



UAS and SmallSat Weekly News

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EVTOL Company Jetson Set to Close \$10 M Seed Round With +\$8M Secured

October 14, 2022 News



Jetson is currently the **only** eVTOL company on the market that can provide a commercially available **personal electric aviation vehicle**. The demand for the Jetson ONE has been phenomenal, supporting the company's dream to 'make everyone a pilot'.

"Our mission at Jetson is to democratize flight and make the skies available to everyone. We achieved fantastic results during our first investment round. We will now go full speed ahead with mass production, R&D and hiring top talent to bring our vision to reality." – Peter Ternström, Jetson co-founder and President

The lead investors in the \$10M seed round are global tech operators. Luca Spada, Nik Robinson and Rikard Steiber. They all share a passion for flight and are pioneers in their respective fields.

Luca Spada, Founder and CEO of [EOLO](#). Will be joining the Board of Directors together with the founders. EOLO is an Italian operator that manages one of the largest Fixed Wireless Access Networks in the World.

"Flying has always been one of mankind's greatest dreams. The technology that is developing with drones will open scenarios of exciting epochal changes in people's transport. Tomasz and Peter had a brilliant vision with Jetson and I am fully convinced that the Jetson ONE will be the forerunner of a new generation of both recreational and business vehicles." – Luca Spada, Eolo CEO and Founder.

The Jetson ONE [official launch movie](#), published on the 21st of October 2021, became an instant media hit with 15 million YouTube views. In less than a year, the 'Flying Formula 1 Car' has garnered over 40 million views on [YouTube](#). Jetson has **sold over 400 units**, with thousands of purchase requests during the same period. https://uasweekly.com/2022/10/14/evtol-company-jetson-set-to-close-10-m-seed-round-with-8m-secured/?utm_source=rss&utm_medium=rss&utm_campaign=evtol-company-jetson-set-to-close-10-m-seed-round-with-8m-secured&utm_term=2022-10-14



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Verizon received the IS-BAO registration for best practices for its commercial drone program October 10, 2022



NEW YORK – Verizon received the International Standards for Business Aircraft Operations ([IS-BAO](#)) registration for best practices for its commercial drone program. Verizon is the **first** corporate drone program to achieve the IS-BAO registration for its drone operations and only the second drone operator in the U.S. to receive the registration. The independent audit

validates the high safety and governance standards of Verizon’s drone program and provides the opportunity to expand future drone operations into more complex areas, such as flights beyond visual line of sight.

Verizon utilizes drones across several critical business functions including support of its network. Since the program’s inception in 2017, there have been more than 17,000 flights that total over **4,000 flight hours**. Verizon’s drones fly in every season to perform network testing and performance monitoring. The drones collect imaging in conjunction with software that creates 3D models of the infrastructure, which enables more efficient and rapid network deployment upgrades and infrastructure inspection. Instead of having an engineer climb a tower or a rooftop, the engineer can use a drone to perform those inspections. By flying a drone, the work is done more quickly, safely and more inspections can be done in a day, accelerating the progress of the work. Verizon also uses its drones to rapidly restore its customer’s ability to access Verizon’s network when natural disasters strike.

<https://www.legendaryleadersininnovation.com/feeds/328/results/d3f310702ac9013b8c8a0242ac11002>

EHang’s air taxi demos aid UAM U-Space development in the EU Bruce Crumley - Oct. 14th 2022



[EHang said](#) its EH216 air taxi prototype performed without hitches during a session in Spain of the “Air Mobility Urban – Large Experimental Demonstration” (AMU-LED) project, one of the EU’s largest programs to feature, test, and advance [UAM craft and services](#) toward launch. The series



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of outings were held at a Galician research center of Spain's National Institute of Aerospace Technology and fulfilled Concepts of Operations requirements that met objectives stipulated under the AMU-LED project.

To do so, the flight data of [EHang's autonomously operated EH216](#) air taxi was entered into the tech platform managing the surrounding [UAM airspace](#) for monitoring and guidance during the demonstrations. The craft safely and effectively negotiated a series of simulated scenarios likely to be encountered during actual service, including the presence of other uncrewed craft in the same U-Space. In response, the EH216 successfully executed conflict management procedures during cruising and approach to the designated [vertiport](#) for landing. <https://dronedj.com/2022/10/14/ehang-air-taxi-uam/>

Turkish Drone Strategy in the Black Sea Region and Beyond Can Kasapoglu *October 12, 2022*



Geopolitically, Turkey is a game-changer. Without Turkey being a member of the North Atlantic Treaty Organization (NATO), the transatlantic Alliance would have had a truly different “mapping” of its surrounding environment. Such a “different mapping” would, quite negatively, pertain to a broad array of agendas, ranging from anti-ISIS operations to the Black Sea correlation of forces and the ability to pursue crisis management operations beyond NATO's frontiers.

