



UAS and SmallSat Weekly News

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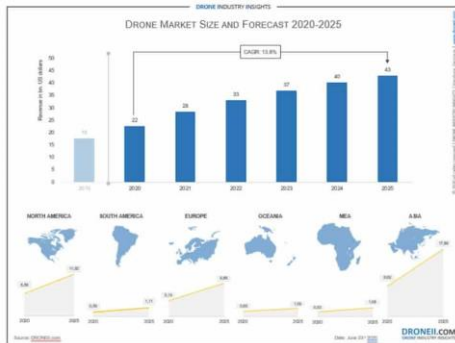


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THE DRONE MARKET SIZE 2020-2025: 5 KEY TAKEAWAYS LUKAS SCHROTH JUNE 22, 2020

To mark the release of the new update of our annual flagship report, here are the most important market trends that you need to know about the UAV industry in 2020 and 2021.



1. The Drone Market will Grow to \$42.8 billion by 2025.

From generating \$22.5 billion in 2020, it will grow at a Compound Annual Growth Rate of 13.8% to almost double that in 2025.

2. Energy is Still the Largest Industry, but Transport is Growing Rapidly.

This includes industries providing transportation of passengers and cargo, warehousing and storage for goods, and support activities related to modes

of transportation like inspection and maintenance of infrastructure.

3. Asia is Now the Biggest Regional Drone Market in the World. While back in 2018, North America was generating slightly more revenue than Asia, thanks to the growth of not only China, but also Japan and especially India, Asia pulled ahead by the end of 2019.

4. The Effects of the COVID-19 Pandemic will be Felt by the Drone Industry. The commercial drone industry has made gains during the pandemic – thanks to medical applications among other automated solutions provided by drone companies like Zipline and Wing.

5. Drone Sales will Double from 2020 to 2025. By 2021, the commercial drone industry will be selling 1,000,000 drone units per year.

Want to Know More? Check Out Our Report! https://droneii.com/the-drone-market-size-2020-2025-5-key-takeaways?utm_source=email&utm_medium=promo&utm_campaign=promo-weekly-drone-market-report-2020-6nov2020&utm_content=read-more&utm_term=body-cta&mc_cid=d2e570c242&mc_eid=857447fe29



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Trump administration advances \$2.9 billion drone sale to UAE Mike Stone, Patricia Zengerle NOVEMBER 5, 2020



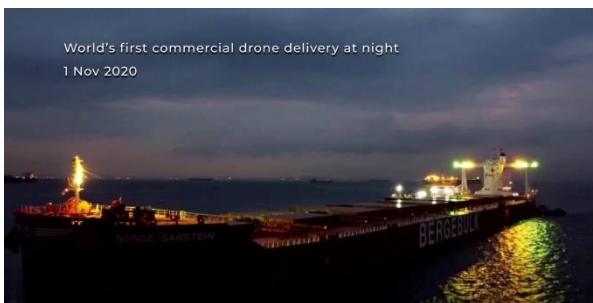
WASHINGTON (Reuters) - This would mark the first armed drone export since the Trump administration reinterpreted a Cold War-era arms agreement between 34 nations to allow U.S. defense contractors to sell more drones to allies.

Reuters has reported that UAE has long shown interest in purchasing drones from the United States and would be among the first customers in line after U.S. export policy changed this summer. This informal notification for the Reaper-style drones is the precursor to the State Department's formal and public notification.

The U.S. Senate Foreign Relations and House of Representatives Foreign Affairs committees - whose members have criticized UAE's role in civilian deaths in Yemen's civil war - have the ability to review and block weapons sales under an informal review process before the State Department sends its formal notification to the legislative branch.

The U.S. State Department may wait to formally notify Congress of the sale once staff and members are briefed on the potential sale. The formal notification gives Congress 30 days to object to any sales. <https://www.reuters.com/article/us-usa-emirates-drones-exclusive/exclusive-trump-administration-advances-2-9-billion-drone-sale-to-uae-sources-idUSKBN27M06L>

World's first commercial nighttime drone delivery completed Josh Spires Nov. 6th 2020



At the beginning of this month, the world's **first commercial nighttime drone delivery** took place at the Port of Singapore to a nearby vessel. The drone was used to deliver a critical part to the Berge Sarstein bulk carrier about three miles off-shore.

The [world's first flight](#) took off from the Port of Singapore on November 1st, soon after nightfall. The delivery was undertaken by F-drone, which builds platforms to make deliveries to ships and offshore platforms.

The drone was tasked with delivering **the world's first** 3D printed CE-Certified Lifting Tool from Finish company Wartsila. The drone's 3-mile flight was completed within **seven minutes**,



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making it much faster than sending out a boat or helicopter. F-drones has built its custom drone capable of delivering 220 pounds to destinations up to 60 miles away. The drone has been designed with modularity for different distance and payload requirements.

