



UAS and SmallSat Weekly News

Contents

- 2 American 'Ghost' drones for Ukraine designed for attack: Pentagon
- 2 Futuristic cargo drone that can land on a 16-foot platform in 40mph crosswinds
- 3 Natilus Announces Expansion to San Diego's Brown Field for First Autonomous Cargo Aircraft
- 4 Swoop Aero plans urban drone delivery network in New Zealand
- 5 Along with sharks, Aussie city wants drones to scan waters for deadly jellyfish
- 5 Zipline launches drone delivery of medical supplies in Japan with Toyota Tsusho
- 6 Ukraine Sounds Alarm on Chinese Drones, Opening Skies to U.S. Startups
- 7 Mid-Missouri public safety departments use drones to help on the job
- 7 CAL Analytics to Provide Detect and Avoid Service in NY Drone Corridor
- 8 World's first VERTIPORT opens in Coventry: the first of more than 200 by 2027
- 8 A lesson from Ukraine: counter UAS technology is still one step behind the threat
- 9 Ocean Alliance flying DJI M210 drones for aerial tagging of whales
- 10 Swoop Aero expands medical drone deliveries in Mozambique healthcare trials
- 10 What the Next-Generation Silent Drone Looks Like
- 11 Aergility to Unveil ATLIS Hybrid Cargo VTOL UAV
- 11 Manna in the U.S.: Irish Drone Delivery Service Plans Slow Rollout this Year
- 12 TCab Tech successfully completed transition flights with the 50% subscale demonstrator
- 13 NASA To Install Batteries in e-Aircraft Demonstrator
- 13 White House seeks more power to counter use of drones
- 14 Drone delivery could be poised to take off in the United States
- 15 Wild heavy-lift cargo UAV debuts @AUVSI, uses gyrocopter principle for lift
- 16 TWO AMERICAN DRONES JOIN DIU'S BLUE UAS CLEARED LIST
- 17 Air-One eVTOL Transportation Hub Makes Debut in UK
- 17 PredaSAR nears first launch of its radar imaging constellation
- 18 SubSonex-Based Unmanned Twin-Jet Revealed as Low-Cost Military UAV
- 19 Hundreds of autonomous drones to monitor Florida electric utility
- 19 Chinese drone-maker suspending operations in Russia, Ukraine
- 20 Airbus, ITA Airways to Partner on eVTOL Work in Italy



UAS and SmallSat Weekly News

23Apr22

American 'Ghost' drones for Ukraine designed for attack: Pentagon Phil

Stewart and Idrees Ali April 21, 2022



WASHINGTON, April 21 (Reuters) - Newly disclosed "Ghost" drones that are part of America's latest arms package for Ukraine were developed by the U.S. Air Force for attacking targets and are destroyed after a single use, the Pentagon said on Thursday.

Ukrainian forces have used Western weapons including Stinger and Javelin missiles along with drones, like the Turkish Bayraktar TB2 and U.S.-made Switchblade, effectively to target Russian positions.

The White House said earlier on Thursday that over 121 Phoenix Ghost Tactical Unmanned Aerial Systems would be provided to Ukraine as part of the new arms package. [read more](#) The Pentagon said the Ghost drones are well suited for the coming fight in Ukraine's Donbas region, which officials have described as flat terrain reminiscent of the U.S. state of Kansas.

<https://www.reuters.com/world/us-rapidly-developed-ghost-drones-ukraine-pentagon-says-2022-04-21/>

Futuristic cargo drone that can land on a 16-foot platform in 40mph crosswinds

21 April 2022



A futuristic cargo drone that could be used to deliver packages over distances up to 25 miles has been unveiled as a design concept.

The uncrewed eVTOL (electric vertical takeoff and landing) aircraft features six battery powered omni-directional CycloRotors that generate thrust. They are designed to allow the drone to land on a 16-foot platform in crosswinds of up to 40mph. It features six omni-directional CycloRotors that generate thrust. The design is based on extensive calculations, wind tunnel testing, and the first successful free flight of a prototype demonstrator in August 2021

The CycloRotors also provide direct and instant control of magnitude and direction of thrust in a full circle of 360° – up, down, forward, backward – whereas all other propulsion systems only



UAS and SmallSat Weekly News

push or pull into one single direction. The vehicle is a joint design study between Austrian company CycloTech GmbH and Japan's Yamato Holdings Co. Ltd.



The design is based on extensive calculations, wind tunnel testing, and the first successful free flight of a prototype demonstrator, which took place in August 2021.

The drone promises advanced aerial logistics capable of carrying a **100lb payload over a range of 25 miles.**

<https://www.dailymail.co.uk/sciencetech/article-10739185/Futuristic-cargo-drone-used-deliver-packages-distances-25-miles.html>

Natilus Announces Expansion to San Diego's Brown Field for First Autonomous Cargo Aircraft April 21, 2022



SAN DIEGO--([BUSINESS WIRE](#))--[Natilus](#), a U.S. company producing **the world's first** purposefully-designed and manufactured **autonomous aircraft for air freight**, has announced its expansion to [Brown Field](#) to host engineering and manufacturing facilities.