Turkey has become the primary armed drone seller to the Ukrainian military with a recent combat record in Donbas. The Ukrainian drone strikes in Donbas and Turkish unmanned systems mushrooming in Eastern Europe and the South Caucasus have further complicated Turkish-Russian relations.

The Turkish Armed Forces remain **one of the most “dronized” militaries within NATO**. In Francis Fukuyama's words, “it seems Turkey's use of drones is going to change the nature of land power in ways that will undermine existing force structures”[\[1\]](#). More importantly, the Syrian, Libyan and Karabakh fronts have visibly showcased the superiority of Turkish robotic warfare solutions over Soviet- and Russian-manufactured conventional arms.

The Turkish administration does not only sell drones in an off-the-shelf fashion. Instead, Turkey sparks drone warfare ecosystems abroad, cementing its alliances through robotic warfare



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transactions. https://jamestown.org/program/turkish-drone-strategy-in-the-black-sea-region-and-beyond/?mc_cid=b8392db7a5&mc_eid=ebaf32c0df

Japan to deploy attack drones as early as 2025 • JJI Oct 16, 2022



A model of Feihong's FH-97 reconnaissance and attack drone is displayed at the China International Aviation and Aerospace Exhibition in Zhuhai, Guangdong province, China, in September 2021. | REUTERS

The Defense Ministry plans to deploy small attack drones in a bid to strengthen the defense of the nation's remote islands. The ministry will prepare for the deployment, introducing U.S.-made and other drones in fiscal 2023 on a trial basis. It aims to deploy **several hundred** attack drones from fiscal 2025 at the earliest.

The ministry assumes that attack drones would be used for "suicide" attacks, crashing into enemy vehicles and vessels coming to invade remote Japanese islands. Such drones are expected to enhance the deterrent power of the country's Self-Defense Forces.

Japan has introduced the Global Hawk large surveillance drone and started to operate drones for disaster relief missions. But no attack drone has been deployed.

<https://www.japantimes.co.jp/news/2022/10/16/national/japan-attack-drones/>

17Oct22

Volatus Acquires Synergy Aviation: More than 500,000 km of Pipeline

Surveillance Miriam McNabb October 15, 2022



Today, [Volatus Aerospace](#) announced that it has signed an agreement to acquire [Synergy Aviation](#), a move that will strengthen Volatus' position in the oil and gas industry in Western Canada. The combination of Synergy's industry leadership with Volatus' drone technology solutions will give Volatus a major edge in introducing new remotely operated drone solutions to meet regulatory and asset monitoring needs.

"There are nearly **5 million kilometers of oil & gas pipeline in North America** requiring annual inspections and, in many cases, weekly patrols to meet regulatory and asset management requirements," said Synergy Aviation President Todd Tkach. "Becoming part of Volatus gives us



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the added geomatics capabilities, market reach, and the opportunity to disrupt traditional methods in this sector.”

Over the first nine months of 2022, Synergy recorded unaudited revenues of \$7 million with 14% earnings and targeted year end revenues of **\$9 million**. The new agreement will see Volatus make a **\$2.29 million equity investment** in Synergy Aviation over the course of 10 months from closing on October 31st in exchange for newly issued shares representing 51% of all outstanding shares. <https://dronelife.com/2022/10/15/volatus-acquires-synergy-aviation-more-than-500000-km-of-pipeline-right-of-way-surveillance/>

Chesapeake Police Dept. takes operations sky high, expanding drone technology

Allison Bazzle September 12, 2022



CHESAPEAKE, Va. — Police are using eyes in the sky to try to improve public safety across Hampton Roads.

In the last few years, city officials budgeted for drone technology to help police officers fight crime.

Recently, the [Chesapeake Police Department](#) added to its fleet.

“Prior to drone technology, unless you had a helicopter, which we don’t, there was really no way to get that aerial view,” said Master Police Officer Leo Kosinski.

The department’s Unmanned Aircraft Systems Team is made up of **eight drones** of various sizes and **15 officers**. Kosinski said they use drones to analyze crash scenes from the sky and during search and rescue operations.

“The drone can go several hundred feet and has a zoom camera so we can really search a large area with minimal effort from the air,” Kosinski said.

<https://www.13newsnow.com/article/news/crime/chesapeake-police-department-drone-technology/291-296933f8-11e1-4af5-bb65-85ee02771dd9>



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Oil and gas industry to drive global drone market Bella Weetch, Editorial Assistant
Hydrocarbon Engineering, 06 October 2022



The global drone market is set to grow from \$13.7 billion in 2021 to **\$89.6 billion in 2030**. The **market share** of commercial drones is expected to increase from 34% to **64%** during the period, aided by significant adoption in the oil and gas industry.