Any other customers needing nighttime deliveries can now do so by visiting the F-drones website and filling out the [delivery request form](#). Below is a quick video of the delivery taking place in real-time. <https://dronedj.com/2020/11/06/worlds-first-commercial-nighttime-drone-delivery-completed/>

Zing Drone Deliveries joins the FAA's BEYOND program Josh Spires Nov. 6th 2020



Zing will be working with the Kansas Department of Transportation to test out drone deliveries in the state under the BEYOND program.

The main challenge is beyond visual line of sight operations that can be repeated, scaled and be economically viable, focusing on infrastructure inspection, public operations and small package delivery. As a part of the trials, [Zing](#) is expected to test out NASA's unmanned traffic management system to allow for an end-to-end drone delivery platform to operate safely.

The program will also look at leveraging industry operations to improve analysis and quantify drone operations' societal and economic benefits. Another big issue is the community's perception of drones and will include data collection to see what can be done.

<https://dronedj.com/2020/11/06/zing-drone-deliveries-joins-the-faas-beyond-program/>

UAV Factory announces the release of Penguin C Mk2 system November 6, 2020 News



Penguin C Mk2 is optimized for up to 8-inch diameter payloads with weight of around 4 kg. Flights of **25.5 hours** have been demonstrated with day/night payload. It has a unique swappable nose concept which allows field replacement of payloads within seconds. The swappable nose has an integrated motor that adds additional roll stabilization to the payload as well as protects the payload during recovery. The swappable payload concept allows customers to conveniently integrate custom payloads. https://uasweekly.com/2020/11/06/uav-factory-announces-the-release-of-penguin-c-mk2-system/?utm_source=rss&utm_medium=rss&utm_campaign=uav-factory-announces-the-release-of-penguin-c-mk2-system&utm_term=2020-11-06



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India launches drone pilot training and recruitment drive HEADLINE NEWS

TRAINING JOE PESKETT NOVEMBER 8, 2020



Government-run flight training centre, Indira Gandhi Rashtriya Udaan Academy (IGRUA), announced over the weekend that it is expanding to include drone pilot training courses.

“[Drones are] absolutely a new and emerging area with immeasurable potential and opportunities”, Ministry of Civil Aviation Secretary, Pradeep Singh Kharola, [said at the 36th foundation day of IGRUA](#).

“We led the software revolution, and in the drone revolution also we have the potential of becoming number one,” he was quoted as saying by Hindustan Times. “In that direction, we have taken a small step. The entire regulatory framework for drones has been put in place and very soon drones will be regulated, monitored, observed and controlled just as is being done for aircraft.” Kharola also hinted that IGRUA could enter the drone manufacturing market in the future. India’s government has increasingly been pushing for the uptake of drones in various industries including agriculture as well as in law enforcement and disaster management. The government wants at least 40% of new drone pilots to be women.

<https://www.commercialdroneprofessional.com/india-launches-drone-pilot-training-and-recruitment-drive/>

KANSAS DOT DEMONSTRATES DISASTER RESPONSE, INSPECTIONS USING DRONES NOVEMBER 06, 2020



The [Kansas](#) DOT’s Division of Aviation completed a field exercise recently in Rossville to demonstrate the capabilities of drones being used for infrastructure inspections and disaster response.

[Bridge inspectors](#), public safety officials, universities, and [unmanned aerial systems](#) manufacturers worked side-by-side with KDOT team members. The Capabilities Exercise, or CAPEX, showed how drones can save time and money on transportation infrastructure inspections; allow state agencies to examine disaster sites in emergency response situations; and expand economic opportunities through transportation using innovative technologies.



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In October 2017, KDOT was selected as one of nine participants in the Federal Aviation Administration's UAS Integration Pilot Program, a three-year program that concluded Oct. 25. The FAA decided to continue the partnerships to tackle remaining UAS integration challenges and further drone research with the BEYOND program. KDOT is one of eight participants to continue in the research effort.

The drone demonstration in Rossville was one of the first events to take place as part of BEYOND, "which will continue to advance the safe integration of drones into our national air space," U.S. Transportation Secretary Elaine Chao said in a statement.

https://www.roadsbridges.com/kansas-dot-demonstrates-disaster-response-inspections-using-drones?utm_source=Airborne+International+Response+Team+%28AIRT%29+News+List&utm_campaign=608dddc9b4-EMAIL_CAMPAIGN_2020_11_08_11_02&utm_medium=email&utm_term=0_2ecada6f57-608dddc9b4-33089729

DRONE LIGHT SHOW IS SURPRISE STAR OF BIDEN VICTORY SPEECH November 7, 2020 Sally French News



A stunning — and fairly long — drone light show lit up the skies over the Biden victory speech rally. Red, white and blue drones flew to make formations of words and letters like "46," "Biden," "Harris," "USA", as well as in shapes such as a map of the country.

For starters, the Biden victory speech (drone show included) was important to the drone industry simply because it was widely broadcast on many cable news networks and on online streams. That means Saturday night's light show quickly brought the power of drones to the masses.