The facility includes a 12,000 square-foot hangar for prototype final assembly, structural testing, systems' integration and secondary structural bonding. There is also a generous 8,000-foot runway for testing, with the ability to land large, oversized cargo aircraft. The 1,500 square feet of additional office space will supplement Natilus' engineering offices in downtown San Diego.

Natilus has initial plans to design and manufacture a family of four aircraft. The first aircraft - the 3.8-ton payload short-haul feeder UAV - has begun manufacturing for first flight in 2023. Last month, Natilus signed a contract with Collins Aerospace for design, development, and integration of a specialized loading system. Additionally, Natilus has designs for a 60 ton payload medium/long range UAV; 100 ton payload long-range UAV and 130 ton long-range large cargo aircraft.

Earlier this year, Natilus announced **purchase commitments of more than \$6 billion** for delivery of more than **440 aircraft** in pre-orders, from major airlines and integrators, including Volatus Aerospace, Astral Aviation, Aurora International, Dymond and Flexport.



UAS and SmallSat Weekly News

<https://www.businesswire.com/news/home/20220421005278/en/Natilus-Announces-Expansion-to-San-Diego%E2%80%99s-Brown-Field-as-Construction-Begins-on-First-Natilus-Autonomous-Cargo-Aircraft>

Swoop Aero plans urban drone delivery network in New Zealand Bruce Crumley -
Apr. 22nd 2022



Australian logistics and drone delivery company Swoop Aero is shifting gears from its service to remote locations or above largely rural zones and moving to establish an urban UAV network in the New Zealand city of Christchurch.

Swoop Aero has been active in recent years expanding its healthcare logistics

activity across Africa, scoring high-profile successes in the Democratic Republic of [Congo](#), [Namibia](#), [Malawi](#), and other nations across the continent. During spikes in COVID-19 pandemic, meanwhile, it also teamed up with UK firm Skyports to make drone deliveries of medical supplies and vaccines to far-flung locales in the UK. It more recently started a similar [distribution](#) operation to underserved communities in the Australian state of Queensland.

Now the company is trying its hand at developing a network designed for the denser population and air traffic environment of New Zealand's second-largest city, Christchurch.

Though it's still fairly light on other details and timing, Swoop Aero [says](#) it is undertaking the project with municipal organization ChrischurchNZ, and will work with its urban development team. The objective of that, the company notes, is to construct a concept for **a city-wide urban air logistics network** that will be available to both businesses and individuals in the area.

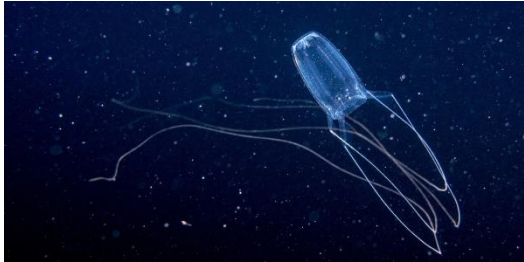
Once achieved, according to Swoop Aero, that system will be **the first full-service** drone logistics and services platform of its kind. <https://dronedj.com/2022/04/22/swoop-aero-plans-urban-drone-delivery-network-in-new-zealand/>



UAS and SmallSat Weekly News

Along with sharks, Aussie city wants drones to scan waters for deadly jellyfish

Bruce Crumley - Apr. 22nd 2022



Drones that have racked up countless hours flying above Australian beaches on watch for drowning situations and approaching sharks may soon start scanning the waters for another potentially deadly threat: box jellyfish.

While multiple Australian states have for the past few years provided lifeguard teams with drones as an aerial asset to [scan the beaches](#) and waters for trouble, the Queensland city of Mackay wants to expand use of the craft to detect groups of box jellyfish. The push comes after a 14-year-old boy died in February after being stung by one of the marine invertebrates, whose toxin is described as the most lethal of all the world's venomous creatures – provoking death in as fast as two minutes.

Mackay Mayor Greg Williamson wants to prevent future fatalities from occurring on his watch, and is urging the Surf Lifesaving Queensland lifeguard association to train operators to spot jellyfish from on high in addition to threats like sharks and saltwater crocodiles.

So why not try drones, asks Williamson. After all, the craft have long been [tested](#) by Australian researchers for spotting the large box jellyfish from above, and are now considered 90% effective in that task. Their mission is made all the easier, experts note, by the creatures tending to travel in packs as they search of food, making them even more conspicuous for whirring eyes in the sky to pick up. <https://dronedj.com/2022/04/22/along-with-sharks-aussie-city-wants-drones-to-scan-waters-for-deadly-jellyfish/#more-79697>

Zipline launches drone delivery of medical supplies in Japan with Toyota

Tsusho Bruce Crumley - Apr. 22nd 2022



Leading instant logistics specialist Zipline is expanding its geographical area of activity from existing African and US operations with new drone deliveries of medical supplies to Japan's Gotō Islands.

