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29Oct18

How drones are protecting animals against poaching across Africa ANDREA SMITH Lonely Planet Writer 6 DAYS AGO

A stunning short film has been produced that highlights the role of drone technology in the war against poaching [Africa's](#) wildlife. Over and Above Africa, a [Los Angeles](#) charity, collaborated with writer Andy Fackrell and director Sam Coleman to create the 90-second film called "A Guardian," to demonstrate how [drones](#) can help protect endangered animal groups.



The video is completely shot by drone, and it shows amazing aerial footage of the movement of groups of wild animals in their natural habitat. As the groups are featured, they are captioned with their respective and charming collective nouns, so we get to see a **dazzle** of zebras, an **implausibility** of gnus

and a **wobble** of ostriches.



While that's adorable, the film takes a sinister turn when 'a gang' of poachers is tracked on the drone's night vision camera. It shows the poachers armed with weapons fanning out in the game reserves, and then cuts to the remains of young elephants, presumably butchered for their ivory tusks. All of

Africa's animal groups are threatened by poaching," the film says. "[Drone surveillance](#) increases their chance of survival by **80%**.

The aim of the video is to urge people to **donate to the charity**, which raises funds to help prevent the extinction of Africa's endangered animals. Supplying drones to game reserves can aid them in spotting poachers and help prevent the eradication of Africa's endangered animal groups.



A Guardian shows the role drone technology can play in protecting wildlife. Image: Over and Above Africa

"My hope through the film is to expose how ruthless and decimating the poaching industry is to Africa's wildlife,"

writer Andy Fackrell tells Lonely Planet. "Being in the [Serengeti](#) for the first time was a



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humbling, pure experience that left its mark on me. The delicate ecosystem has to be protected, and drones are proving to be an unlikely savior. Humans can turn this around, but the rangers, who are putting their lives at risk every day, need all the help we can give them. They're the heroes. If we can supply the tools, the animals can have some sort of chance."



Ranger Cosmo launches his drone while filming in South Africa.

Andy says that one of the big challenges was conveying an emotional, hard-hitting message in a way that engages with the audience, as bombarding them with awful images can be counter-productive. "You just click off," he says, "so being able to utilize these playful collective nouns and romanticizing the other, non-iconic, animals helps lull the viewer."



Writer Andy Fackrell (left) with director Sam Coleman.

Over and Above Africa "A lot of time and obsession went into the edit, with the use of the typical kid's book type font, the way the type gently spreads, and the wonderful track by Ezio Bosso, to build you up for the shock of the slaughter scene. It was such a delicate operation to frame that one scene with what goes before and after, and to hold viewers for this length of time so they may feel invested in the cause."



A wobble of ostriches captured by drone

For further information on how you can help Over and Above Africa, see [here](#).

[https://www.lonelyplanet.com/news/2018/10/22/charity-drones-poaching-](https://www.lonelyplanet.com/news/2018/10/22/charity-drones-poaching-africa/)

[africa/](#)

Virgin Orbit Just Attached a Rocket to Its Cosmic Girl Mothership for the 1st

Time Mike Wall, Space.com Senior Writer October 26, 2018



The California-based company — part of British billionaire Sir Richard Branson's Virgin Group — mated a LauncherOne rocket with its carrier plane, a modified 747 jet called [Cosmic Girl](#), at Long Beach Airport on Wednesday (Oct. 24).



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"The team was carrying out the integration check of the rocket with Cosmic Girl to verify [that] mechanical, electrical, software and dynamics all work together for the first time," Branson wrote in a blog post today (Oct. 26).

That test-flight campaign will begin with "captive carry" missions, in which LauncherOne will stay attached to Cosmic Girl from liftoff to landing. The next step will be drop tests, which will allow engineers to study the rocket-release mechanism and LauncherOne's flight through Earth's atmosphere.



Branson anticipates moving through these milestones rather quickly; in [today's blog post](#), he predicted that LauncherOne would reach orbit "early next year." The 70-foot-long (21 meters) LauncherOne can deliver satellites weighing up to 1,100 lbs. to a variety of low Earth orbits. Cosmic Girl will carry the booster to an altitude of about 35,000 feet at which point LauncherOne will separate and make its own way to space.

Cosmic Girl "can fly thousands of miles **in any direction at 24 hours' notice** to deliver to the right orbit," Branson wrote in his blog post. "Currently, people have to wait between 18 and 24 months for manufacturing and a ground launch." Virgin Orbit said it has hundreds of millions of dollars on contract for a wide range of customers including NASA and the U.S. Defense Department. <https://www.space.com/42265-virgin-orbit-mates-rocket-planet-photos.html>

DJI Launches New Mavic for Enterprise: "The Tool for Everyday Heroes" Miriam McNabb October 29, 2018



A day ahead of the official start of DJI's Airworks conference in Dallas, the company has announced the Mavic 2 Enterprise – a totally pro drone with the light weight and compact form of a consumer model.

