays airborne for up to **12 hours** and can cover around 900kms per flight with payload options of up to 1.5kg. The Reach, with a wingspan of 6 metres and flight time of more than **12 hours** offers payload options of up to 7kg. Also included is the in-house developed “plug-and-play” avionics system called AvioX. <https://www.commercialdroneprofessional.com/insight-altis-vtol-concept/>



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### **Russia orders S-70 Okhotnik 'Hunter' UAV deliveries accelerated to 2024** Garrett Reim 3 August 2020

The accelerated delivery schedule was acknowledged publicly for the first time when Russian President Vladimir Putin met with UAC chief executive Yuri Slyusar for an update on the company's product development plans on 3 August.



Designed by UAC subsidiary Sukhoi, the S-70 prototype first took off in August 2019. The UAV is designed to carry a payload of 13,200lb, have a flight range of 3,240nm and an operating ceiling of 59,000ft. The aircraft is capable of carrying air-to-air missiles and reconnaissance equipment.

The S-70 is “our heavy attack drone with unprecedented capabilities, having the largest combat radius, the widest range of weapons, the widest range of equipment,” says Slyusar, according to a transcript released by the Kremlin and translated. “[UAVs] of this class are only designed and manufactured by two countries: the USA and China.”

The S-70 is similar in appearance to flying-wing UAVs built by several nations, including China's Sharp Sword, France's Dassault Neuron, the UK's BAE Systems Taranis and the USA's Northrop Grumman X-47B. The flying wing shape inherently has a lower radar cross section, although Russia says its jet is also coated in radar absorbent paint. <https://www.flightglobal.com/military-uavs/russia-orders-s-70-okhotnik-hunter-uav-deliveries-accelerated-to-2024/139607.article>

### **HAPS UAV Completes Basic Flight Tests** 31 Jul 2020 Mike Ball



[HAPSMobile](#) has successfully completed the fourth test flight of its Sun glider solar-powered high-altitude pseudo-satellite (HAPS) unmanned aerial vehicle. The test flight took place at Spaceport America in New Mexico, and its completion marks the conclusion of all basic aircraft tests for the aircraft. It will now begin preparations for stratospheric test flights.

During this round of testing, Sun glider reached altitudes higher than those of previous flights and maintained high altitudes for a long duration. Other test milestones included flight speed changes, steep turns, automated flight control in the event of interrupted communications with the Ground Control System and in-flight balance control.



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HAPSMobile has constructed a new specialised test site at Spaceport America, providing an additional facility to the existing test site on the Hawaiian island of Lanai. Spaceport America offers flexibility in coordinating test flight schedules, providing opportunities to conduct test flights with greater frequency and more freedom to conduct various types of tests. HAPSMobile also plans to conduct stratospheric test flights at Spaceport America.

[https://www.unmannedsystemstechnology.com/2020/07/haps-uav-completes-basic-flight-tests/?utm\\_source=UST+eBrief&utm\\_campaign=3f2a0536fc-eBrief\\_2020\\_04Aug&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-3f2a0536fc-111778317](https://www.unmannedsystemstechnology.com/2020/07/haps-uav-completes-basic-flight-tests/?utm_source=UST+eBrief&utm_campaign=3f2a0536fc-eBrief_2020_04Aug&utm_medium=email&utm_term=0_6fc3c01e8d-3f2a0536fc-111778317)

### Inspired Flight Unveils New Federally-Compliant Heavy-Lift UAV 31 Jul 2020 Mike Ball



[Inspired Flight](#) has introduced the IF1200, a heavy-lift hexacopter that can carry payloads of **18 pounds and fly for 40 minutes**. Developed, produced and tested entirely in the USA with domestically-sourced electronics, the IF1200 is designed as **a replacement for the DJI M600**, and maintains strict compliance to evolving US Government regulations regarding Chinese components.