What's more, Saturday's delightful drone show not only raises awareness about how impressive the technology can be for entertainment purposes, but also proves that drones aren't always "bad or scary," as many people have long feared. Drones can be used for good — not just for crashing or spying on you. <http://www.thedronegirl.com/2020/11/07/biden-victory-speech/>



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Trump administration plans to sell \$2.9 billion of drones to the UAE NOV 6 2020

Isaac Brekken Getty Images News



The U.S. State Department gave [Congress](#) notification it plans to sell 18 armed MQ-9B aerial drones to the United Arab Emirates in a deal worth as much as \$2.9 billion. This would mark the first armed drone export since the Trump administration reinterpreted a Cold War-era arms agreement between 34 nations to allow [U.S. defense contractors to sell more drones to allies](#).

This informal notification for the Reaper-style drones is the precursor to the State Department's formal and public notification. The U.S. Senate Foreign Relations and House of Representatives Foreign Affairs committees — whose members have criticized UAE's role in civilian deaths in Yemen's civil war — have the ability to review and block weapons sales under an informal review process before the State Department sends its formal notification to the legislative branch. <https://www.cnbc.com/2020/11/06/trump-administration-advances-2point9-billion-drone-sale-to-uae-reuters.html>

National Drone Safety Awareness Week is Nov. 16 – 22, 2020 What Will You Do to Participate? Miriam McNabb November 08, 2020



Sponsored [by the FAA](#), this is a week-long opportunity to help create a drone community with high standards of safety and professionalism. This year's event is

completely virtual – and there are many ways that you and your organization can participate and contribute. Whether you are an individual drone pilot, a recreational flyer, or part of a large enterprise organization, you can do your part to build up the drone industry. For more information, check out the [National Drone Safety Awareness Week Guidebook](#) and the FAA [announcement here](#).

Each day of the week features a different theme, and there are multiple ways to participate. If you or your organization has been planning a virtual event – a job fair, training session, recreational fly-in, or other drone related event – register your event on the [National Drone Safety](#) event page (dronesafetyawarenessweek.com) to be listed as a participant. Or, find an event that interests you to attend – there are already lots of great educational opportunities

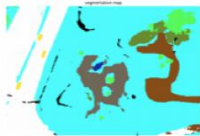


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listed. <https://dronelife.com/2020/11/08/national-drone-safety-awareness-week-is-nov-16-22-2020-what-will-you-do-to-participate/>

Bringing the Sully-Factor to UAS Operations Press UAV Expert News

Leveraging Artificial Intelligence and Vision Systems Black Swift Technologies Brings the Sully-Factor to UAS Operations



Artificial intelligence can bring a predictive-measure to unmanned aircraft systems—essentially “failure prediction” coupled with a vision system that could recognize objects on the ground that needed to be avoided in the event of a forced landing due to system or flight failure.

Using AI neural-networks, [Black Swift Technology](#) (BST) has been developing technology that would enable a UAS to autonomously locate a safe landing site (avoiding people, vehicles, structures, and terrain obstacles, in a hierarchal order). The technology, named SwiftSTLTM (Swift Safe To Land), essentially uses AI to act as the “Sully-factor” (in the event of a flight emergency where you have engine failures in flight, determine where the safest location is to land your plane—in the real world event, Capt. Sully put his aircraft down in the Hudson River since there were no other viable alternatives).

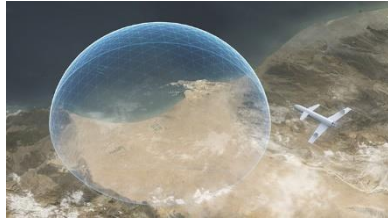
Black Swift’s technology processes high-resolution images quickly and efficiently onboard the UAS to enable the identification of objects and terrain that must be avoided during a safe emergency landing. The technology uses a machine vision technique known as semantic segmentation, which allows objects to be classified at the pixel level by assigning each pixel to a class label. It uses heuristics to make sure that it doesn’t hit people, vehicles, buildings, or structures. Once it finds the ideal landing location, it relies on object detection to finish the landing. https://www.uavexpertnews.com/2020/11/bringing-the-sully-factor-to-uas-operations/?utm_source=Master&utm_campaign=17563e506d-EMAIL_CAMPAIGN_2017_12_20_COPY_01&utm_medium=email&utm_term=0_35ad7bc94d-17563e506d-89168288



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MARSS and its partners successfully demonstrate world-first CUAS application

November 9, 2020 Counter UAS



MARSS and its partners have successfully collaborated to celebrate a world first in disabling UAS and drone threats. The three companies demonstrated the new capabilities of the NiDAR CUAS AI Command and Control system in a week-long ‘prove out’ in Arizona, showcasing the next-generation airborne threat verification and denial solution.