This is no "prosumer" drone – a consumer drone with great payloads that will do the job. With the Mavic 2 Enterprise, DJI has moved the Mavic into the **professional space**: providing an array of features designed specifically for the enterprise market.

One of the Mavic's most compelling features has always been its portability – foldable design makes it perfect to carry around, either on great adventures or from jobsite to jobsite. Now DJI



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has honed in on vertical industries like infrastructure inspections and emergency services that require portability.

“Drones are incredible tools that can make our rescuers more efficient, simplify some of our tasks and provide affordable protection from the skies. That is a big deal.” Dean Morales, Fire Captain, Mesa Fire & Medical Department. “With the use of drones, lives are going to be saved.” <https://dronelife.com/2018/10/29/dji-launches-new-mavic-for-enterprise-the-tool-for-everyday-heroes/>

Southern California police are sending drones to respond to 911 calls October 28, 2018 Feilidh Dwyer



Chula Vista, population 275,000, is a city south of San Diego. According to the [San Diego Union Tribune](#), since last week, the city’s police force has used drones to react to more than 30 different calls, three of which led to arrests.

The police receive calls from the public and depending on the location of the crime, one of their drones flies quickly to the scene, giving incoming police officers a live, bird’s eye view of what’s going on.

In a recent domestic violence call, a drone was sent and hovered above a canyon where a homeless man suspected of stabbing a woman was hanging out. The footage that was broadcast to police cellphones, which enabled one responding officer to navigate through difficult terrain to the exact location of the suspect. The drone showed the suspect fleeing a red tent in the canyon with a knife, and police swooped in and were able to apprehend the suspect without any significant problems.

Chula Vista is one of multiple police departments around the United States taking part in a pilot program in collaboration with the Federal Aviation Authority (FAA). The FAA gives these police department specially permission to fly drones at night and above people and traffic during emergencies.

The department eventually plans to have a total of eight or nine drones spread throughout the city which will give them the capacity to respond to most emergencies within just **two minutes** which compares favorably to their current response time of six and a half minutes.

<https://www.wetakuav.com/south-california-police-sending-drones-to-respond-to-911-calls/>



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These tiny drones can lift 40 times their own weight AJ Dellinger, @ajdell 10.27.18 in Robots

Researchers at Ecole Polytechnique Fédérale de Lausanne (EPFL) in Switzerland and Stanford University have developed a line of small flying bots that can move objects that are 40 times their weight.



The drones, called FlyCroTugs (short for "flying, micro tugging robots"), are equipped with a system of winches, adhesives and microspines that allow the tiny craft, which weigh just a few ounces each, to latch onto just about anything. The winch is one of the few immovable parts of the highly customizable drone -- just about everything else about it can be modified for a given scenario. The grippers can be moved around depending on the landing surface, and the drone can take on additional accessories like wheels when a job calls for it.

When it's time for the drones to lift, they can deploy the grippers and connect with the object. The grippers are a non-sticky adhesive that researchers designed by taking inspiration from the **toes of geckos**. Rather than just dropping a sticky pad or some hooks, the drone grippers create intermolecular forces between their adhesive pads and the surface of an object. When that won't do, the microspines -- a series of metal spikes resembling the point of a fishing hook -- can be called in. Once a drone is connected to the target object, it uses the winch to lift, and **can pick up 40 times the weight of its tiny body**.

In one instance, researchers used two of the FlyCroTugs bots to open a door by lassoing the handle, turning it, and pulling until it opened. In another instance, the researchers handed the drone a camera and used it to explore a crumbling structure. The next step for researchers is developing autonomous controls and addressing some of the logistics of using multiple drones at the same time. <https://www.engadget.com/2018/10/27/flycrotugs-gripping-lifting-drones-stanford-epfl/>

First Major Urban BVLOS Drone Project in North America Completed 25 Oct 2018

Mike Rees



Commercial drone operator [IN-FLIGHT Data](#) and [senseFly](#) have announced that the two companies have completed North America's

Robert Rea | Axcel Innovation | Charlottesville and Portsmouth, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com



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first urban BVLOS (beyond visual line of sight) UAS (unmanned aerial system) project in a major city.

The project, carried out in the city of Calgary, Alberta, was commissioned to collect mapping data to support the development of a new graveyard site. The mapping of the area, completed using a senseFly eBee Plus fixed-wing drone, saw IN-FLIGHT Data's team conduct a total of **257 mi BVLOS** operations at an average distance of 1.46 miles from the pilot.

Restricted ground access to the site meant that remotely launched drone operations were the obvious option. Since the site was situated near a protected nature reserve and bird sanctuary, drone use also minimized the project's environmental impact, negating the need to drive vehicles onto the site and disturb wildlife.