Featuring a Universal Payload Interface, existing sensor integrations can be easily transferred to and swapped out on the IF1200 with minimal downtime. It supports a wide range of optical cameras, commercial and mil-spec EO/IR cameras and LiDAR systems, and features the ability to write GNSS data directly onto captured images for georeferenced photogrammetry and inspection applications. The open architecture and Universal Payload Interface allow for the integration of nearly any third-party tech stack, providing a highly flexible platform for OEM or experimental UAV applications. [https://www.unmannedsystemstechnology.com/2020/07/new-federally-compliant-heavy-lift-hexacopter-uav-unveiled/?utm\\_source=UST+eBrief&utm\\_campaign=3f2a0536fc-eBrief\\_2020\\_04Aug&utm\\_medium=email&utm\\_term=0\\_6fc3c01e8d-3f2a0536fc-119747501](https://www.unmannedsystemstechnology.com/2020/07/new-federally-compliant-heavy-lift-hexacopter-uav-unveiled/?utm_source=UST+eBrief&utm_campaign=3f2a0536fc-eBrief_2020_04Aug&utm_medium=email&utm_term=0_6fc3c01e8d-3f2a0536fc-119747501)

### The U.S. Military Wants Start-Ups to Help It Build Better Drones and Robots

August 4, 2020 Kris Osborn



[Northrop Grumman](#) and hundreds of small technology defense firms are making new efforts to fast-track robotics and autonomous systems to war, by seeking new, non-traditional, start-up firms to explore unique innovations.

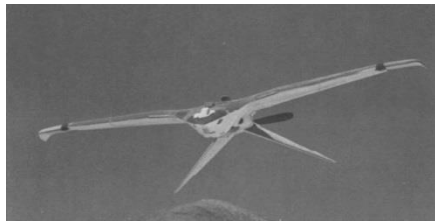


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“We are working on autonomy, sense and avoid technology and robust navigation in a GPS denied environment,” Hunter Hudson, Director, Northrop Grumman, told *The National Interest* in an interview. In partnership with Starburst Aerospace, Northrop recently held an **Autonomy Pitch Day** intended to help identify promising start-ups that offer military technology solutions able to make a fast and substantial impact on emerging weapons systems.

The outreach effort is grounded in the notion that many small, enterprising new businesses have and will uncover unprecedented innovations with far-reaching implications for military applications of autonomy. Military development of robotics, autonomous systems, manned-unmanned teaming and drone systems continue to take on new urgency given the pace of technological change. <https://nationalinterest.org/blog/buzz/us-military-wants-start-ups-help-it-build-better-drones-and-robots-166204>

### **CIA Project Aquiline made public, a bird-like stealth drone** Josh Spires Aug. 4th 2020



The CIA has recently declassified documents surrounding Project Aquiline, which has turned out to be a [stealth drone](#) from the late 60s and early 70s. The bird-like stealth drone was used on many spy missions in the Soviet Union and flew out of [Area 51](#).

[The project](#) was created after a U-2 spy plane went down over the Soviet Union making manned flights too risky to perform. This prompted the need for a low altitude spy device that was able to get higher resolution images than the satellites above. The drone used as this low altitude spy device was a drone that mimicked a bird from a distance, but from much closer, you would be able to see the rear propeller and camera on the front.

The development of the project started in 1966 with research and development taking up the entirety of the year. The next two years, from 1967-1968 saw flight tests performed. The final six years of the project, from 1969-1974 saw tests of various versions of the drone.

During the development time, the CIA tested a prototype drone that used a radioisotope propulsion system that would have allowed it to stay up in the air for 50 days. The project was eventually scrapped due to cost issues with the contractor who set out to produce the drones, McDonnell Douglas. The contractor received a budget of \$11 million to get the drones in the air with the radioisotope power plant but responded saying that it required \$110 million. The man heading up the project, Lt Col John H. “Hank” Meierdierck was not happy, believing the number



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to be exaggerated and later closed the project altogether. <https://dronedj.com/2020/08/04/cia-project-aquila-made-public-a-bird-like-stealth-drone/#more-33239>

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### **PredaSAR may launch 48 satellites with SpaceX** Caleb Henry August 4, 2020



WASHINGTON — Synthetic aperture radar startup PredaSAR has signed a contract to launch a small satellite with SpaceX and is in discussions to launch its entire first constellation with the company, PredaSAR co-founder Marc Bell, said Aug 4. Bell said PredaSAR's first satellite is scheduled to launch on a SpaceX

rideshare mission in the spring of 2021.