GlobalData's latest report, "Drones in Oil & Gas," reveals that the recent regulatory changes across key markets have boosted the scope for drone deployment in the oil and gas industry. The March 2022 US Federal Aviation Administration (FAA) update on beyond visual line of sight (BVLOS) drones is expected to benefit drone manufacturers as well as industrial users in the country. It might provide an impetus to technology development, especially in BVLOS drones.

Ravindra Puranik, Oil and Gas Analyst at GlobalData, comments: "BVLOS offers extended coverage by expanding the purview of drones beyond the visibility of the operator. Earlier, BVLOS capabilities of the drone were seldom utilized for commercial deployment due to regulatory skepticism towards potential incursions."

In the oil and gas industry, drones are being deployed for a variety of applications, including the inspection of offshore platforms, refining equipment, leak detection in midstream assets, emergency response, and material handling.

https://www.hydrocarbonengineering.com/refining/06102022/oil-and-gas-industry-to-drive-global-drone-market/?utm_campaign=InnovateEnergy%20Content&utm_medium=email&_hsmt=229944490&_hsenc=p2ANqtz-8WyzjBdXU-tGQfhRrxLq45XDibLH8Jk6Wg7F_TplktsF4raLjorZs8d-M_imZDNclnrqhMwscg-X115XyzeJLR8xfg&utm_content=229944490&utm_source=hs_email

What is known about the Iranian-made drones that Russia is using to attack Ukraine Austin Ramzy Oct. 17, 2022

Russia has used the drones to strike on the battlefield and in Ukrainian cities. Their use may be a sign that Moscow is running low on precision-guided weapons.



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Pedestrians walked past wreckage from an explosive drone attack in Kyive on Monday. Brendan Hoffman for The New York Times

Russia's use of the devices, which first [appeared in Ukraine](#) about two months ago, is considered to be a sign that it is running low on precision-guided weapons, analysts say.

The drones have allowed Russia to strike energy infrastructure and civilian targets, even as it loses ground on the battlefield in the northeast and south of the country.

Iran's Shahed-136 is a "kamikaze" drone, so-called because it dives from high in the sky toward its target and explodes on impact. It has a triangular wing, carries a warhead of about 80 pounds and is launched from the back of a truck. The drones have a reported range of up to 1,500 miles. But they are also slow-moving, noisy and fly at a low altitude. Britain's Ministry of Defense [said last week](#) that those characteristics make them "easy to target using conventional air defenses."

While military experts agree that Ukraine's record of shooting down missiles has been good, Britain's Ministry of Defense added that there is "a realistic possibility that Russia has achieved some success" by attacking with several drones at the same time.

<https://www.nytimes.com/2022/10/17/world/europe/russia-ukraine-iran-drones.html>

Delta, Joby Aviation Partner to Pioneer Home-to-Airport Transportation to Customers

October 16, 2022 News



Delta Air Lines is once again deepening its commitment to transform the future of travel: the airline is embarking on a multi-year, multi-market commercial and operational partnership with Joby Aviation, Inc., to deliver transformational, sustainable home-to-airport transportation service to Delta customers, beginning in New

York and Los Angeles.

As part of the **first-of-its-kind arrangement**, the companies will work together to integrate a Joby-operated service into Delta's customer-facing channels, providing customers who travel with Delta through New York and Los Angeles the opportunity to reserve a seat for seamless, zero-operating-emission, short-range journeys to and from city airports when booking Delta travel.



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Delta has made an **upfront equity investment of \$60 million** in Joby, with the opportunity to expand the total investment up to **\$200 million** as the partners achieve milestones on the development and delivery of the service. The partners will work to create a differentiated, premium experience for Delta customers featuring seamless booking, simplified transit and greater time savings. This will run alongside Joby's standard airport service in priority markets. The partnership will be mutually exclusive across the U.S. and U.K. for five years following commercial launch, with the potential to extend that period.

https://uasweekly.com/2022/10/16/delta-joby-aviation-partner-to-pioneer-home-to-airport-transportation-to-customers/?utm_source=rss&utm_medium=rss&utm_campaign=delta-joby-aviation-partner-to-pioneer-home-to-airport-transportation-to-customers&utm_term=2022-10-17

Manna drone delivery CEO Bobby Healy discusses EU, US expansion Bruce Crumley - Oct. 17th 2022



Tech entrepreneur Bobby Healy's objective is as simple as it is enormous. He wants to use the momentum he's created establishing [Manna Aero](#) as [Ireland's](#) hottest aerial tech business to transform it into the biggest and best [drone delivery](#) company on the planet. And to do that, he's readying its launch across the European Union in the coming months, with the US following hard on that.