Zipline [said](#) its entry into Japan will come through a partnership with Toyota Tsusho Corp., a subsidiary of the eponymous automotive group. The host company will create the Sora-iina subsidiary to



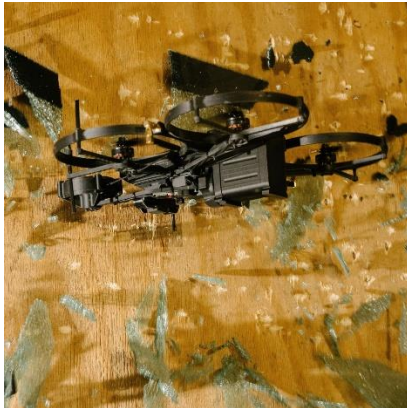
UAS and SmallSat Weekly News

manage drone deliveries of medical products to Gotō Islands hospitals and pharmacies, making it the **14th Zipline associate** to operate the company's instant logistics tech.

The pairing marks an evolution in the relationships between Zipline and Toyota Tsusho, which has been an investor in the San Francisco startup since 2018. Services will be expanded gradually across the Gotō Islands, a chain covering about 50 miles west of Kyūshū, with a population of about 50,000 people. Zipline says initial drone deliveries of medical supplies will involve roundtrip beyond visual line of sight flights of up to 40 kilometers.

With road conveyance impossible between the 140 total islands use of UAVs to assure routine distribution of medical goods is expected to cut current sea and air transport options from several, costly hours down to **30 minutes**. <https://dronedj.com/2022/04/22/zipline-launches-drone-delivery-of-medical-supplies-in-japan-with-toyota-tsusho/>

Ukraine Sounds Alarm on Chinese Drones, Opening Skies to U.S. Startups *Heather Somerville* Apr. 22, 2022



Seattle-based BRINC Drones, which has supplied Ukraine, makes a model that can break through glass.

Hovering in the sky above Ukraine are hundreds of small drones from U.S. startups, searching for survivors [in war-pummeled cities](#) and Russian hide-outs in the scarred landscape.

Those startups, including Seattle-based BRINC Drones Inc. and Silicon Valley's Skydio Inc., are rushing to fill a gap in Ukraine after government officials called out products supplied by Chinese company DJI Technology Co., the world's largest commercial drone maker, as a security risk for Ukraine's military and civilians.

BRINC since last month has donated 10 drones to Ukraine and sold approximately 50 more to aid the country's defense. Helicopter pilots and members of Ukraine's State Emergency Service are using them in their search-and-rescue and intelligence-gathering missions, Chief Executive Blake Resnick said. Skydio donated dozens of drones to equip Ukraine's Ministry of Defense, with hundreds more sold to nongovernment organizations and governments supporting Ukraine, said Chief Executive Adam Bry. The startup has a team working full time to



UAS and SmallSat Weekly News

supply Ukraine with drones. https://www.wsj.com/articles/ukraine-sounds-alarm-on-chinese-drones-opening-skies-to-u-s-startups-11650619800?mod=lead_feature_below_a_pos1

24Apr22

Mid-Missouri public safety departments use drones to help on the job Sam Olsen,
KOMU 8 Reporter Apr 19, 2022



BOONE COUNTY - Public safety departments across mid-Missouri are using drones to maximize their abilities on the job.

Rick Smith, police officer at the Ashland Police Department and Air Support Team program manager, said the program has been underway for about the past

six months or so.

"It gives us the ability to stand back, look at things from afar. We can still zoom in and get a good idea of what we're looking at when we're walking into and make better decisions and keep our officers safe."

The Boone County Fire Protection District has **nine** drones that have forward-looking infrared and night vision capabilities, according to Gale Blomenkamp, assistant chief of the BCFPD. The department uses it most often in a search for a missing person, on natural cover fires or for its mapping capabilities. The department has about 15 or 20 drone pilots.

https://www.komu.com/news/midmissourinews/mid-missouri-public-safety-departments-use-drones-to-help-on-the-job/article_c4dd17bc-bc1b-11ec-a18d-9b46098085a0.html

25Apr22

CAL Analytics to Provide Detect and Avoid Service in NY Drone Corridor Miriam McNabbon: April 24, 2022 by DRONELIFE Staff Writer Ian M. Crosby



Autonomous systems leader [CAL Analytics](#) will be incorporating its proprietary detect and avoid (DAA) service and contingency management platform into [New York's 50-mile Drone Corridor](#). The Drone Corridor, operating out of Griffiss International Airport in Rome, NY and managed by [NUAIR](#), is **one of seven** uncrewed aircraft systems test sites designated by the Federal Aviation Administration. The organizations



UAS and SmallSat Weekly News

are collaborating on a Technical Assistance program with the FAA to establish a DAA service for use in low altitude beyond visual line of sight UAS operations.

As CAL's newest UAS traffic management (UTM) service, the DAA service builds off their existing contingency management platform, which offers a range of UTM services. CAL's CMP will provide essential airspace services for the guarantee of safe UAS operation, such as situational awareness from [Kongsberg](#), conflict detection from CAL, health monitoring by [ResilienX](#), and an assortment of weather services from [TruWeather Solutions](#).