SpaceX will likely receive additional launch orders from PredaSAR covering the company's initial constellation of 48 radar satellites, Bell said. "We agreed to do one, and we will negotiate the rest later. We would like to work with SpaceX on the rest of them, and I'm sure we'll come to an agreement in the near future."

Bell declined to say when PredaSAR hopes to have all 48 satellites in orbit, or to state the resolution of the constellation. The company has more satellites beyond the initial 48 planned and will have a **resolution well below one meter**. <https://spacenews.com/predasar-may-launch-48-satellites-with-spacex-exec-says/>

### **New NASA office coordinates rideshare launches of smallsat science missions** Jeff Foust August 4, 2020



WASHINGTON — NASA has established an office to coordinate rideshare launch opportunities for its growing number of smallsat science missions, taking advantage of excess capacity on launches of larger spacecraft.

NASA's Science Mission Directorate established the rideshare office earlier this year as part of broader efforts to promote the use of cubesats and other smallsats to carry out a wide range of missions. "The goal of the rideshare office is to provide a single point of contact for all SMD rideshare-related inquiries," said Aly Mendoza-Hill, head of the office, at a NASA town hall meeting Aug. 3 during the Conference on Small Satellites.



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Thomas Zurbuchen, NASA associate administrator for science, announced in a keynote at the conference two years ago that [NASA would fly payload adapters for secondary payloads on all launches of science missions that had excess capacity](#). “We’re not going to ask whether we need it,” he said in that speech. “You have to convince us that we don’t need it.”

SMD adopted a formal policy for doing so last October, Mendoza-Hill said. That policy states that, for science missions whose launches have excess capacity, the directorate will use that capacity for SMD-sponsored secondary payloads, or offer it to other NASA directorates or other U.S. government agencies. <https://spacenews.com/new-nasa-office-coordinates-rideshare-launches-of-smallsat-science-missions/>

### **Drone Rescue of Beluga Whale in the Arctic Sea** Miriam McNabb August 04, 2020



On Wednesday evening, July 29, the Wildlife Board of the Målselv municipality was notified of a white whale on its way up a river from the sea. This situation constitutes a great threat to the whale, as the river has sandbanks and depth variations that can cause a tide-trap.

A wildlife rescue operation was launched to lead the whale back to deep water – but during that operation, the whale was lost from sight. The local wildlife force then requested the assistance of the Norwegian People’s Aid Midt-Troms to help locate the missing endangered whale and provide aerial intelligence for the operation. NPAID Midt-Troms is known for missions of locating and rescuing people in extreme Arctic conditions. Using their expertise and Atlas’ drone technology, NPAID was able to locate the missing whale and orchestrate the rescue operation.

“We searched from a relatively high altitude of 70m-100m, since the object we were looking for would stand out so markedly,” said Kenneth Brattli Molund, the unit leader and RPAS project SAR technology integration manager from NPAID in Mid-Troms. “Using the AtlasPRO drone, we were able to locate the whale within **10 minutes**, create a clear situational overview and control the rescue operation from above.” <https://dronelife.com/2020/08/04/drone-rescues-beluga-whale-in-the-arctic-sea/>

### **How drones and wasps are saving the Great Barrier Reef** Josh Spires Aug. 5th 2020

[Drones](#) and wasps are being used in eastern Australia to reduce the amount of chemicals used in farming to lessen the damage caused to the Great Barrier Reef. The drones are being used to drop loads of wasps that will then attack pest insects [destroying the crops](#).



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Drone pilot [Luke Jurgens](#) is working with the Bowen-Gumlu growers' association in a trial that will see drones releasing wasps to kill pests destroying tomato crops and the farmers' income.

Prior to drones, the agronomists would go through with vials with little wasps inside. They'll go along in a bay of tomatoes, or any crop, and just drop them so many meters apart, where they'd hatch from their vials and do their thing. The combination of drones and wasps has been beneficial for the farms so far, reducing labor costs and improving efficiency by removing the need for workers to release the wasps. The use of wasps also means less chemicals will seep into the soil and end up in waterways.