After founding the company in 2018, Healy spent the past three years introducing and improving [Manna's drone delivery](#) services in limited Irish locations and perfecting the model he's now moving to scale and export. To do so, he's preparing rollouts in several EU markets next year, concurrent with work in the US to attain certification of the ZX UAVs the company manufactures – the sine quo for launching [last-mile aerial services](#) in North America.

Central to the goal of becoming Master of the Universe – by way of [Dublin suburb Balbriggan](#) – are Healy's paired convictions: That by considerably benefiting businesses and consumers alike, [drone delivery](#) is a growth-assured, can't-miss service – so long as it's deftly developed – and that both he and Manna are in just the right place and time to use [drone-friendly EU](#) regulations that Ireland additionally enhances to expand the activity internationally and scale it rapidly.

A trained programmer and video game creator who went on to found, build, and sell successful travel sector businesses – including thriving CarTrawler – Healy says that experience, along with the current landscape he sees in Europe, convinced him that Manna and its **growing staff of 103** are in an ideal spot to become the world drone deliver champ – and not despite being in a



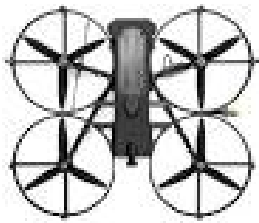
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small [market like Ireland](#), but because of it. <https://dronedj.com/2022/10/17/manna-drone-delivery-eu/>

18Oct22

The BRINC Ball is Changing Outcomes in Crises for Police and First Responders

Miriam McNabb October 17, 2022



[BRINC](#) is best known for its LEMUR drone designed to de-escalate crises and improve outcomes for SWAT teams and police.

LEMUR is a flying cell phone, enabling two-way communications between police and suspects. Two-way communication is proven to dramatically improve outcomes of SWAT engagements.



Now, the company has gone beyond drone hardware with the BRINC Ball – a communications tool enclosed in a nearly indestructible ball form, one that can be thrown into a suspect’s environment, or into the rubble of a damaged building to communicate with survivors.

The company describes the BRINC Ball as a “next gen throw phone.” Whatever you call it, it’s incredibly effective.

“Ever since we introduced the BRINC LEMUR drone, we’ve been hearing about the challenges first responders face when attempting to communicate with suspects,” said Blake Resnick, CEO of BRINC. “We designed BRINC Ball from the ground up to offer a durable, reliable, and flexible tool to aid the first responder community in negotiation, communication, and de-escalation.”

The BRINC Ball is water resistant and durable, tested to survive 10-foot drops onto concrete. Battery life is similarly extreme, with 24 hours of sustained talk time, or over 5 days of standby time. <https://dronelife.com/2022/10/17/the-brinc-ball-is-changing-outcomes-in-crises-for-police-and-first-responders/>

Professional Drone with Thermal and Visible Camera Payload

SIRAS is an affordable, easy-to-fly, IP54-rated professional drone with an interchangeable payload system for industrial and utilities inspection, firefighting, law enforcement, and search and rescue missions. With front collision avoidance, hot swappable batteries, a 31-minute flight



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time, and no restrictive geofencing, professional UAV pilots can fly safely when and where the mission demands.

The quick-connect Vue® TV128 payload features patented MSX® technology, adding visible-light outlines to thermal imagery to provide critical information in real time. The 16MP visible camera delivers clear, pinpoint details with a 128x zoom. A 640x512-pixel, radiometric FLIR Boson® provides sharp thermal imagery, 5x digital zoom, accurate temperature-measurement, and compatibility with

FLIR Thermal Studio™ analysis software.

Designed for data security, SIRAS stores imagery on an onboard microSD card and does not include cloud connection capability. To further protect data chain of custody, pilots are not required to create an online profile, increasing ease of use and reducing potential unintended online data access. SIRAS provides best-in-class imagery, mission flexibility, secure data, and compatibility with the leading photogrammetry software enabling the pros to get the job done. \$9,695.00

https://www.flir.com/products/siras/?utm_source=commercialuav&utm_medium=eblast&utm_campaign=americas.us.oem.uas.l.eb.dhx.siras-launch

EU warns Iran more sanctions likely over alleged drone supplies to

Russia [Alexandra Brzozowski](#) | [EURACTIV.com reporting from Luxembourg](#)



Iran-made Shahed-136 drones

EU foreign ministers in Luxembourg reached an in-principle consensus on sanctioning Tehran if hard evidence is found it supplied Shahed 136 ‘kamikaze’ drones to Moscow.

According to Ukrainian officials, Russia has increasingly deployed said Iranian drones to target infrastructure across Ukraine in recent weeks. Iran says it has not sent any drones to Russia since Moscow’s invasion of Ukraine and the Kremlin has not commented.