<https://dronelife.com/2022/04/24/cal-analytics-to-provide-detect-and-avoid-service-in-ny-drone-corridor/>

World's first VERTIPORT opens in Coventry: the first of more than 200 by

2027 SHIVALI BEST FOR MAILONLINE 24 April 2022



The Air-One vertiport is in Coventry and will be a hub for drones and electric vertical take-off and landing (eVTOL) aircraft, including flying cars and taxis. The site will serve as a blueprint for more than 200 vertiports planned worldwide over the next five years.

The site was chosen due to its location in the heart of the UK, with most parts of the country within four hours reach. However, Urban Air Port has ambitious plans for more than 200 vertiports worldwide by 2027. Sites are already planned in the West Midlands and London, as well as in Los Angeles, Australia, South Korea, France, Germany, Scandinavia and Southeast Asia.

Air-One was delivered in just 15 months, setting the standard for deployment globally and opening a world of possibilities for rapid response air mobility. In the future, Urban-Air Port says its vertiports will serve four key markets – flying taxis, autonomous delivery drones, disaster emergency management, and defense operations and logistics.

<https://www.dailymail.co.uk/sciencetech/article-10743751/Worlds-VERTIPORT-opens-Coventry-Air-One-serve-hub-drones-flying-taxis.html?ito=1490>

A lesson from Ukraine: counter UAS technology is still one step behind the threat April 20, 2022

The failure of Russia's advanced, layered and previously effective counter-UAS systems to deal with the relatively modest capabilities posed by Ukraine's drone forces shows there are still



UAS and SmallSat Weekly News

wide gaps [\[1\]](#) in the technical and organizational capabilities of military and civil security forces to detect, classify and deal with emerging drone threats. “The preferred solution is to deploy a network of meshed low-cost sensors of different types to provide early identification of targets and this has proved to work well in defence of static targets (and worked well for Russian forces in Syria),” according to the Guide’s author Philip Butterworth-Hayes.



For many years, directed energy weapons have been identified as the key game-changer in air defense against drones and there are now 26 C-UAS directed energy programs under way around the world – including laser-based systems. Outside the USA, France and Germany, the Middle East has recently become a global center for development and deployment of directed-energy C-UAS systems, with research and deployment taking place in Israel, Saudi Arabia, Turkey, and the United Arab Emirates. Israel is developing a “laser-wall” air defense system to protect itself from drone and missile attacks. <https://www.unmannedairspace.info/counter-uas-systems-and-policies/a-lesson-from-ukraine-counter-uas-technology-is-still-one-step-behind-the-threat/>

Ocean Alliance flying DJI M210 drones for aerial tagging of whales Bruce Crumley - Apr. 25th 2022



Marine biology researchers have for several years used drones for periodical collection of data to evaluate the health of whales, but now they’ve developed a way to pilot a DJI M210 to gently and discreetly attach electronic tags to monitor the creatures for extended periods.

That effort was detailed in a recent DJI Enterprise [blog piece](#) on marine conservation group [Ocean Alliance](#)’s partnership with the National Oceanic and Atmospheric Administration (NOAA) to enhance their method of flying drones for gathering health data on whales, and be able to use it for the tougher task of tagging the creatures for remote observation.

A team aboard a boat positions the drone above a whale they’ve spotted in the area, and when its back is exposed above the water line the pilot releases an electronic surveillance tag designed to drop down and affix itself with four suction cups on the underside.

The method is harmless, painless, and almost imperceptible to the whales. It also eliminates the previously laborious, time-consuming, and stressful process of several boats chasing the creatures until they can get close enough to manually plant tags using long poles. It similarly



UAS and SmallSat Weekly News

ensures more reliable placement of monitoring devices on whales – transmitting data on their hunting patterns, kinetics, acoustics, and social interactions – which after a few hours automatically detaches itself and is picked up by researchers for reuse.

<https://dronedj.com/2022/04/25/ocean-alliance-flying-dji-m210-drones-for-aerial-tagging-of-whales/#more-79756>

Swoop Aero expands medical drone deliveries in Mozambique healthcare trials

Bruce Crumley - Apr. 25th 2022



Mozambique's National Health Institute said the extension of the trial project will take place in the southern province of Inhambane, where flights between medical healthcare facilities in three districts will be made daily. Central to that is partner Swoop Aero's operation of fast, on-demand drone deliveries of medical supplies,

drugs, and laboratory samples.

The new Drones for Health Phase 2 is a follow-up to [previous](#) aerial trials shuttling COVID-19 and TB samples and test results between villages and labs. The initiative is designed as a multi-phase experiment aiming to establish routine drone operations in Mozambique. The initial phase took place from 2018 to 2020, and examined the advantages, negative aspects, and costs of UAV transport of lab samples compared to ground vehicles. The result determined the air option did not negatively affect the samples received by labs, while considerably speeding their travel time.

