UPS Supporting Drone Startup's Blood, Vaccine Deliveries in Rwanda.

Reuters (5/9) reports that the UPS Foundation is providing Zipline International Inc. and Gavi an \$800,000 grant along with logistics support to help the startup with its primary mission of using UAVs to transport blood and vaccines in Rwanda. Reuters notes that by backing drone projects in other countries, UPS can avoid the regulatory hurdles faced by other U.S. companies experimenting with UAV deliveries. Reuters mentions that other prominent companies such as Amazon, Google, and Walmart have also invested in UAV projects.

Drones Can Save Lives With Healthcare Deliveries. In a piece sponsored by the Singh Family Foundation, <u>GeekWire</u> (5/6) said the idea "of getting your Amazon order whisked quickly to your doorstep by a drone might sound delightfully convenient," but drones also have the potential to save lives in developing countries. The article goes over various efforts in developing countries to use drones to deliver medicines and provide other healthcare services in remote areas.

Martin UAV Shows Off New VTOL Drone.

<u>Popular Science</u> (5/6) reported on Martin UAV's V-Bat drone, which it showed off last week at the XPONENTIAL conference in New Orleans. The V-Bat is a vertical takeoff and landing (VTOL) drone that takes off upright with a "ducted fan" on the bottom and then turns perpendicular to the ground in mid-air. *Popular Science* mentioned that as evidenced by a Prime Air video from "earlier this year," Amazon has switched from "a more helicopter-like quadcopter...to a sturdier VTOL design."

AUVSI's Conference Highlights Growing Interest in Drones.

Ars Technica (5/8) reports that the Association for Unmanned Vehicle Systems International's (AUVSI) Xponential conference, held in New Orleans, showcased the growing importance of drones. The article reports that "Cloud connection to drones is gaining increasing attention because of the massive amount of data that uncrewed vehicles can collect." FAA regulations have so far restricted the number of industries that heavily rely on drone use. One of the most well-established current applications of drones outside the military include "precision agriculture." While some are looking to integrate 3G or LTE wireless signals to drones for easy materials recovery on the cloud, most of the companies making progress in that regard are outside the US, due to FAA restrictions.

Drone Industry Expresses Resentment Toward Obama Administration.

Ars Technica (5/6) reported that in a keynote on Tuesday at AUVSI's XPONENTIAL conference, former Cisco CEO John Chambers criticized the Administration for not moving fast enough on modifying drone regulations. FAA administrator Michael Huerta spoke on Wednesday and explained why the agency was moving slowly and announced it would allow students and faculty to test drones without applying for an FAA waiver. After Huerta's speech, *Ars Technica* informally surveyed the audience and found that "many still held feelings of resentment toward the Obama administration's apparent lack of action" and said "that nothing would get done unless the next administration takes the same sorts of steps that other countries have taken to accelerate innovation around drones."

Goglia: Sully Sullenberger Flew Through an Entire Flock of Geese, So What's One Drone?

The New York Post (5/8) reports that former NTSB member John Goglia addressed the Vaughn College of Aeronautics and Technology UAS conference on Saturday in Queens for International Drone Day, saying that pilots need to settle down about fears that a drone colliding with a jet engine could send both aircraft careening to the ground. "We've been flying into birds for how long?" Goglia mused, chiding any nervous doomsayers for not being more like US Airways Capt. Chesley "Sully" Sullenberger, who famously landed Flight 1549 on the Hudson River in

2009 soon after a gaggle of geese flew into his plane after takeoff. As Goglia pointed out, "It took a flock of them to bring down Sully's plane," so he isn't interested in whatever "baloney" these other pilots are talking about. "A drone hitting an airplane in flight and getting digested by an engine might be expensive for the airline, but it's not going to bring an airplane down," Goglia concluded. The FAA, on the other hand, has warned that not only is operating any UAS near an airport or airborne craft illegal but reckless and potentially life threatening.

10May16

Global UAV Market To Approach \$127 Billion By 2020, PwC Says.