Several member states’ ministers were more direct in attributing the drone use, calling for more action against Iran over the “obvious” involvement in the war. Drones captured nearly intact by the Ukrainian army reportedly show that these are indeed Shaheed-136 made in Iran.



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Additional EU sanctions on Iran will not be limited to blacklisting some individuals should Tehran's involvement in Russia's war on Ukraine be proven, Luxembourg's Foreign Minister Jean Asselborn said.

Both parties to the 2015 Iran nuclear deal, France and Germany have said they believe new sanctions over the drone supplies are necessary. <https://www.euractiv.com/section/global-europe/news/eu-warns-iran-more-sanctions-likely-over-alleged-drone-supplies-to-russia/>

New AI-Powered VTOL UAS with 5G & BVLOS Capabilities Mike Ball / 13 Oct 2022



[Sky-Drones](#) has launched SkyLane, a new VTOL UAS (unmanned aerial system) platform that has been designed from the ground up for long-endurance and beyond visual line of sight operations. The aircraft can be equipped with a wide variety of sensors and payloads and is ideal for inspection, surveillance, and mapping, as well as cargo delivery.

[SkyLane](#) is powered by Sky-Drones' AIRLink unit, incorporating an AI mission computer, drone autopilot, and 5G connectivity. AIRLink enables real-time telemetry and streaming video feeds. The onboard AI software provides a range of capabilities including autonomy, detection and tracking, and image enhancement.

The UAS also comes with a cloud-based software suite, allowing users to plan missions in 3D and add and adjust waypoints. All flight logs are stored in the cloud for easy access, and detailed analytics ensure early detection of potential issues.

The electrically powered SkyLane platform is available in 2500 and 3500 mm wingspan variants. SkyLane-250 features a payload capacity of 1.2 kg and range of up to 300 km, while SkyLane-350 can carry 7kg and fly for up to 500 km.

https://www.unmannedsystemstechnology.com/2022/10/new-ai-powered-vtol-uas-with-5g-bvlos-capabilities/?utm_source=UST+eBrief&utm_campaign=60b9be26f5-ust-ebrief_2022-oct-18&utm_medium=email&utm_term=0_6fc3c01e8d-60b9be26f5-119747501&mc_cid=60b9be26f5&mc_eid=0d642a9d48



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Soaring Eagle Technologies Receives Long Distance FAA Waiver for UAS

Inspections October 17, 2022 News



[Soaring Eagle Technologies](#), an unmanned aerial vehicle drone data collection company servicing critical infrastructure owners across the continental U.S., has obtained one of the first Beyond Visual Line of Sight (BVLOS) Federal Aviation Administration (FAA) waivers to fly small Unmanned Aerial System commercial inspection

missions under operational guidelines versus specific operations in restrained geographical areas. The newest BVLOS approval is nationwide and based on meeting **operational parameters**, not restricted to specific areas during specific time limits. This waiver allows Soaring Eagle Technologies clients to collect data such as high-resolution images or LiDAR more quickly and safely than with manned aviation.

The most recent FAA approval for flying BVLOS for commercial missions allows asset managers to partner with Soaring Eagle Technologies to inspect electric utility corridors and other critical infrastructure and collect information on the condition of assets or vegetation with greater efficiency and return on investment. This waiver enables commercial and industrial clients as well as utilities to inspect large geographical areas, ranging from 800-3000 acres in a day for light detection and ranging (LiDAR) or photogrammetry, with a high degree of granularity.

The long-range BVLOS inspection is used to conduct vegetation and other audits as well as for detailed mapping over large geographical areas, all currently carried out by foot or flying manned aircraft. BVLOS is a more competitive alternative for mapping large areas, including surveying land for large construction projects such as solar fields, electrical utility construction, and large-footprint buildings. BVLOS is also used for controlled burn overwatch, right-of-way audits, and agriculture, as well as other long distance applications.

https://uasweekly.com/2022/10/17/soaring-eagle-technologies-receives-latestlong-distance-faa-waiver-for-commercial-uas-inspections/?utm_source=rss&utm_medium=rss&utm_campaign=soaring-eagle-technologies-receives-latestlong-distance-faa-waiver-for-commercial-uas-inspections&utm_term=2022-10-18



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Emesent launches three time saving products for geospatial professionals October 18, 2022 Mapping and Surveying | News



Emesent, World leader in drone autonomy, LiDAR mapping, and data analytics today launched three new products at INTERGEO, which will help geospatial professionals save time while capturing accurate data for digital twins and BIM applications.

The products include Hovermap ST-X, a new Hovermap variant with a sensing range of 300 meters and improved accuracy, a Long Range Radio add-on which increases the communication range with Hovermap up to 20 times further, and Emesent's Aura platform which offers an integrated SLAM processing and point cloud visualization environment for Hovermap users.