The data collected during the project was delivered to the City of Calgary and will support construction management as the development of the graveyard commences. In addition to providing valuable inventory data, enabling city officials to identify the real estate available at the site, the findings will also be shared with the citizens of Calgary to follow the progress of the site construction. <https://www.unmannedsystemstechnology.com/2018/10/first-major-urban-bvlos-drone-project-in-north-america-completed/>

Tech Guru Bets Drones will be `Gold Rush in the Air' For Japan [Jie Ma](#) and [Nao Sano](#) October 23, 2018

Kotaro Chiba is raising money for his second such fund. First fund has already invested in 22 drone-related companies.



Kotaro Chiba

The only person in a kimono at a recent Japanese government meeting on flying cars was Kotaro Chiba, a former online-game executive turned financier of a very specific kind.

Chiba, 44, who wears the kimono on special occasions to show his pride in Japanese culture, is gathering money for what he calls **the Drone Fund**. It invests in unmanned vehicles to survey buildings, make deliveries and take aerial photos for tourist boards; hover scooters; and a pilotless cargo craft that's seeking to make it all the way from Japan to Silicon Valley in one go.



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"It's like a gold rush in the air," Chiba said in an interview from his office in central Tokyo. And "the first movers will reap the best results." Chiba started his first Drone Fund, which was small and oversubscribed, in 2017. He put in 150 million yen (\$1.3 million) of his own money. He's currently raising as much as 5 billion yen for the second one, which he aims to close by the end of the year. He's already lined up money from Mizuho Bank Ltd., KDDI Corp., and the Japanese soccer star and angel investor Keisuke Honda. When that closes, he plans to gather as much as 50 billion yen for a third one by about 2020.

The Japanese government, which has provided some financial backing for the funds, is trying to create the laws and infrastructure needed to put flying cars into the sky in the next decade. It formed a group in August for this purpose, which includes big names such as Uber Technologies Inc. and Boeing Co. The government sees uses for drone technology in everything from tourism to getting supplies to remote islands or mountainous areas in times of disaster.

https://www.bloomberg.com/news/articles/2018-10-23/the-kimono-wearing-tech-guru-who-s-running-japan-s-drone-fund?cmpid%3D=socialflow-twitter-tech&utm_campaign=socialflow-organic&utm_content=tech&utm_medium=social&utm_source=twitter

Consortium featuring 13 firms to shape drone standardization across Europe

NEWS CARLY HACON OCTOBER 29, 2018



The SAFIR consortium (Safe and Flexible Integration of Initial U-space Services in a Real Environment), a pool of 13 public and private organizations, has been picked to **demonstrate drone traffic management** in Belgium.

Chosen by the Single European Sky ATM Research Joint Undertaking, the SAFIR project will be located in two areas of Belgium: Sint-Truiden, where the Drone Test Centre of DronePort is located, and the larger Antwerp area, including the Port of Antwerp. The network will aim to become a forum to share knowledge on how to keep drone operations safe, secure and green.

The goal of the project is to contribute to the EU regulatory process for drones and drive forward the deployment of interoperable, harmonized and standardized drone services across Europe. The program will focus on the so-called U-space, a system that **connects all drones** flying in the air and that makes them visible for authorities and citizens.

http://www.commercialdroneprofessional.com/major-drone-services-to-shape-future-eu-u-space-regulations/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-280897-Commercial+Drone+Professional+DNA+-+2018-10-29



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AirWorks 2018: Watch DJI and American Airlines inspection demo with new Mavic Enterprise ALEX DOUGLAS OCTOBER 30, 2018



Using the new DJI Mavic Enterprise, the DJI pilot flew the drone around an American Airlines plane to highlight how UAVs can make the inspection easier and save huge amounts of time and money.

The footage captured by the drone was projected onto a TV screen for the media to see and, for the sake of the demonstration, it found a small sticker acting as a fault on the plane. The drone then zoomed in and around the supposed fault to showcase how it would work in a real life setting, outlining how the drone could capture up-close imaging of the problem and transfer that data back for a team to analyze on the ground.

Following the demonstration, American Airlines representatives discussed how the usual inspection would take three men around two shifts (10-12 hours each) to complete, and went on to describe how doing the inspection by **drone could at least half the time**.

Watch the footage CDP captured at the American Airlines hangar at Dallas Fort Worth Airport here: http://www.commercialdroneprofessional.com/airworks-2018-watch-dji-and-american-airlines-inspection-demo-with-new-mavic-enterprise/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-281080-Commercial+Drone+Professional+DNA+-+2018-10-30

FAA Approves HSE Over 55 lb Crop Sprayer Drone for Commercial Use! Press 25 October 2018



Homeland Surveillance & Electronics, LLC together with UASolutions Group, Inc. an aviation consulting firm, received notification from the Federal Aviation Administration of approval on the AG-V6A+ unmanned aircraft system for Commercial Operations over 55 lbs.