The INS says around 100,000 people will directly benefit from the extended program by accelerating the transport and processing of patient lab samples. Moreover, Swoop Aero's two-way capabilities to deliver medical supplies by drones, then use the same craft to fly matter for testing on return trips will also reduce risks of healthcare centers running low – or out – of equipment usually distributed by road vehicles. <https://dronedj.com/2022/04/25/swoop-aero-expands-medical-drone-deliveries-in-mozambique-healthcare-trials/>

What the Next-Generation Silent Drone Looks Like April 25, 2022 News



[Undefined Technologies](#), a Florida-based tech startup, has unveiled the new aesthetic design of its silent eVTOL drone powered by ion propulsion. The concept vehicle

ea | Axcel Innovation | Suffolk, VA

| 757-309-5869 | www.axcelinnovation.net



UAS and SmallSat Weekly News

named “Silent Ventus™” uses proprietary technology to fully use the ion cloud surrounding the craft to generate high levels of ion thrust in atmospheric air. Currently, the company is working towards achieving longer flight times with noise levels below 70 decibels; the next mission flight is scheduled for next month.

In December 2021, the aircraft completed [a major milestone](https://uasweekly.com/2022/04/25/what-the-next-generation-silent-drone-looks-like/?utm_source=rss&utm_medium=rss&utm_campaign=what-the-next-generation-silent-drone-looks-like&utm_term=2022-04-25) achieving a significant increase in lifting power and mission time. The technology uses innovative physics, making it viable to use ion propulsion in atmospheric conditions with superior performance of up to 160% compared to current ion thruster technologies. https://uasweekly.com/2022/04/25/what-the-next-generation-silent-drone-looks-like/?utm_source=rss&utm_medium=rss&utm_campaign=what-the-next-generation-silent-drone-looks-like&utm_term=2022-04-25

Aergility to Unveil ATLIS Hybrid Cargo VTOL UAV April 21, 2022



The result of years of development and testing, the innovative drone uses the company’s patented Managed Autorotation technology to carry **400-500 pounds** of cargo straight to the point-of-need **300 to 600 miles** away.

The UAV uses six fixed-pitch, **nine-foot diameter** electric rotors for takeoff and landing. Forward propulsion is handled by a 90 kW multifuel turboprop engine, which also recharges the batteries for the rotors in flight. In forward flight, lift is provided by a small cord wing and airflow through the rotors like an autogyro. Managed autorotation enables ATLIS to maintain lift and flight control by varying rotor RPMs while still drawing net zero battery power. Cruising speed is 100 miles per hour.

ATLIS is designed to provide time-critical delivery of cargo straight to the point-of-need in places with undeveloped, limited, or damaged infrastructure. The internal cargo bay is 40 cubic feet, and the tail opens for easy loading and unloading.

https://uasweekly.com/2022/04/21/aergility-to-unveil-atlis-hybrid-cargo-vtol-uav-at-xponential-2022/?utm_source=rss&utm_medium=rss&utm_campaign=aergility-to-unveil-atlis-hybrid-cargo-vtol-uav-at-xponential-2022&utm_term=2022-04-25

26Apr22

Manna in the U.S.: Irish Drone Delivery Service Plans Slow Rollout this

Year Miriam McNabb April 25, 2022 By Jim Magill



UAS and SmallSat Weekly News



The company, founded in 2018, currently makes food deliveries to two cities in Ireland and is authorized by European Union regulators to expand its services to other countries in Europe. But the big prize for the company will be to get a toehold in the fast-growing U.S. drone delivery market, said Andrew Patton,

CEO of US Manna's U.S. business.

Manna, which claims to operate the largest and most advanced drone delivery operation in Europe launched its operations in a small village in Ireland delivering medicines and food at the height of the global COVID-19 pandemic.

In Ireland, the company currently operates in suburbs of the cities of Dublin and Galway, delivering to more than 45,000 people, making more than 160 deliveries per day, according to a company spokesman. Manna uses custom-built aerospace-grade quadcopter drones to deliver food directly to consumers' homes. <https://dronelife.com/2022/04/25/manna-in-the-u-s-irish-drone-delivery-service-plans-slow-rollout-this-year/>

TCab Tech successfully completed transition flights with the 50% subscale demonstrator Apr. 15, 2022

SHANGHAI, April 15, 2022 /PRNewswire/ -- In 2022 TCab Tech is steadily pushing forward their E20 eVTOL development. During the first quarter of the year, they completed many tilt-rotor transition flights with the E20 50% subscale demonstrator.



Vertical Take-off in Multi-Rotor Mode

Transition by Tilting Rotors

Cruise in Fixed-Wing Mode

The demonstrator features 6-meter wingspan, 2 lift rotors and 4 tilt-rotors. Like the E20, the demonstrator uses 6 rotors in VTOL and transits to 4 rotors

in cruise. The 2 lift rotors are switched-off and locked during cruising flight. Being the first passenger-carrying eVTOL company in China employed with vectored thrust configuration, the 50% subscale demonstrator is by far one of the largest eVTOL demonstrators in China.