The drones are also able to provide better coverage of the crops and remove the risk of biosecurity issues. The aim of the trial is to see whether using the drones is a suitable way to release the wasps. If everything goes well, it's expected that more farms will hop on board the program and use the drones as well, hopefully in tandem with surveying drones.

<https://dronedj.com/2020/08/05/how-drones-and-wasps-are-saving-the-great-barrier-reef/>

## National Geographic Defies Gravity with TV's First Global Airborne Franchise

News August 4, 2020



National Geographic today announced it is expanding on the success of its From Above specials and creating television's **first global franchise driven primarily by aerial footage.**

With earlier iterations sweeping over the modern topography of China, Egypt, Europe, Japan and New Zealand, National Geographic located a sweet spot for viewers eager to rise above the fray and see their cultures, landmarks and landscapes with a new vibrancy. The forthcoming INDIA FROM ABOVE and ANCIENT CHINA FROM ABOVE will premiere in 2020, while EGYPT FROM ABOVE: PAST MEETS FUTURE and a second season of EUROPE FROM ABOVE will debut in 2021.

Featuring breathtaking drone footage as its centerpiece, the From Above franchise explores, in stunning visual detail, the culture, history, innovation and engineering feats that have helped shape the world as we know it. Epic cinematography marries with advanced technologies to enable iconic tracking shots, with a drone able to lock in its flight coordinates and return to the same location to capture the exact same shot at different times and seasons, highlighting changes in the macrocosm below. <https://uasweekly.com/2020/08/04/national-geographic-defies->





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[gravity-with-tvs-first-global-airborne-franchise/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=national-geographic-defies-gravity-with-tvs-first-global-airborne-franchise&utm\\_term=2020-08-05](https://national-geographic-defies-gravity-with-tvs-first-global-airborne-franchise/?utm_source=rss&utm_medium=rss&utm_campaign=national-geographic-defies-gravity-with-tvs-first-global-airborne-franchise&utm_term=2020-08-05)

### **Police drone catches suspect on the run** Scott Simmie Aug. 6th 2020

Police in the UK really love to use their drones. And when those drones happen to help them in dramatic fashion, they love to post videos. We're happy they do, because this drone video of a hapless suspect trying to evade capture is priceless.

It begins with a large number of police officers converging on a home. That home belongs to Thomas Stones, and the Derbyshire Constabulary wanted a word with him. But it seems Mr. Stones wasn't exactly eager to comply with that warrant and thought instead he'd make a run for it. And so he tried to jump from the second-story window of his flat. Actually, he did more than try: He jumped straight out and then began what looks like a not very fun run. I mean, we'll give him an E for Effort...but when a drone is locked onto your whereabouts, and the operator is radioing your every move to other officers, it's not likely to end well.



First, there's the window jump:

There goes Mr. Stone

Then came the fence, which collapsed as he tried to scale it:



Ouch as he falls through the fence. With a valiant effort, he crosses the street and into someone's backyard. There he jumps a smaller fence, knocking over some bicycles. All the while, the police are moving in – including an officer with a dog.



Run, run, run, Mr. Stones...

It was inevitable . When you're running from police who have a drone locked on you, just stop. They will catch you. And, if you're like Mr.

Stones, you'll just fall down a bunch of times and wear yourself out before they put the handcuffs on. Not only will they catch you, they'll Tweet about it, which will add insult to injury.

<https://dronedj.com/2020/08/06/police-drone-catches-suspect-on-the-run/>



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### Drone wireless/autonomous charging coming to US via WiBotic [Josh Spires](#) Aug. 6th 2020



[WiBotic](#) has just announced that it has received [FCC approval](#) for its drone wireless charging tech providing up to 300 watts of power to equipped devices. The approval is **the first of its kind**, allowing mobile robots and drones to be charged wirelessly. The system also monitors battery levels to ensure they are charged without causing damage, keeping the drones in the sky for longer and reducing maintenance times.

Last month, WiBotic was able to secure [\\$5.7 million in Series A funding](#) which it is using it to expand its wireless charging technology. The funding round included investors Junson Capital, SV Tech Ventures, Rolling Bay Ventures, Aves Capital, The W Fund, and WRF Capital.

WiBotic's wireless solution entails a fleet of drones equipped with wireless charging coils that receive power when landed on a base station. As the drone lands, it also shares battery information and allows for a slow or fast charge to begin.