The aircraft is an autonomous, unmanned & remotely piloted multirotor designed for spraying operations in Agriculture, Public Safety and Invasive Species Management. The aircraft weighs 75.3 lbs with a full payload.

With terrain following up to 1-centimeter accuracy it's built for precision spraying.



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"We're excited that our AG-V6A+ has passed the FAA's rigorous standards! This is a **major milestone** in the role drones play in Precision Agriculture. The increase in payload capacity will allow farmers to cover up to 50% more acres per flight than the 10-liter models," said Terry Sanders, VP Sales & Marketing of HSE-UAV. <https://www.suasnews.com/2018/10/faa-approves-hse-over-55-lb-crop-sprayer-drone-for-commercial-use/>

Drones help hunt for crashed Indonesian passenger plane October 30, 2018 Feilidh

Dwyer

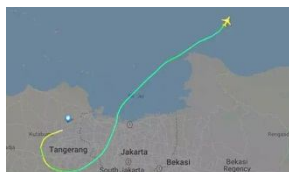


Lion Air Flight JT 610 was a Boeing 737 Max 8 and was only six weeks old. The pilot had more than 6,000 flight hours and on this fateful journey, the plane was in the air for just thirteen minutes before crashing. Minutes after taking off, the pilot Bhavye Suneja called air traffic control to report technical issues and requested permission to fly back to Jakarta. He was granted permission, but the plane hit the ocean before he was able to complete the return journey.

The cause of the crash is as yet unknown, but the day before the accident the plane had experienced technical issues on a flight between Jakarta and Bali. According to the BBC, the captain and first officer had mentioned "unreliable" airspeed readings in their flight log and the captain and first officer had different altitude readings on their instruments. Lion Air claimed the plane had undergone thorough safety checks and the issue had been "resolved."

Tragically, all people on board the plane are presumed to have died in the crash. Rescue crews have so far recovered passenger luggage, wallets and enough passenger remains to fill at least 26 body bags.

Drones and sonar are now scanning the area near where the last contact with the plane was made. The fuselage of the aircraft has not yet been located and that contains the plane's black box. The black box will reveal the last moments of the flight before it hit the ocean and give investigators a window into what happened.



When it comes to surveying large areas of the sea for wreckage, drones offer a distinct advantage over aeroplanes or helicopters: they are much, much cheaper. <https://www.wetalkuav.com/drones-hunt-for-crashed-indonesian-plane/>



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Army Tests Sikorsky-DARPA Autonomous Flight System on Modified Commercial Helicopter Monica Jackson October 30, 2018 C4ISR, News



The U.S. Army has demonstrated an autonomous and optionally-piloted technology that [Lockheed Martin's Sikorsky](#) subsidiary developed with the Defense Advanced Research Projects Agency through DARPA's *Aircrew Labor In-Cockpit Automation System* program.

Lockheed [said Monday](#) Army pilots tested the *Sikorsky Autonomy Research Aircraft* — a modified version of the *S-76B* commercial helicopter — and onboard *MATRIX* system through automated takeoff and landing, obstacle avoidance, automatic landing zone selection and contour flight scenarios.

“Future vertical lift aircraft will require robust **autonomous** and optimally-piloted systems to complete missions and improve safety,” said Chris Van Buiten, vice president of Sikorsky's innovations group. DARPA created the ALIAS program in a push to help operators manage manned operations and facilitate **unmanned** and minimal crew operations.

The agency [said](#) Sikorsky will integrate and demonstrate the system into a *Black Hawk* helicopter sometime in 2019. <https://blog.executivebiz.com/2018/10/army-tests-sikorsky-darpa-autonomous-flight-system-on-modified-commercial-helicopter/>

31Oct18

Safety warning issued after drones fall from the sky HEADLINE NEWS CARLY HACON OCTOBER 31, 2018



The [safety notice](#), which was published by the Civil Aviation Authority on 26 October, applies to operators of the DJI Matrice M200 series of drones. According to the aviation watchdog, the drones affected suffered a **complete loss of power** during flight despite indications that there was sufficient battery time still remaining.

In each case, this resulted in the aircraft falling directly to the ground due to the immediate loss of lift with the remote pilot unable to control its subsequent flight path.

The CAA advises DJI Matrice M200 operators to seek a battery firm update. Anyone experiencing technical issues with the firmware update process is urged to contact their DJI dealer immediately or DJI directly, it added. DJI has issued its own response to the safety alert,



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in which it said that it is aware of a small number of reports involving drones in the Matrice 200 series that have lost power mid-flight. "Our engineers are thoroughly reviewing each customer case and working to address this matter urgently," it stated.

http://www.commercialdroneprofessional.com/safety-warning-issued-after-drones-fall-from-the-sky/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-281297-Commercial+Drone+Professional+DNA+-+2018-10-31

Drone research may help farmers grow profits and productivity Trevor Metcalfe
Staff writer Oct 30, 2018



Virginia Tech graduate student Sayantan Sarkar, left, pilots a drone while assistant professor Maria Balota and research assistants Benjamin Davies and Brice Cazenave look on at the Tidewater Agricultural Research and Extension Center near Suffolk. Balota said drones can help local farmers grow stronger plants and save money, among other uses.