<https://markets.businessinsider.com/news/stocks/tcab-tech-successfully-completed-transition-flights-with-the-e20-evtol-50-subscale-demonstrator-1031358902>



UAS and SmallSat Weekly News

NASA To Install Batteries in e-Aircraft Demonstrator Chad Trautvetter April 25, 2022



NASA's electric experimental aircraft, the X-57 "Maxwell," is nearing the end of ground tests and being prepared for the installation of batteries, the agency said late last week. Slated to fly by year-end, the X-57 is a modified Tecnam P2006T that replaces its two Rotax gasoline-powered engines with **14 leading-edge-mounted electric motors**.

According to NASA, the project is a research platform to build confidence in cleaner and more energy-efficient aircraft. Under the project, the agency will test and determine the airworthiness of electrified aircraft technologies, including battery technology, electric motor capabilities, and distributed electric propulsion.

"The X-57 project has made substantial contributions to the field of electric aircraft propulsion as an initial pathfinder building a knowledge base of expertise that is influencing industry standards and contributing to future electric vehicle demonstrations," said Heather Maliska, the X-57 project manager at NASA's Armstrong Flight Research Center in Edwards, California.

Lessons learned from the X-57 project are already being shared with industry and academia to develop pathways for future electric aircraft, NASA said. <https://www.ainonline.com/aviation-news/business-aviation/2022-04-25/nasa-install-batteries-e-aircraft-demonstrator>

White House seeks more power to counter use of drones AAMER MADHANI yesterday



WASHINGTON (AP) — The Biden administration is calling on Congress to expand authority for federal and local governments to take action to counter the nefarious use in the U.S. of drones.

The White House on Monday released an action plan that calls for expanding the number of agencies that can track and monitor drones flying in their airspace. It calls for establishing a list of U.S. government-authorized detection equipment that federal and local authorities can purchase and creating a national training center on countering the malicious use of drones.

The White House said it was critical that Congress "adopt legislation to close critical gaps in existing law and policy that currently impede government and law enforcement from protecting the American people and our vital security interests."



UAS and SmallSat Weekly News

The federal-government-wide focus comes as the Federal Aviation Administration projects that more than 2 million drones will be in circulation in the U.S. by 2024 and as availability of detection and mitigation technologies — including jamming systems — are limited under current law. <https://apnews.com/article/technology-business-federal-aviation-administration-congress-90c34d902cacb04d0d7369356d9706c1>

Drone delivery could be poised to take off in the United States from Arstechnica By TIMOTHY B. LEE



Earlier this month, Google’s sister company, Wing, began [offering a drone delivery service](#) in the Dallas suburbs of Frisco and Little Elm. Wing drones take off from “nests” in two Walgreens parking lots to deliver things like health products or ice cream to nearby customers. Wing describes it as “the first-ever commercial drone delivery service in a major US metropolitan area.”

Walmart has been [running](#) its own drone delivery service near its Bentonville, Arkansas, headquarters since November. Walmart delivers a range of products to customers within a 1.5-mile radius of two Walmart stores. The service will soon expand to a third Walmart store in the same corner of Arkansas.

Meanwhile, Amazon’s drone efforts got some [unflattering press coverage](#) last week. Bloomberg reported on a drone crash at an Amazon test facility in Oregon. No one was injured, but the story underscores the fact that Amazon has yet to launch a commercial drone delivery service in the United States.

The Wing and Walmart services are still limited, with each service initially designed to perform around 100 deliveries per day. But drone delivery is finally moving beyond the research-and-development phase. Wing and Walmart are using drones to deliver real merchandise to real customers. The question is how quickly they can scale up—and how many other companies can follow their lead. <https://www.startwheel.org/2022/04/19/how-walmart-and-alphabet-jumped-ahead-of-amazon-in-drone-delivery/>



UAS and SmallSat Weekly News

Wild heavy-lift cargo UAV debuts @AUVSI, uses gyrocopter principle for lift Scott

Simmie - Apr. 26th 2022



The Aergility ATLIS is billed as a long-range, heavy lift VTOL cargo UAV; its manufacturer claims it will be able to carry **500 pounds over 300 miles**. This VTOL-style fixed-wing craft has an unusual design feature that sets it apart from the crowd, utilizing the principle of a gyrocopter for lift while in forward flight.

At their simplest, a gyrocopter has a blade similar to a helicopter blade – except it is not attached to a motor. Thrust is from a pusher or puller prop that pulls the vehicle forward on the ground. As airflow moves over the chopper-style blade, it begins to autorotate, and that autorotation produces lift – very much like a wing.

The ATLIS has a total of seven propellers. A multiple turboprop on the front supplies propulsion.



So that motor provides forward thrust. But unlike a traditional gyrocopter, which requires forward movement on the ground to get those overhead blades auto-rotating, the ATLIS uses electrical power to gain lift from six large blades powered by electrical motors. Once it's in the air, the multi-fuel motor kicks in for forward flight.

For takeoff, a minimal number of batteries power the rotors to lift ATLIS off the ground. Managed Autorotation Technology (MAT) allows us to achieve transitionless flight from hover to forward flight, with battery power tapering to zero. The tractor propeller provides propulsion, and lift is efficiently managed by a small-chord wing and fixed-pitch rotors in managed autorotation. <https://dronedj.com/2022/04/26/wild-heavy-lift-cargo-uav-debuts-auvsi-uses-gyrocopter-principle-for-lift/>



UAS and SmallSat Weekly News

27Apr22

TWO AMERICAN DRONES JOIN DIU'S BLUE UAS CLEARED LIST April 21, 2022 Sally French



Drones from Washington-based Freefly Systems, and Kansas-based AgEagle Aerial Systems both scored approvals on the list this spring.