This was the first time the integration of the technology was demonstrated with systems from its partners Northrop Grumman and MSI-Defence Systems Limited. It saw the ground-breaking technology detect, track and engage a hostile UAS in seconds. The partners were able to test the solution and its countermeasures, which provide 360 degree protection. With demonstrations ranging from 250m to 15km.

The system allows users for the **first time** to integrate layers of defensive countermeasures designed to permanently disable single or defeat asymmetric UAS threats – saving lives and protecting assets at significant ranges, with high probability of intercept.

The success of the system has resulted in several key installations, with contracts close to the \$200m mark. https://uasweekly.com/2020/11/09/marss-and-its-partners-successfully-demonstrate-world-first-cuas-application/?utm_source=rss&utm_medium=rss&utm_campaign=marss-and-its-partners-successfully-demonstrate-world-first-cuas-application&utm_term=2020-11-09

Kawasaki’s rad new unmanned compound helicopter Scott Simmie Nov. 9th 2020



The vehicle is produced by a division of the company called Kawasaki Heavy Industries. The term “compound” refers to the fact it has a rotor for vertical lift and two motors for forward flight. And the design? Well, we think it’s kinda gorgeous. Especially in flight:

A LinkedIn post from the Japan UAS Industrial Development Association says that Kawasaki had a successful test flight of the product, and then goes into more detail: The K-RACER is a special type of testing machine called a compound helicopter that has a main rotor (4 m in diameter), main wings and propellers on both sides instead of a tail rotor. The left and right propellers can



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cancel the torque associated with the rotation of the main rotor and generate forward thrust. In forward flight, the main wing shares the lift to reduce the burden on the main rotor, and the concept is to enable high-speed flight that cannot be achieved with conventional helicopters. The power source is the supercharged engine of the company's motorcycle "Ninja H2R".
<https://dronedj.com/2020/11/09/kawasaki-releases-rad-new-unmanned-compound-helicopter/#more-40335>

What the Biden drone show means for the future of drones [Josh Spires](#) Nov. 9th 2020



When Joe Biden addressed the nation on Saturday night, [drones took to the sky](#) to create an unforgettable show. The inclusion of drones in the show was a surprise but will do so much for the drone industry.

To my surprise, after Harris and Biden finished speaking, fireworks began firing with drones joining in a few seconds later. Finally! Drones being used in a positive way in front of tens of millions of people and hundreds of millions more around the world.

DJI Enterprise's Senior Director of Public Safety Integration [Romeo Durscher](#) said it best in his tweet: *Drones are becoming less and less seen as this really bad thing in the sky but are now seen as a tool; a tool to improve entertainment, science and research, public safety, agriculture, inspection and STEAM education.*

An event like this will only help to improve the public's perception of drones being used in a positive way. It will be great to see how drone usage will change over the next few years and the harsher restrictions placed on foreign models being removed. Whoever had the idea to put drones in the show has changed the way hundreds of millions will perceive drones. **Great work** to everyone involved! <https://dronedj.com/2020/11/09/what-the-biden-drone-show-means-for-the-future-of-drones/#more-40229>

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Zing Drone Delivery Joins BEYOND Program: Like Uber, for Drone Delivery

[VIDEO] Miriam McNabb November 09, 2020

How do you scale drone deliveries? [Zing drone delivery](#) may have the answer, with a platform that allows licensed drone pilots from around the country to use their DJI drones, a Zing delivery kit and an app to accept drone delivery jobs from consumers. Now, FL-based Zing



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announces that they will join the [BEYOND program](#), the next step in the U.S. Department of Transportation's Integration Pilot Program, to test their platform in Kansas.



"The Kansas Department of Transportation has partnered with Zing to test package delivery operations. The program is focusing on expanding operations that are Beyond Visual Line of Sight, improving public perception of UAS, and quantifying the economic and societal impacts of these advanced operations," says a Zing press release.

"It is an honor to be a part of the group of partners in Kansas who will be testing and implementing these operations. We are grateful for the opportunity to be one of the first to implement and scale package delivery Beyond Visual Line of Sight. We are especially excited to be testing and implementing NASA's Unmanned Traffic Management system with our delivery platform," said Ian Annase, Founder and CEO of Zing. See the video:

<https://dronelife.com/2020/11/09/zing-drone-delivery-joins-beyond-program/>

Hydrogen Fuel Cells for Passenger Drones: Honeywell Purchases Ballard Miriam McNabb November 09, 2020



Fortune 100 companies are continuing investment in the drone industry. Honeywell (**NYSE: HON**) purchased Ballard Unmanned Systems assets last month. Ballard Unmanned Systems is "a wholly owned subsidiary of Southborough, Mass.-based Ballard Power Systems Inc. that designs and produces stored-hydrogen proton exchange membrane fuel cell systems that power unmanned aerial systems, particularly those used for energy inspection, cargo delivery, and other commercial and defense applications where demand for UAS services is growing," says a Honeywell press release.