The drone's control panel includes several knobs and joysticks, in addition to a covered viewing screen for the attached camera.

The extension center – part of a network of 11 research sites operated by Virginia Tech – is located in Holland, just a few miles from Suffolk. At the center, researchers work on 412 acres of land, growing everything from cotton and soybeans to peanuts and sorghum.

Research assistant Benjamin Davies explains how the drone could help agricultural breeders in Virginia. Using the sensors, growers can gather data on which crop varieties are the most resilient without roaming the fields themselves. Additionally, Balota said the drone can help farmers save on time and labor costs. For example, a drone can help save a wheat farmer countless hours in the winter months.

"We think that by using the drone technology, we can tell the farmers just by flying over the field whether they need to apply nitrogen in the soil," she said. Speaking with area farmers, Balota said many are already using drones and almost all of them are excited about their potential applications. Some private companies offer drone surveying to farmers, she added.

https://pilotonline.com/inside-business/news/agriculture/article_db33d900-dbc4-11e8-a9f1-231c2aefdf4a.html?spMailingID=14528584&spUserID=MTI4MTcwMjgzOTQxS0&spJobID=1502355146&spReportId=MTUwMjM1NTE0NgS2#utm_source=pilotonline.com&utm_campaign=%2Fnewsletters%2Finside-business%2Fwednesday%2F&utm_medium=email&utm_content=read%20more



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Leonardo Tests Falco EVO UAS Endurance and Range Upgrades 27 Oct 2018 Mike Rees



[Leonardo](#) has announced that it has completed a series of successful test flights of its Falco EVO Remotely-Piloted Air System in Bulgaria. The flight campaign was to validate a package of upgrades that extends the endurance and operational range for overland and maritime missions. This includes a Beyond-Line-Of-Sight satellite data-link system and a new propulsion system based on a heavy-fuel engine.

As well as extending the flight envelope of the Falco EVO, the new engine was also proven to generate more electricity on-board the platform, granting access to more power-intensive ISR sensors required for complex missions.

Further trials are now planned that will see the Falco EVO flying equipped with Leonardo's new surveillance radar combined with a high-definition InfraRed electro-optical system, Automatic Identification System, and a communications relay suite.

The Falco EVO, the longest-endurance model from Leonardo's Falco RPAS family, is a surveillance and intelligence-gathering platform suited to overland and maritime missions. It can fly for more than **20 hours while carrying a payload of up to 100 kg.**

https://www.unmannedsystemstechnology.com/2018/10/leonardo-tests-endurance-and-range-upgrades-for-falco-evo-uas/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=5201ddd209-eBrief_2018_Oct_30&utm_medium=email&utm_term=0_6fc3c01e8d-5201ddd209-119747501

Australian Navy Commissions New UAS Squadron 26 Oct 2018 Mike Rees



The Royal Australian Navy has announced it has commissioned a new operational Squadron to operate unmanned aerial systems in the maritime domain. The Squadron will operate the Insitu ScanEagle UAS, a small, long-endurance, low-altitude aircraft and the [Schiebel S-100 Camcopter](#), which can carry payloads such as electro-optics and infrared sensors.

At the commissioning ceremony at HMAS Albatross, the Naval Unmanned Aircraft Systems Unit was formally transitioned to 822X Squadron, making it the fourth operational Squadron in the RAN Fleet Air Arm.

Chief of Navy, Vice Admiral Michael Noonan, AO, RAN, said this was a significant moment for the Navy and the Fleet Air Arm. <https://www.unmannedsystemstechnology.com/2018/10/australian->



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navy-commissions-new-uas-squadron/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=5201ddd209-eBrief_2018_Oct_30&utm_medium=email&utm_term=0_6fc3c01e8d-5201ddd209-119747501

Certifiable Autonomous UAS Framework to be Established 25 Oct 2018 Mike Rees



[NASA](http://www.nasa.gov) and [Modern Technology Solutions, Inc.](http://www.mtsi.com) have announced they have entered into a partnership to develop a **framework for autonomous unmanned aircraft** that can be used to achieve **Federal Aviation Administration certification**. For MTSI, an engineering services and technology solutions provider, it will be the company's first NASA Space Act Agreement, which enables it to partner with NASA Armstrong on the NASA Traveler Project.