Hovermap ST-X is the newest edition of Emesent's award-winning Hovermap autonomy and mapping device. It incorporates the latest in LiDAR sensing technology to offer high density point clouds with increased coverage and improved accuracy. Featuring a sensing range of 300 meters, triple returns, and more than a million points per second, it captures detailed, accurate data over a greater area in less time. Customers scanning large areas for mining, construction, and forestry will benefit from these features, providing faster time to insight.

https://uasweekly.com/2022/10/18/emesent-launches-three-time-saving-products-for-geospatial-professionals/?utm_source=rss&utm_medium=rss&utm_campaign=emesent-launches-three-time-saving-products-for-geospatial-professionals&utm_term=2022-10-18

German drone maker Quantum-Systems scores \$17.5M from Peter Thiel, others

Ishveena Singh - Oct. 18th 2022



Germany-based drone start-up Quantum-Systems has bagged \$17.5 million in new funding from investors, including billionaire tech entrepreneur Peter Thiel who cofounded PayPal and was the first outside investor in Facebook.

The news comes mere months after the drone manufacturer raised [\\$32 million](#) through a mix of equity and debt financing in its Series A funding round.

Thiel is joined by German firms Project A Ventures and Sanno Capital in the new investment round that aims to accelerate Quantum-Systems R&D into artificial intelligence, autonomy, edge computing, and robotics. As Thiel [puts it](#): The future of drones is in neither software nor hardware alone, but in the intelligent synthesis of the two.



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Florian Seibel, CEO of Quantum-Systems, agrees that investing heavily in the software side of things will take his firm to the next level. “That includes artificial intelligence, which will enhance our ability to provide situational awareness to our operators; edge computing, which facilitates real-time data processing onboard our UAS; and new elements in our mission planning software, which allows operators to orchestrate complex operations with the click of a button,” Seibel says. <https://dronedj.com/2022/10/18/peter-thiel-drone-company-investment/>

DX Korea 2022: KAI launches UAM concept for Korean army Jon Grevatt 23

SEPTEMBER 2022



Korea Aerospace Industries (KAI) has showcased a scale model of a new unmanned urban air mobility (UAM) aircraft for military applications, at the DX Korea 2022 exhibition held in Goyang.

The company told *Janes* that it plans to develop the electric vertical take-off and landing (eVTOL) platform during the 2020s and by 2029 present a prototype to the Republic of Korea Army (RoKA). A KAI official said the RoKA has a potential future requirement for more than 100 UAMs.

A KAI official said the biggest challenge in developing the platform is the endurance and range. He said the RoKA has outlined a requirement for such a platform that has a range of at least 250 km.

KAI said the concept UAM has a maximum take-off weight of 2,500 kg and can carry a payload of 600 kg. It has a length of 9.5 m, a height of 3.8 m, and a wingspan of 13.1 m.

The UAM is **being developed from a similar manned version** of the aircraft for commercial applications. KAI plans to develop a prototype of this commercial platform by the mid-2020s. <https://www.janes.com/defence-news/news-detail/dx-korea-2022-kai-launches-uam-concept-for-korean-army>

Lockheed, Verizon testing 5G-linked drone swarm for intel collection

Colin Demarest Sep 28



Concept art from the U.S. Air Force Research Lab depicting a drone swarm that the service could potentially employ in the future. (Air Force Research Lab)



UAS and SmallSat Weekly News

WASHINGTON — Lockheed Martin and Verizon are experimenting with 5G-enabled drones and intelligence, surveillance and reconnaissance payloads in an effort that could ultimately enhance U.S. military command and control and in-the-field targeting abilities.

The two companies on Sept. 28 said they were able to securely share and analyze real-time data and other intel captured by [a swarm of drones](#) via fifth-generation wireless networks, both private and public.

The tests, conducted in May and September, and their results have significant battlefield implications, according to Dan Rice, the vice president of 5G.MIL programs at Lockheed. <https://www.c4isrnet.com/battlefield-tech/it-networks/5g/2022/09/28/lockheed-verizon-testing-5g-linked-drone-swarm-for-intel-collection/>

Killer drones vie for supremacy over Ukraine By The Associated Press, yesterday



They are precise, small in size, able to effectively penetrate air defenses when [fired in groups](#) and, above all, they're cheap.

In [Russia's invasion of Ukraine](#), killer drones have cemented their reputation as a potent, cost-effective weapon that can seek out and destroy targets while simultaneously spreading the kind of terror that can fray the resolve of soldiers and civilians alike.

They're also quickly surpassing missiles as the remote weapon of choice. Known as "the poor man's cruise missile," the flying death machines can flood any combat theater much more cheaply.

The Shahed drones are packed with explosives, and they can be preprogrammed with a target's GPS coordinates. They are known as suicide drones because they nosedive into targets and explode on impact like a missile.