Fuel cells offer an alternative to traditional batteries, using the chemical energy of hydrogen or another fuel to produce electricity. Hydrogen fuel cells can offer drones longer flight times without recharging. Fuel cell power systems can run up to **three times longer** than batteries and are **five times more reliable** than small engines. Unlike traditional gas engines that have carbon emissions, they utilize hydrogen, a clean source of energy."

<https://dronelife.com/2020/11/09/hydrogen-fuel-cells-for-passenger-drones-honeywell-purchases-ballard/>



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THE TOP DRONE DELIVERY COMPANY OF 2020 IS NOT GOOGLE OR

AMAZON November 10, 2020 Sally French The Drone Girl News



According to Drone Industry Insights, the Hamburg, Germany-based drone market intelligence tracking company, the top drone delivery company of 2020 turns out to be **Zipline**.

Wing, the drone-focused sister company of Google came in at No. 2, but Amazon Prime Air, the retail giant's drone delivery arm didn't get a spot on the podium. No. 3 went to Silicon Valley-based drone delivery group Matternet.

Dronell released its [Drone Service Provider Ranking 2020 Report](#) this month, ranking the top drone service providers in the world using parameters like company size, market shares and public activity. The report also notes drone delivery companies aren't necessarily all-American. **15 nations** are represented in the Top 20 Drone Delivery Ranking.

While Zipline isn't a household name the way Google or Amazon is, it's easy to see how it took DII's top spot. With a valuation of over \$1 billion, \$190 million in new financing in 2019 and a total over 50,000 commercial deliveries, Zipline is the latest contender to become the leader in the global drone industry. <http://www.thedronegirl.com/2020/11/10/top-drone-delivery/>

Drones for Mining: Use Cases, Benefits and Trends 09 Nov 2020 Mike Ball



[Iris Automation](#) has released the following article outlining the adoption of unmanned aerial systems by the mining industry. The company's Casia detect-and-avoid system enables Beyond Visual Line of Sight operation for industrial UAVs.

Mining is an incredibly dangerous industry, which helps explain its ready adoption of UAS technology in recent years, particularly across the regions of Australasia and Africa, according to GlobalData's survey of more than 200 mine sites.

Beyond improving the safety of mining operations, drones can be used to collect data more efficiently and accurately, and according to Global Data's survey, replacing manned aircraft with a drone and drone pilot for can **save around 90% of the cost per hour**. Other benefits include:

- Surveys are easily repeatable



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- Improves worker and site-safety management
- Reduces variance in stockpile volume calculations
- Reduces the need for costly manned aircraft and highly skilled personnel
- Unlimited aerial data that can be collected allows engineers to focus on analysis and interpretation

Use cases for drone technology in operations include: Mining surveys, stockpile management, quarry management and operation planning, drilling and blasting, tailings dams, security, underground and abandoned mines

https://www.unmannedsystemstechnology.com/2020/11/drones-for-mining-use-cases-benefits-and-trends/?utm_source=UST+eBrief&utm_campaign=3848abf993-eBrief_2020_10Nov&utm_medium=email&utm_term=0_6fc3c01e8d-3848abf993-119747501

Northrop Grumman's Plan To Replace The MQ-9 Reaper With Stealthy

Autonomous Drones TYLER ROGOWAY NOVEMBER 9, 2020 THE WAR ZONE

We talk to Northrop Grumman Vice President Richard Sullivan about what his company has potentially in store for the Air Force's MQ-Next tender.



As the U.S. faces growing threats from peer state competitors with highly capable integrated air defense systems, environments in which the Air Force's current fleet of [MQ-9 Reaper drones cannot survive](#), the unmanned air combat vehicle has suddenly become **the next big item** on the Air Force's shopping list.

Dubbed the MQ-Next, the exact requirements remain undefined, but the service has reached out to its industry partners to see what they have to offer. Northrop Grumman, a company [known for its low-observable](#) (stealth) [design capabilities](#) and its bright history with [advanced unmanned systems](#)—namely the [X-47 demonstrators](#) and the [RQ-4 Global Hawk](#)—has thrown their hat in the ring for what will be an emerging tender in the coming years.

With that in mind, Richard Sullivan, a Vice President of Program Management at Northrop Grumman, talked in-depth with *The War Zone* not just about their own potential drone offerings under MQ-Next, but also about their shadowy Distributed Autonomy Responsive Control (DARC) advanced mission management system that aims to control not just the MQ-Next vehicles, but what will be **a family of interconnected unmanned systems** that will rule the



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skies in the not so distant future. See the interview at: <https://www.thedrive.com/the-war-zone/37498/northrop-grummans-plan-to-replace-the-mq-9-reaper-with-stealthy-autonomous-drones>

UK Firefighting and COVID drones to receive \$43 million in funding Josh Spires Nov. 10th 2020



The [British government](#) has set aside £33 million (~\$43 million) in funding to be spent on firefighting and COVID delivery drones as a part of a **ground-breaking aviation project** to solve major global challenges. So far, 20 winning ideas have been funded by the UK government.