Drones with Blue sUAS Cleared status have met criteria developed by the DoD for U.S. government procurement and have gone through many testing, evaluation, and demonstration programs. Among those: a cyber-security evaluation, a policy compliance check, and administrative documentation.

The Blue UAS Cleared List provides a common DoD approval standard that can save the U.S. Government time and money, inform acquisition policy updates, and increase access to commercial technology.

The DoD (and other federal partners) are only supposed to use approved drones on the list. Some private companies — particularly those that fly for government contracts — choose specifically to only fly drones on the Blue UAS Cleared list.

There are two new drones to choose from: the [Freefly Alta X](#) and the Sensefly eBee TAC. The eight drones on the [DIU's Blue UAS Cleared list](#) are:

- [Freefly Alta X](#)
- Sensefly eBee TAC
- Skydio X2D
- FLIR ION M440
- Parrot Anafi USA GOV
- Parrot Anafi USA MIL
- [Teal Golden Eagle](#)
- Vantage Robotics Vesper

Many more companies are working to build drones that will ultimately earn a spot on the list. There are 11 companies, in fact, that are close. <https://www.thedronegirl.com/2022/04/27/two-american-drones-join-dius-blue-uas-cleared-list/>



UAS and SmallSat Weekly News

Air-One eVTOL Transportation Hub Makes Debut in UK Charles Alcock April 26, 2022



Urban-Airport and eVTOL developer Supernal yesterday unveiled in the UK a **fully functional** example of a “multimodal infrastructure hub” to support eVTOL and drone operations. The Air-One facility—installed at the heart of the English city of Coventry—will be open for viewing by the public from April 28 through May 15.

The partners intend to move the Air-One unit to other cities worldwide as part of an ongoing campaign to increase understanding of advanced air mobility. The 17,000-sq-ft structure, which took 11 weeks to assemble, is divided into zones, including a fully equipped passenger lounge, café, pop-up retail store, cargo logistics hub, aircraft recharging facilities, and hangar. It also has security screening equipment and a command-and-control center for flight operations.

The display in Coventry also features a mockup of the four-passenger SA-1 eVTOL that Supernal aims to have ready to start commercial services by 2028. The U.S.-based company is a subsidiary of South Korean automaker Hyundai.

Supernal started working with Urban-Air Port in 2020. The hopeful eVTOL manufacturer also has partnerships with the cities of **Miami and Los Angeles** to develop plans for advanced air mobility services. <https://www.ainonline.com/aviation-news/business-aviation/2022-04-26/air-one-evtol-transportation-hub-makes-debut-uk>

PredaSAR nears first launch of its radar imaging constellation Sandra Erwin April 26, 2022



DENVER – Radar imaging startup PredaSAR is preparing to deploy its first satellite on the SpaceX Transporter 6 rideshare projected to launch in October.

The company is planning a constellation of **96 radar** satellites “to be fully deployed by the end of 2026,” Michael Moran, senior vice president of defense and

intelligence systems at Terran Orbital Corp., told *SpaceNews*.

Founded in 2019, PredaSAR will be joining the competitive market for synthetic aperture radar which is now gaining attention as a growing number of commercial SAR satellites collect



UAS and SmallSat Weekly News

imagery over Ukraine. Unlike visible spectrum imagery, SAR penetrates clouds, bad weather and can see at night. This capability is useful when monitoring Ukraine which is covered by clouds most of the time, Moran noted. <https://spacenews.com/predasar-nears-first-launch-of-its-radar-imaging-constellation/>

SubSonex-Based Unmanned Twin-Jet Revealed as Low-Cost Military UAV Mark Phelps April 26, 2022



Fans of Sonex Aircraft will find familiarity in the latest jet-powered unmanned air vehicle (UAV) released today at the AUVSI Xponential convention in Orlando. Warminster-Pennsylvania-based Navmar Applied Sciences Corporation (NASC) has partnered with Oshkosh, Wisconsin-based Sonex on a twin-engine version of its SubSonex Personal Jet kitplane. Known as the NASC Tracer, the newly announced aircraft is

described as “a low-cost, high-performance UAV designed for speed, versatility and survivability.”

The Tracer and its co-developed Mobile Operations Center offer the Department of Defense and civilian customers “a high-speed and reliable platform for the development and testing of various technologies,” said NASC. Bryan Hazlett, VP of the company’s UAS sector.

NASC cites the airframe’s multiple payload locations, including potential for under-wing and centerline pods and within a nose radome enabling “a wide variety of advanced payload systems.” The Tracer’s 18-foot wingspan and light weight (max takeoff weight less than 1,500 pounds) generates a much smaller footprint than traditional, larger UAVs.