Drones like the Shaheds are called **loitering munitions** by the military because when used at short range, they can hover over an area and then hit a target on an operator's command. At a mere **\$20,000** apiece, the Shahed is only a tiny fraction of the cost of a full-size missile. For example, Russia's Kalibr cruise missiles, which have seen widespread use in eight months of war, cost the Russian military about \$1 million each. <https://apnews.com/article/russia-ukraine-kyiv-business-government-and-politics-5a3e86a903ea5de028308f22f32a00c4>



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AAM coordination and leadership law signed to orchestrate next-generation air mobility Bruce Crumley - Oct. 19th 2022



Stakeholders in [next-generation aircraft](#) development and their future activity have hailed the signing of the [Advanced Air Mobility](#) Coordination and Leadership Act into law by President Joe Biden, calling it a milestone in the effort to launch and expand [AAM services](#) across the US.

The measure “requires the Secretary of Transportation to establish an advanced air mobility (AAM) interagency working group to review and examine factors that will allow the maturation of the AAM ecosystem within the U.S. and **develop an AAM National Strategy.**”

There has been some concern that while much attention has been turned to the [futuristic, emission-free craft](#) that companies like Joby, [Archer](#), Wisk, and others have been working toward certification and later launch, not enough effort has been made at the federal level to define and orchestrate the way [AAM will function](#) once tech is ready to enable it.

The new law aims to facilitate collaboration between [federal agencies and civil aviation industry](#) officials in their overlapping efforts to define and apply policies [governing AAM](#). The Department of Transportation is to lead a group made up of staffers from **nine government agencies** to interface and collaborate with representatives of companies and organizations across US aviation sector.

The working group will both recommend and review policies framing [AAM development and activity](#) and help guide decisions on safety, security, and government investment required to permit the growth and expansion of new, sustainable [urban aerial transportation](#).
<https://dronedj.com/2022/10/19/aa-law/>

Joby applies for UAM eVTOL aircraft certification in Japan Bruce Crumley - Oct. 19th 2022



Next-generation aircraft developer [Joby](#) says it has applied for design certification of its [electric vertical takeoff and landing](#) (eVTOL) plane in Japan, which is expected to be a [particularly promising market](#) for urban air mobility (UAM) activities.



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In [its communiqué](#) Tuesday, Joby said it had filed a request with the [Japan](#) Civil Aviation Bureau (JCAB) to validate the type certification of its eVTOL craft issued by the [Federal Aviation Administration](#) (FAA) last May – a milestone in its work to develop the plane for full authorization and launch in [UAM services](#) by mid-decade. Joby described its application to the JCAB “the first of its type.”

“With 92% of residents living in urban areas, we have a spectacular opportunity to save people time in congested cities like Tokyo, Yokohama, and Osaka while also reducing their impact on the environment,” said Joby CEO JoeBen Bevirt.

The [turn to Japan](#) is also driven by logic internal to the company’s partnerships. Automotive giant [Toyota](#) threw its weight behind Joby’s push to develop battery-powered eVTOL back in 2018, providing manufacturing advice and a hefty [\\$400 million](#) in financial support. <https://dronedj.com/2022/10/19/joby-evtol-uam-japan/>

20Oct22

Virgin Boeing 747 to launch rocket into space Julia Buckley, CNN 20th October 2022



This will be the first orbital launch for the UK.

(CNN) — At the far southwestern tip of England, dangling into the Atlantic, the remote region of Cornwall rarely feels like the center of the world.

But recently locals have been feeling tantalizingly close as they've watched a very special plane fly low overhead, taking off from the runway at little Newquay Airport and circling the skies above the coast before touching back down.



This isn't just any plane. Nor is it a normal Boeing 747, as it appears from the ground. In fact, it's the "Queen of the Skies" repurposed for the space race, making trial flights before it takes part in [the United Kingdom's first orbital space launch](#) next month. And it'll be taking off from Spaceport Cornwall, which shares the airport's 1.7-mile regular runway.

Cosmic Girl, as the plane has been named, is the vessel for Virgin Orbit's bid to [launch seven satellites](#) into space. A former passenger jumbo jet in service with Virgin Atlantic until 2015, it



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has been modified to carry LauncherOne, a California-made rocket which will go into the Earth's orbit. <https://www.cnn.com/travel/article/virgin-orbit-boeing-747-newquay-scن/index.html>

TOPODRONE Launches AQUAMAPPER: Airborne Bathymetric Surveying Solution

Miriam McNabbon: October 19, 2022 by DRONELIFE Staff Writer Ian M. Crosby



LiDAR equipment company [TOPODRONE](#) has launched [AQUAMAPPER](#), a UAV-based solution for bathymetric surveying and marine construction. Bathymetric surveying is the underwater equivalent of topographic surveying, mapping the floor of rivers, lakes, and oceans. The new multitasking data collecting device has been successfully

deployed alongside TOPODRONE LiDAR ULTRA equipment for the airborne surveying of a Romanian highway construction project to provide a digital twin of a scanned area.