The objective of this NASA-led project, termed Resilient Autonomy, a Joint Capability Technology Demonstration through Office of Under-Secretary of Defense Emerging Capabilities office, is to develop a robust architecture and methodology for certifying fully autonomous systems by using a technique known as multi-mode run-time assurance. This technique places a deterministic "wrapper" around the autonomous system's non-deterministic software in order to safely bind the untrusted system's behavior.

https://www.unmannedsystemstechnology.com/2018/10/certifiable-autonomous-unmanned-aircraft-framework-to-be-established/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=5201ddd209-eBrief_2018_Oct_30&utm_medium=email&utm_term=0_6fc3c01e8d-5201ddd209-119747501

DJI Airworks 2018 Kicks Off Today – the Big Reveal(s) Miriam McNabbon October 30, 2018



[DJI's Airworks 2018](http://www.dji.com) kicked off today in Dallas, and they've got a lot of news to share. Jan Gasparic, DJI's Director of Strategic Partnerships, set the tone by saying that the theme of this year's conference was the **ecosystem** – the growing network of users, partners, and developers. Building on yesterday's announcement of the [Mavic 2 Enterprise](http://www.dji.com) – a lightweight, portable, professional tool – DJI laid out a vision of how their company will support growth of the ecosystem and broad enterprise adoption.

At a price point of under \$2,000 for the universal edition and about \$500 for an additional accessory set, the configurable Mavic 2E is a tool designed for large scale enterprise programs. In addition to the external payloads like an amazing camera, loudspeakers and spotlights; the drone has 24GB of internal, password-protected storage for greater data



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security. Local data mode adds an extra level to that security when required. They've added GPS time stamping – which makes the data more useful if needed as part of a larger project.

It's quiet. It's resilient. "This is the safest and most reliable drone that DJI has ever produced," says Gasparic. And it's built for the future – features including HD video feed at a range of over 5 miles and **360 degree obstacle avoidance** mean the drone is designed for operations beyond visual line of sight when those become possible through waiver or regulation.

<https://dronelife.com/2018/10/30/dji-airworks-2018-kicks-off-today-the-big-reveals/>



The Commonwealth Commercialization Program (CRCF)

Award caps range from \$50,000 to \$250,000.

In FY2019, approximately **\$2.4 million is available** to award to promising projects in five industry sectors, **including unmanned systems**.

Since its inception in 2011, The **Commonwealth Commercialization Program** has awarded more than \$25 million for more than 300 projects across all regions of Virginia and supporting a variety of industries.

The Commonwealth Commercialization Program www.cit.org/initiatives/crcf/fy2019/ accelerates innovation and grows Virginia's economy by supporting high-potential technology commercialization projects from Virginia's public and private institutions of higher education, federal labs, non-profit research institutions, and the private sector. Whether your unmanned technology is for land, air, sea, or space, CRCF can support critical technology development efforts to advance the product or service into the marketplace, even if the technology is at the proof-of-concept or prototype development phase. **Please email us at crcf@cit.org** for any questions about the CRCF program or the FY2019 round.



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1Nov18

SoCalGas Study Touts Importance of Drones Post-Disaster Betsy Lillian October 31, 2018



As wildfire season arrives and the U.S. recovers from two Category 4 hurricanes, SoCalGas has released a new [study](#) that looks at how utilities and communities across the country can be better prepared for such disasters. The study, conducted for SoCalGas by consulting firm ICF, investigated damage and disruptions in the energy and transportation sectors caused by four disasters – hurricanes Harvey and Irma, last October’s Northern California wildfires, and the December 2017 wildfires and subsequent mudslides in Southern California. The report provides examples of resilience and best practices by various utilities, drawing from utility and state energy department reports, interviews recounting firsthand observations, and other sources.

Regarding the use of aerial imagery, the study points out that satellite and drone image analysis can pinpoint damage to infrastructure when physical access is limited and speed up response in the time-critical hours following an event. Following the Southern California mudslides, SoCalGas used satellite images to locate exactly where mudflows had occurred and where those locations overlapped with their pipelines. Similarly, drones equipped with methane sensors and high-definition cameras were able to survey for leaks and rapidly assess damage.

“This case study analysis makes clear the importance of gathering information through technologies such as SCADA systems and drone capability, then sharing that data in real-time interaction between utilities and government in a natural disaster,” says Don Boland, executive director of the California Utilities Emergency Association. “Utilities, law enforcement, fire, DOT and emergency responders cannot be siloed. Everyone needs to **share** information so that all parties know what can be brought to bear in a disaster response.” https://unmanned-aerial.com/socalgas-study-touts-importance-of-drones-post-disaster?utm_medium=email&utm_source=LNH+11-01-2018&utm_campaign=UAO+Latest+News+Headlines



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Kespry Offers New Drone Data Inventory Management for Mining, Aggregates

Betsy Lillian October 26, 2018

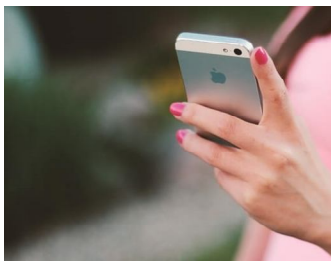


According to the aerial platform provider, the new offering enhances the ability to monitor, reconcile and manage inventory data across sites, product lines and divisions.