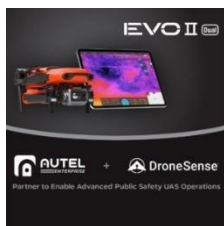
For the [20 winning ideas](#) chosen so far, they will receive a share of £7 million (~\$9 million) to develop them further and get them flying. The drone projects chosen range from COVID-related delivery drones to drones allowing remote inspections of infrastructure and construction sites.

Nine of the 20 projects are focusing on drone-related solutions to the pandemic, delivering medicines by air and reducing human-to-human contact in the process. See a list of winners: <https://dronedj.com/2020/11/10/uk-firefighting-and-covid-drones-to-receive-43-million-in-funding/>

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Autel, DroneSense Pilot an Integrated Drone Public-Safety Platform Jason

Reagan November 10, 2020



Public-safety UAV software provider [DroneSense](#) is teaming up with drone manufacturer Autel Robotics to create a platform for public-safety operators. The partnership will marry the Autel EVO II Dual with DroneSense's solution for police, fire and rescue agencies designed to build, manage and scale drone programs.

EVO II Dual helps public safety personnel recognize persons and objects in zero-light environments through smoke/fog. It also has one of the highest resolution thermal imaging cameras in its class, providing police officers and firefighters 4X zoom capability and 40 minute flight time.

DroneSense allows operators to deliver intelligence to decision-makers. Incident commanders gain situational awareness with live video streams and telemetry data as well as the ability to



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collaborate with pilots and neighboring agencies. Program administrators have a record of data like flight logs, hardware and personnel.

“Autel Enterprise Robotics relationship with DroneSense provides public safety with functionality our customers have been requesting for many months,” said Gary DeLuca, CEO of Autel USA. <https://dronelife.com/2020/11/10/dronesense-teams-up-autel-drone/>

TWO COMPANIES WANT TO PUT DRONE DELIVERY MAILBOXES IN YOUR

YARD November 11, 2020 Sally French The Drone Girl News

Two [American drone companies](#), AgEagle Aerial Systems and Valqari, are partnering in an attempt to make contactless drone delivery a widespread possibility.



That drone delivery mailbox is an automated and safe package delivery system. It could serve a few homes in a neighborhood, as the seven and a half-foot high station contains six storage units to accommodate multiple drone and traditional postal deliveries and pickups.

Many have been dubious of the viability of drone delivery because there hasn't been a great way to secure mail from thieves. This mailbox not only stores the packages but also maintains a digital chain of custody throughout the delivery process.

But drone delivery has been a growing trend in 2020, largely due to [coronavirus](#) has upended most Americans' lifestyles, causing people to stay at home rather than running out to stores for shopping. In fact, a memo sent out on April 14 by the Federal Aviation Administration specifically addressed the fact that [drones can aid in a number of coronavirus-related use-cases](#), including [drone delivery](#). <http://www.thedronegirl.com/2020/11/11/contactless-drone-delivery/>

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Wildfire Meteorology: Drones Provide a Better, Cheaper Way to Understand

Fire Risk Miriam McNabb November 11, 2020 By DRONELIFE Staff Writer Jim Magill

As wildfires continue to rage across vast swaths of the western United States, researchers are developing the use of unmanned aerial vehicles to understand the weather systems that lead to the fires' ignition and spread and to help develop tools to battle the blazes.



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A team of researchers from the [Fire Weather Research Laboratory](#) at San Jose State University in California recently completed a study that demonstrated that a drone equipped with a sonic anemometer is an effective tool for taking vertical profiles of atmospheric variables, a process that would otherwise require the use of costly weather balloons or the construction of a meteorological tower.

“It turns out the wildfire environment is poorly sampled and there have not been a lot of measurements around wildfires,” Craig Clements, professor at SJSU’s Fire Research Laboratory and leader of the project, said in an interview. He began experimenting with using unmanned aircraft to measure meteorological conditions near wildfires in 2008 when he flew a small fixed-wing, gas-powered remote-controlled airplane through the smoke plumes of wildfires. Since then, the increasing sophistication of UAVs has greatly expanded the potential for their use in fire research, he said. <https://dronelife.com/2020/11/11/wildfire-meteorology-drones-provide-a-better-cheaper-way-to-understand-fire-risk/>

THE DRONE MANUFACTURER RANKING 2020 LUKAS SCHROTH OCTOBER 6, 2020



The report is an assessment of 430 global companies whose core business is to manufacture drones.

Prosumer Multirotors: The top positions in the ranking are occupied by manufacturers of multirotor drones up to a price of \$10,000.

Many niche suppliers: Behind the large market players such as DJI and Yuneec, companies follow in the most common industries or for niche applications.

The military market as financier: Manufacturers in the dual-use segment often show a strong tendency towards the military market.

Industry leader China: China shows its dominance with seven companies in the top 20 ranking. The dual-use sector is dominated by US drone manufacturers.