The new AQUAMAPPER hardware integrates with other technology to form a comprehensive set of photogrammetry, LiDAR, and bathymetry surveying solutions. Upon being mounted to a UAV, AQUAMAPPER offers high speed efficiency (up to 14 km/h) and accuracy. The PPK ready solution is also compatible with DJI Matrice 300 RTK. The hardware can be deployed for a wide range of use cases including an open sea bathymetric survey up to 100m depth, quantity survey and calculation of sediments, and periodic maintenance survey of storage pools.

<https://dronelife.com/2022/10/19/topodrone-launches-aquamapper/>

Market Drivers and Industry Trends: Highlights from the 2022 Drone Industry

Barometer OCTOBER 17, 2022 Kay Wackwitz



- The largest commercial applications for drones are photography & filming, mapping & surveying, and inspections.
- Many drone companies say they are focusing less on product development and more on marketing, sales, and staff development.
- Despite progress in drone regulation, rule-making authorities are seen as the most important market-driving actors in the industry.



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Those are just a few of the many findings contained in the [2022 Drone Industry Barometer](#). A **free publication** from [Drone Industry Insights](#), the Barometer seeks to measure changes in the opinions and perceptions of drone companies towards the commercial drone market.

“We started five years ago with only about 200 to 300 survey respondents, and now we’re close to **1,000**,” reported [Kay Wackwitz](#), CEO of Drone Industry Insights. “The international drone industry is getting bigger every year and so is the survey. That’s a really good thing.”

https://www.commercialuavnews.com/international/market-drivers-and-industry-trends-highlights-from-the-2022-drone-industry-barometer?mkt_tok=NzU2LUZXSi0wNjEAAAGHIZo8evJULujcsHtmJvKYTiVw7JNWSa4TTzZ-2MUBoAcw8ttTsuoc7xO3QndnWDGZW-DRXBRMoZYopRUHxyCTkz6Y0ZZDBWlqmX-6Yf3Ln3bGw

Spright records longest US commercial BVLOS drone flight Ishveena Singh - Oct. 20th 2022



Spright, the drone division of aerial medical service provider Air Methods, is now one step closer to launching **the first** bidirectional American medical drone delivery network. The company has **set the record** for completing the longest beyond visual line of sight (BVLOS) drone flight by a

commercial entity in the US.

The 29-mile flight was accomplished in Kansas using German-made [Wingcopter 198 eVTOL aircraft](#). The fixed-wing drone departed from Hutchinson Medical Center in Hutchinson and flew to Rice County District Hospital in Lyons, reaching its destination in approximately 23 minutes. In comparison, the same journey would have taken 45 minutes to complete by road.

Medical supplies such as blood and critical drugs are often centralized in larger healthcare facilities to control costs. In emergency medical situations, accessing these inventories becomes both challenging and time-consuming, thus delaying care and threatening positive patient outcomes. <https://dronedj.com/2022/10/20/us-commercial-bvlos-drone-spright/>



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From the Floor of INTERGEO: DRONEII on the Biggest Surprise in Drone Industry Projections

Harry McNabb October 20, 2022



At this week's INTERGEO GIS and mapping expo held in Essen, Germany, DRONEII CFO and Co-Founder Hendrik Bödecker presented on drone industry projections, recent survey results, and the biggest surprise in recent forecasts.

In 2020, drone industry investment was \$2,433 million. In 2021, that investment grew to a stunning **\$7,917 million**. That's an indication, says Bödecker, that the industry has achieved the trust of stakeholders.

[DRONEII's Industry Barometer](#) tracks the dynamics of the drone market. The Barometer is based on a survey of more than 900 respondents and is based on expected and realized revenue figures.

2020 was a tough year for every sector, and the drone industry also slightly underperformed expectations: in 2020, the expectation was for growth of 6.3 on a scale of 1 -10; reality, or realized revenue, was only 6.0. Survey participants, however, had high hopes for 2021.

That led to one of the biggest surprises of the Drone Industry Barometer: the greatest disparity between expectation and reality since the start of the research in 2018. "Projections were for 7.2 growth per year but ended up at 5.6," says Bödecker, citing the continuing effects of COVID and other industry headwinds.

This year, companies are more conservative in their estimates: but possibly more realistic. "Projections for 2022 are more muted: but **projected growth is 6.3**," says Bödecker. <https://dronelife.com/2022/10/20/from-the-floor-of-intergeo-droneii-on-the-biggest-surprise-in-drone-industry-projections/>