“The field-maintainable aircraft is intended for a wide range of operations including Manned-Unmanned Teaming, reconnaissance, counter-UAS, communication relay, insertion into contested airspace, electronic warfare, research and development, and military training activities.” [https://www.avweb.com/aviation-news/subsonex-based-unmanned-twin-jet-revealed-as-low-cost-military-](https://www.avweb.com/aviation-news/subsonex-based-unmanned-twin-jet-revealed-as-low-cost-military-uav/?MailingID=904&utm_source=ActiveCampaign&utm_medium=email&utm_content=SubSonex-Based+Drone%2C+Plane-Swap+Gone+Half+Bad&utm_campaign=SubSonex-Based+Drone%2C+Plane-Swap+Gone+Half+Bad%2C+Wednesday%2C+April+27%2C+2022)

[uav/?MailingID=904&utm_source=ActiveCampaign&utm_medium=email&utm_content=SubSonex-Based+Drone%2C+Plane-Swap+Gone+Half+Bad&utm_campaign=SubSonex-Based+Drone%2C+Plane-Swap+Gone+Half+Bad%2C+Wednesday%2C+April+27%2C+2022](https://www.avweb.com/aviation-news/subsonex-based-unmanned-twin-jet-revealed-as-low-cost-military-uav/?MailingID=904&utm_source=ActiveCampaign&utm_medium=email&utm_content=SubSonex-Based+Drone%2C+Plane-Swap+Gone+Half+Bad&utm_campaign=SubSonex-Based+Drone%2C+Plane-Swap+Gone+Half+Bad%2C+Wednesday%2C+April+27%2C+2022)



UAS and SmallSat Weekly News

Hundreds of autonomous drones to monitor Florida electric utility Ishveena Singh - Apr. 27th 2022



Florida Power & Light has tied up with drone-in-a-box solutions provider Percepto for what is being hailed as “**the largest commercial autonomous drone project in the world.**”

The plan is to deploy **13** autonomous drones initially, **with hundreds more getting added** to the network over the next five years. The drones in operation across the state will be coordinated on a single platform through Percepto’s Autonomous Inspection and Monitoring solution, which was named one of the [100 Best Inventions of 2021](#) by *Time* magazine.

These drones will ensure that the state’s electrical infrastructure is monitored constantly, providing residents with more reliable service with power back online faster after outages. It works in FPL’s favor that Percepto’s drone-in-a-box solution has passed Level 5 hurricane testing at a wind speed of up to 155 mph.

The electric utility has been working with the Israeli drone manufacturer since 2018. The two companies have collaborated closely to develop optimized drone monitoring solutions and build consensus and compliance with FAA regulations. The FAA, meanwhile, has issued a nationwide waiver for FPL to fly Percepto drones for surveillance and inspection purposes at sites owned and serviced by FPL. <https://dronedj.com/2022/04/27/percepto-autonomous-drones-florida-utility/#more-79938>

Chinese drone-maker suspending operations in Russia, Ukraine MONIQUE BEALS - 04/27/22



Chinese drone-maker DJI announced on Tuesday that it will temporarily suspend its operations in Russia and Ukraine.

DJI directly said that the decision was an effort to reassess sales compliance “in light of current hostilities.” A company spokesperson told Chinese media that the pause was “not a statement targeting any particular country but rather a statement about our principles,” [The Washington Post](#) reported.



UAS and SmallSat Weekly News

Ukrainian officials previously accused DJI of leaking information about its military to Moscow, though the company has denied those claims categorically, [Reuters reported](#). The company says it **opposes any military use** of its products. <https://thehill.com/policy/international/3467506-chinese-drone-maker-suspending-operations-in-russia-ukraine/>

29Apr22

Airbus, ITA Airways to Partner on eVTOL Work in Italy Gregory Polek April 27, 2022



The CityAirbus NextGen eVTOL vehicle features a fixed-wing structure and eight electrically powered propellers

Airbus and Alitalia successor ITA Airways have signed a memorandum of understanding to collaborate on urban air mobility (UAM) in Italy, the companies said Wednesday. The

agreement calls on the companies to recruit local partners to participate in the launch of operations with the CityAirbus NextGen eVTOL aircraft, now under development. The parties also agreed to identify pilot cases with the goal of securing public acceptance of UAM by local communities.

Alfredo Altavilla, chairman of ITA Airways, said “With this agreement, our partnership expands to the segment of urban air mobility for a wider, customer-centric, innovative, and sustainable offer for our customers.”

A fully electric vehicle equipped with fixed wings, a V-shaped tail, and eight electrically powered propellers, the CityAirbus NextGen would carry up to four passengers to a range of 80 km and a cruise speed of 120 km/h. A team led by Airbus Helicopters last September announced plans to **fly the first prototype in 2023** and earn type certification in 2025. Building on extensive flight trials with the CityAirbus and Vahana technology demonstrators, Airbus intends to certify the CityAirbus NextGen under EASA’s Special Conditions-VTOL rules.

<https://www.ainonline.com/aviation-news/air-transport/2022-04-27/airbus-ita-airways-partner-evtol-work-italy>