Additionally, Kespry users can now reconcile data from their drone surveys with data from ERP and other systems of record for production and sales data. This data can then be used to make better production decisions, inform sales teams of available product and reduce write-downs by finance teams.

“Physical inventory accuracy is an important element of profitability for our 200-plus mining and aggregates customers,” says George Mathew, chairman and CEO of Kespry. “Our combination of drone-based topographic surveys, cloud-based analytics and inventory management capabilities provide a single source for every site, product line and organization. With over 25 percent of all aggregate material in the U.S. now measured with our aerial platform, Kespry’s new inventory management will have an even greater impact on an industry with tight profit margins and highly variable demand.” https://unmanned-aerial.com/kespry-offers-new-drone-data-inventory-management-for-mining-aggregates?utm_medium=email&utm_source=LNH+11-01-2018&utm_campaign=UAO+Latest+News+Headlines

New Hardware, Software and Partnerships from DJI Betsy Lillian October 31, 2018



This week at its AirWorks conference in Dallas, DJI unveiled new solutions, including a drone flight simulator, flight control app and upgraded flight planning tool, as well as new collaborations with industry partners.

The new **DJI Flight Simulator** is designed to create a realistic flight experience for pilots in training, allowing them to hone their skills without the costs, restrictions and potential risks of real-life training. It runs on a computer and is controlled by a DJI drone remote controller. Pilots take off and fly in a lifelike environment, which can be manipulated to provide different wind and weather conditions, lighting, and visibility.

Compatible with DJI enterprise drones, the company’s flight control app for professional work, **DJI Pilot**, is now out of beta and is available on both Android and iOS devices.

Robert Rea | Axcel Innovation | Charlottesville and Portsmouth, VA
robert.rea@axcel.us | 757-309-5869 | www.axcelinnovation.com



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DJI says the app allows pilots to build detailed operations into their flight plans and generate semi-automatic inspection capability. It can create and control the parameters of a flight, as well as photo and video operations, along the way. It can operate a range of payloads, including the Zenmuse XT2 thermal imaging camera and the Zenmuse Z30 zoom camera; accessories for the new Mavic 2 Enterprise; and third-party payloads built on the DJI Payload SDK.

Next, DJI has upgraded its **Ground Station Pro** (GS Pro) app, a flight route planning tool that gives critical missions added accuracy and reliability. With Version 2.0, enterprises can manage fleets of drones, the pilots who operate them, the missions they fly and the data they generate.

https://unmanned-aerial.com/new-hardware-software-and-partnerships-from-dji?utm_medium=email&utm_source=LNH+11-01-2018&utm_campaign=UAO+Latest+News+Headlines

Forbes predicts further consolidation for commercial drone industry INNOVATION

INSIGHT ZOE MONK NOVEMBER 1, 2018



[Airware unexpectedly shut down last month](#), leaving around 120 employees without jobs after the startup's \$118m in funding dried up.

Supplier of commercial drone solutions, Delair, announced an agreement to acquire the key assets of the developer of software analytics tools for drone data, promising to "ensure the continuity of service for existing customers and dealers". The acquisition also included Airware's Redbird analytics software and IP, plus the 26 employees who ran it.

Speaking in his [Forbes article](#), Finnegan wrote: "Despite this initial promise, Airware ran into problems that forced it to shift its strategy. Initially, the company planned to provide the operating system for drones. The goal was to become a Microsoft of drones, enabling greater commonality and utility for drones. Then the company shifted to providing more hardware. **DJI**, which has more than 70% of the market for drones worldwide, proved to be a **formidable competitor**. As DJI's intense competition pushed Airware out of hardware sales, it moved more toward providing software for drone data collection and analysis. Even its new strategy was insufficient to provide enough cash flow to survive."

He continues on [Forbes](#): "Regulatory barriers are taking time to loosen. Without Federal Aviation Administration approval to fly beyond visual line of sight, the commercial viability of many operations in agriculture and industrial inspection is in doubt."

He says there is still a 'large, profitable market ahead' in the drone industry, with Teal Group



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forecasting a commercial market of almost \$40bn over the next 10 years – but companies will need to dedication and commitment to go the full distance.

http://www.commercialdroneprofessional.com/forbes-predicts-further-consolidation-for-commercial-drone-industry/?utm_source=Email+Campaign&utm_medium=email&utm_campaign=45819-281500-Commercial+Drone+Professional+DNA+-+2018-11-01

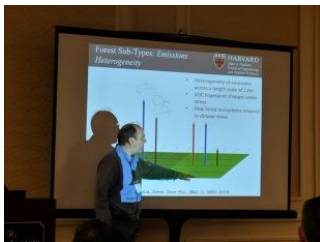
Determining How Drones Can Help Define a Response to Climate Stress Jeremiah

Karpowicz Oct 30, 2018



Dr. Scot T. Martin is a Professor of Environmental Science and Professor of Earth and Planetary Sciences at Harvard University, and he was at the DJI AirWorks 2018 event to discuss how drone-based sensing and sampling has opened **new frontiers in the environmental sciences**.