WiBotic is targeting the construction, inspection, agriculture, security, delivery, and mining industries to use its technology to enable drones to be in the air for longer, and allowing them to be charged in any conditions the drones can fly in. <https://dronedj.com/2020/08/06/drone-wireless-autonomous-charging-coming-to-us-via-wibotic/>

### NASA Small Business Partnership Prepares Drone for 30-Day Science Flights

August 5, 2020 News



With the help of NASA's Ames Research Center in California's Silicon Valley, Swift Engineering of San Clemente, California, completed a two-hour flight test of their Swift High-Altitude Long-Endurance UAS. The applications of the technology – for science, agriculture, and disaster response – could have a real impact on our everyday lives.

Swift's **72-foot** solar-powered HALE weighs less than 180 pounds, flies 10- to 15-pound payloads at a time and is designed to operate at an altitude of **70,000 feet for 30 days or more**. Compared to the NASA [ER-2](#), which also operates at a maximum altitude of 70,000 feet and can



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carry a 2,600-pound payload for missions over 10 hours, the Swift HALE UAS is capable of flying lightweight payloads for days and weeks on end.

Matt Fladeland, a researcher at Ames working with Swift on the aircraft said, "Developing the HALE with Swift has opened up more possibilities than we initially imagined. The successful flight test is an important first step towards realizing a new capability to support NASA science."

[https://uasweekly.com/2020/08/05/nasa-small-business-partnership-prepares-drone-for-30-day-science-flights/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=nasa-small-business-partnership-prepares-drone-for-30-day-science-flights&utm\\_term=2020-08-06](https://uasweekly.com/2020/08/05/nasa-small-business-partnership-prepares-drone-for-30-day-science-flights/?utm_source=rss&utm_medium=rss&utm_campaign=nasa-small-business-partnership-prepares-drone-for-30-day-science-flights&utm_term=2020-08-06)

## Volansi Signs Teaming Agreement with N.C. Department of Transportation August 5, 2020 News



[Volansi, Inc.](#), the California-based cargo drone delivery service provider developing autonomous VTOL UAVs, today announces it has signed a teaming agreement with the N.C. Department of Transportation to begin commercial, middle-mile drone delivery projects in North Carolina.

Volansi will initially perform tests and VLOS cargo delivery flights under Part 107 as part of the UAS Integration Pilot Program in North Carolina with the intent to scale to more projects with additional waivers and permissions.

Projects will initially utilize the VOLY C10- Gen 2, Volansi's [all-electric, hybrid VTOL fixed-wing UAV](#). This enables two-way missions with minimal infrastructure needs. Because the drones fully land at the delivery point, they can deliver and return cargo such as samples for analysis and diagnosis, or parts for repair. The drone flies autonomously and can carry up to **10lb of cargo over 50 miles**.. [https://uasweekly.com/2020/08/05/volansi-signs-teaming-agreement-with-n-c-department-of-transportation/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=volansi-signs-teaming-agreement-with-n-c-department-of-transportation&utm\\_term=2020-08-06](https://uasweekly.com/2020/08/05/volansi-signs-teaming-agreement-with-n-c-department-of-transportation/?utm_source=rss&utm_medium=rss&utm_campaign=volansi-signs-teaming-agreement-with-n-c-department-of-transportation&utm_term=2020-08-06)



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### SpaceX launches 57 special Starlink satellites equipped with sun visors Eric

Mack, Jackson Ryan Aug. 6, 2020



Under the cover of dark in the early hours of Friday morning, SpaceX launched its ninth operational flight of [the broadband-capable Starlink satellites](#). The first stage of the rocket booster returned to Earth and completed a perfect landing on the Of Course I Still Love You droneship stationed in the Atlantic. SpaceX also noted it will [attempt to catch the rocket's fairing halves](#), as they did during the ANASIS-II launch on July 20.

The mission's payload included two rideshare satellites and the first batch of SpaceX's broadband satellites equipped with a sunshade to reduce their brightness, [which has been a sore point for many stargazers](#). <https://www.cnet.com/how-to/spacex-launches-57-special-starlink-satellites-equipped-with-sun-visors/>