Top 3 Commercial Drone Manufacturers

#1 DJI: The Chinese manufacturer is the undisputed leader of commercial drone manufacturers. Between **70-80%** of market share in the worldwide commercial sector speaks for itself.

#2 Yuneec: In 2nd place is another Chinese manufacturer. They developed from a supplier of recreational drones to one of the largest manufacturers of commercial drones.

#3 Parrot Drones: Despite difficult years with staff layoffs and continued sales declines, Parrot is still one of the world’s largest manufacturers. Parrot is using the current opportunity in the U.S. to offer its products to government agencies. <https://droneii.com/the-drone-manufacturer->



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[ranking-2020?utm_source=email&utm_medium=promo&utm_campaign=promo-weekly-drone-manufacturers-ranking-2020-12nov2020&utm_content=read-more&utm_term=body-cta&utm_source=Droneii.com+%7C+Newsletter&utm_campaign=d5578aac25-Promo-Drone-Manufacturers-Ranking-12Nov2020&utm_medium=email&utm_term=0_8e282c8de0-d5578aac25-261904885&mc_cid=d5578aac25&mc_eid=7a6c4a1fef](https://www.axcelinnovation.net/ranking-2020?utm_source=email&utm_medium=promo&utm_campaign=promo-weekly-drone-manufacturers-ranking-2020-12nov2020&utm_content=read-more&utm_term=body-cta&utm_source=Droneii.com+%7C+Newsletter&utm_campaign=d5578aac25-Promo-Drone-Manufacturers-Ranking-12Nov2020&utm_medium=email&utm_term=0_8e282c8de0-d5578aac25-261904885&mc_cid=d5578aac25&mc_eid=7a6c4a1fef)

Azerbaijan's drones owned the battlefield in Nagorno-Karabakh — and showed future of warfare Robyn Dixon November 11, 2020



A soldier inspects the remains of a downed drone from Azerbaijan

MOSCOW — The drone's-eye view over Nagorno-Karabakh defined much of the six-week war in the mountainous enclave within Azerbaijan:

Drone strikes — targeting Armenian and Nagorno-Karabakh soldiers and destroying tanks, artillery and air defense systems — provided a huge advantage for Azerbaijan in the 44-day war and offered the clearest evidence yet of how **battlefields are being transformed** by unmanned attack drones rolling off assembly lines around the world.

The expanding array of relatively low-cost drones can offer countries air power at a fraction of the cost of maintaining a traditional air force.

“Drones offer small countries very cheap access to tactical aviation and precision guided weapons, enabling them to destroy an opponent’s much-costlier equipment such as tanks and air defense systems,” said Michael Kofman, military analyst and director of Russia studies at CNA, a defense think tank in Arlington, Va. “An air force is a very expensive thing,” he added. “And they permit the utility of air power to smaller, much poorer nations.”

https://www.washingtonpost.com/world/europe/nagorno-karabakh-drones-azerbaijan-armenia/2020/11/11/441bcbd2-193d-11eb-8bda-814ca56e138b_story.html

Drones now used to count Antarctic penguin colonies in 3 hours Josh Spires Nov. 12th 2020

Scientists have turned to drones to speed up the counting process undertaken to track [Antarctic](#) penguins’ numbers. The drones have cut down the counting time from two full days to just three hours, amazing!



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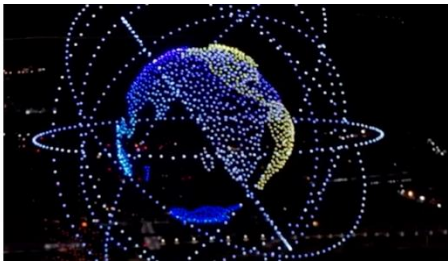


The scientists also hope to begin counting the chicks from the air, rather than counting them from the ground, which is the way it's currently done.

Previously, scientists would manually fly drones above the penguins, capturing the video as it goes along for manual analysis later. Now, scientists are using drones with the POPCORN algorithm. This new algorithm autonomously flies the drone along a set course to perform multiple flyovers to count the number of penguins accurately.

The POPCORN system uses a lot of math to calculate the route a drone should take. Rather than making the common zig-zag pattern used today, the drones follow a contour path overlaid with the images from other drones. The drones are also able to maneuver tricky obstacles that would be much harder for humans to do. <https://dronedj.com/2020/11/12/drones-now-used-to-count-antarctic-penguin-colonies-in-3-hours/>

The biggest and best drone show you've seen... yet Scott Simmie Nov. 12th 2020



A Guinness World Record!

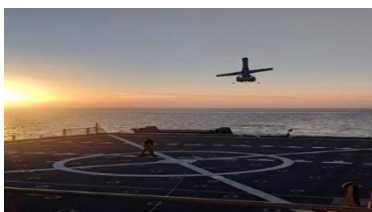
We remember when [1,000 drones lit the sky in China](#). We watched when [Intel's Shooting Star drones augmented ODESZA's light show at Coachella](#). And we will certainly remember the show you're about to watch. Why? Because it featured 3,051 drones. The

Shenzhen Damoda Intelligent Technology Control Company LTD put it on specifically to try to snag a Guinness World Record. According to the Facebook post, it did!