We caught up with Dr. Martin earlier this year to get a sense of how he was using drones to sniff the various organic chemicals coming out in all types of sub-forest ecosystems that make up the bio-diversity in the Amazon.



Efforts to understand why plants emit certain compounds have been hindered because scientists like Dr. Martin haven't been able to spatially map out which plants are emitting these compounds at which times and for which reasons. That's the 1km-type resolution in the horizontal that has been missing and which drones are able to provide.

A couple of the key insights from his presentation centered on how drones are resetting the expectations that scientists have going into such projects. A single drone and fleet can tackle some science questions that traditional platforms cannot even get out of the gate for, and it's made a difference in terms of the approach and findings for such projects. Additionally, Dr. Martin talked through the challenges associated with the political and social environment surrounding the Rainforest, which simply underscores the fact that there will always be challenges when it comes to operating a drone, regardless of the environment.

https://www.expouav.com/news/latest/drones-response-climate-stress/?utm_source=marketo&utm_medium=email&utm_campaign=newsletter&utm_content=newsletter&mkt_tok=eyJpIjoiWWpKbFpUbGtOVVEEOT1dNNCIsInQiOiJqdFIXejJ5YlIXZHAR5ia2k3cEJOK3dlUTk0MFNtajVzaIREXC9OdnpyYWG1KSUIqT0NQb04zN2JWS1k3aHo5c2xDbDzh5akR5Q3V2aCtldmJ4T2hnTVpHRHBVTkh6QXhXVlBnMVdmeGNFXC8yaEJCXhd0TTZ3N3NseVVzRWZ3WkN4In0%3D



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Taking out drone threats: Raytheon showcases counter UAS technology Berenice

Baker 1 NOVEMBER 2018

At Farnborough Airshow, Raytheon showcased advanced technologies it is developing to counter attacks by unmanned aerial systems, including mobile high-energy lasers and microwaves, control-hijacking technology and armed, swarming drones to protect personnel, forward operating bases and infrastructure.



The FAA estimates that by 2021 there will be as many as four million drones operated by hobbyists and commercial users.

The number of drone near-misses with passenger aircraft in the UK more than tripled to 92 in 2017.



There is a significant risk in civilian airspace, too. The number of drone near-misses with passenger aircraft in the UK more than tripled to 92 in 2017 from 29 in 2015, according to UK Airprox Board figures released in March. Similarly, the US Federal Aviation Administration found that reports of drones violating safety standards rose 46% over the same eight-month period year-on-year, with 1,274 incidents being reported.

At Farnborough International Airshow in July, the vice president of business development for Raytheon Integrated Defense Systems, Joe DeAntona, said: "UAVs are probably the fastest-growing threat set of all the threats we have. One customer regularly uses Patriot missiles to take out UAS."

The alternative to counter UAS threats is to neutralize them, which requires transformational or disruptive technology. This includes high-energy lasers, intercepting a drone's RF communications signal to take control of it, or high-power microwaves.

"Prototype laser weapons developed and funded by Raytheon have been operational in the field," says Peterson. "They are a low-cost solution, powered by electricity, and are very modular and scalable." There are many situations when it is not safe or acceptable to knock a system out of the sky, for example when a drone is flying over a full stadium. "In these



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situations, you have to get in the control loop and steer it to a safe location.”

Australian company Department 13 detects, identifies and mitigates a drone threat by taking control of a drone and either send it home, to a safe zone or safely land in place. Raytheon has also developed its own solution, the Windshear scalable cyber counter-unmanned aircraft system, which is currently undergoing trials at a number of locations. <https://www.airforce-technology.com/features/taking-drone-threats-raytheon-showcases-counter-uas-technology/>

Raytheon Lands \$191M Army Contract for Counter-UAS Radars Nichols

Martin November 2, 2018 Contract Awards, News



Raytheon has won a potential \$191M contract to deliver Ku-band radio frequency radars to the U.S. Army for use against unmanned aerial vehicles.

The company [said Thursday](#) its *KuRFS* electronically scanned array system is geared to provide military users with fire control and detection of enemy missiles, artillery and UAVs. The system operates with the *Phalanx Weapon System*, as well as certain guns, cannons and lasers, to address a variety of threats.

“Seeing threats – like swarming drones – as soon as possible on the battlefield is essential to protecting critical assets and saving soldiers’ lives,” said Andrew Hajek, senior director of tactical radars at Raytheon’s integrated defense systems unit.

He added that the KuRFS fulfills this function by providing 360-degree situational awareness, precision and mobility. <https://www.govconwire.com/2018/11/raytheon-lands-191m-army-contract-for-counter-uas-radars/>