The drones have more mass, and are more powerful, than the typically small and very light drones used in these shows. That the drones can move more quickly, creating and dissolving shapes at a really snappy clip. See the show: <https://dronedj.com/2020/11/12/the-biggest-and-best-drone-show-youve-seen-yet/#more-40853>

Martin UAV Partners with SOUTHCOM on Enhanced Counternarcotics Operation

November 11, 2020 News



[Martin UAV](#) successfully demonstrated the shipboard integration of its V-BAT as well as its impressive maritime capabilities in support of [United States Southern Command's](#) counter narcotics operations in the Eastern Pacific



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from Oct. 6, 2019 to July 31, 2020. Support for the mission included the highly visible Enhanced Counter Narcotics Operations that began April 1 and was kicked off by the President of the United States. The 10 month mission started with a demonstration of the V-BAT's small footprint, quick set-up, rapid deployment and true Vertical Takeoff and Landing capabilities. Over the course of the demonstration, the V-BAT flew an unprecedented 273 sorties for a total of **1340.7 flight hours**.

"This mission helped catapult [Martin UAV's V-BAT](https://uasweekly.com/2020/11/11/martin-uav-partners-with-southcom-on-enhanced-counternarcotics-operation/?utm_source=rss&utm_medium=rss&utm_campaign=martin-uav-partners-with-southcom-on-enhanced-counternarcotics-operation&utm_term=2020-11-12) into the maritime environment, showcasing its ability to withstand and perform in tropical conditions, including: strong crosswinds and unexpected storms with rain exceeding 10mm per hour," said Heath Niemi, VP of Global Sales & Development. https://uasweekly.com/2020/11/11/martin-uav-partners-with-southcom-on-enhanced-counternarcotics-operation/?utm_source=rss&utm_medium=rss&utm_campaign=martin-uav-partners-with-southcom-on-enhanced-counternarcotics-operation&utm_term=2020-11-12

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Ehang Passenger Drone Makes Debut Flight in Korea Miriam McNabb November 12, 2020



[EHang Holdings Limited](#) (Nasdaq: EH) announced its [EHang 216](#) two-seater passenger-grade autonomous aerial vehicle had completed its maiden flight in Korea. "It is Korea's first time to launch a flight of an autonomous "air taxi" over a densely populated downtown area," says a company press release. The flight, which took place on November 11, 2020, was part of the "Open the Urban Sky" UAM Seoul Demo event in the center of Seoul. The flight is expected to be followed by a series of trials in several Korean cities.

"The EHang 216 was purchased by the Seoul Metropolitan Government and is the first of its kind in Korea being officially registered under the Nationality and Registration Mark "HL008X" by MOLIT."

The Acting Mayor of Seoul, Seo Jeong-hyup said, "We are excited that Seoul can host the country's first domestic demo flight. The city government will strive to realize the human dream of safe flights for Seoul citizens and thus support the future industry of Korea."



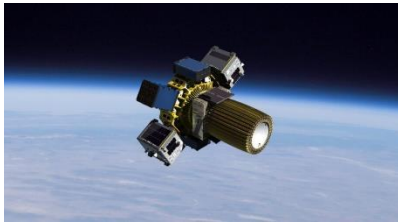
The Korea government announced the "Korean Urban Air Roadmap" in June 2020. The government projects that commercial passenger drone services will be available 3 -5 years from now.



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EHang will follow this launch with trial projects “in more locations across Korea for a variety of UAM uses, such as urban passenger transportation, aerial sightseeing, island hopping and aerial logistics.” <https://dronelife.com/2020/11/12/ehang-passenger-drone-makes-debut-flight-in-korea/>

Spaceflight announces Sherpa tug with electric propulsion Jeff Foust November 12, 2020



WASHINGTON — Rideshare launch service provider Spaceflight Inc. announced a new version of its Sherpa tug Nov. 12 equipped with electric propulsion that can **send smallsats to high orbits or cislunar space.**

The first flight of its Sherpa-LTE orbital transfer vehicle will take place in mid-2021. With a Hall effect thruster provided by Apollo Fusion, Sherpa-LTE will be able to generate a change in velocity of more than 6 kilometers per second. That will allow the vehicle to deliver smallsats to geostationary Earth orbit, cislunar space or Earth-escape trajectories after a launch into low Earth orbit.

Mike Cassidy, chief executive of Apollo Fusion, said “Our goal is to get our customers’ spacecraft delivered to orbit exactly when and where they want it. Our new Sherpa OTVs enable us to provide that in-space delivery service, while keeping costs low and timelines short.” <https://spacenews.com/spaceflight-announces-sherpa-tug-with-electric-propulsion/>