Bloomberg News (5/9) reports that according to a new study published on Monday by consulting firm PricewaterhouseCoopers (PwC), the global market for commercial UAV applications, currently estimated at around \$2 billion, will skyrocket to as much as \$127 billion by 2020. Speaking to reporters, Piotr Romanowski, PwC partner and Business Advisory Leader for central and eastern Europe, said that "the cost of drone technology is falling so quickly that a number of everyday applications are becoming cost-efficient." According to PwC, new UAV technologies may prove useful for infrastructure projects, insurance claim verification, and various security applications, and may also revolutionize both the movie and transportation industries, given appropriate legislation.

UPS Partners With Zipline To Use Drones To Deliver Blood.

In continuing coverage, the Atlanta (GA) Journal-Constitution (5/9) reports that UPS has given an \$800,000 grant to Gavi to support a partnership with Zipline to use drones to deliver blood and vaccines to residents of remote villages in Rwanda. UPS Foundation President Ed Martinez said, "If you have a resilient and efficient supply chain, you're going to save lives." The AJC mentions that UPS has been studying the feasibility of delivery drones, and Martinez said the venture "is going to be a learning process for us as well."

Canada Using UAVs to Combat Massive Blaze.

<u>Digital Trends</u> (5/9) reports that Canadian firefighters continue to combat the "devastating wildfires" around Fort McMurray, Alberta, and "drone technology is being called upon to try to determine the precise cause of the massive blaze." Noting that the provincial Albertan government is working with Edmonton-based Elevated Robotic Services, the article highlights that the use of drones illustrates how both businesses and governments "are becoming increasingly interested in the technology, adding weight to forecasts suggesting the drone market will flourish in the coming years." The article explains that Elevated's DJI-manufactured quadcopters "are using regular HD cameras alongside infrared and ultraviolet ones to gather data," which has "the potential to place the location of a fire's origin to within 9-meters."

11May16

Mountain Dew to Sponsor Drone Race This August.

<u>Variety</u> (5/10) reports that Mountain Dew will sponsor the "'DR1 Invitational,' a one-hour drone-racing special slated to air on both [the] Discovery Channel and Science Channel, two cable networks owned by Discovery Communications." The competition "will spotlight 12 of the world's top drone-racing pilots as they vie for the title at Sepulveda Dam in Los Angeles" this August. Mountain Dew Senior Director of Global Brand Marketing Manos Spanos said, "We wanted to get in early and make sure we put our stamp on it. Drone racing is right at the intersection of technology and entertainment and forward thinking."

Airbus Vying for CubeSat Business.

Bloomberg News (5/10) reports that Airbus is said to be working on a project to develop "a commercial launcher for satellites ranging from less than one kilo to a few dozen kilos [CubeSats], used for earth exploration, defense and security, weather forecasts and Internet connections." The article notes that the plan comes as NASA "unveiled in October contracts worth \$17 million with three companies, including billionaire's Richard Branson's Virgin Galactic, to help develop launchers for small satellites." According to sources familiar with the matter, the new project would give a European company access to the burgeoning market for CubeSats. The article reports that French space official Genevieve Fioraso said in an interview, "The market for CubeSats is going to expand, and France and Europe must be part of it, including with launchers."

FAA Signs UAS Detection Tech Research Agreements.

The Hill (5/10) reports that the FAA signed three Cooperative Research and Development Agreements (CRDAs) with companies this week to "evaluate procedures and technologies that can identify unauthorized drone operations" in and around US airports, as part of its "Pathfinder Initiative" to explore how UAS can be integrated into US airspace. The companies' UAS detection systems will be evaluated by the FAA and the Department of Homeland Security for effectiveness and workability. Homeland Security Today (5/10) reports that the CRDAs were signed with Gryphon Sensors, Liteye Systems Inc., and Sensofusion, and notes that in February, "the FAA partnered with DHS and CACI International on similar research" to explore UAS detection technology. The AVweb (5/10) reports that "other federal agencies participating in the effort include the Department of Defense, the Department of Energy, the US Secret Service, and the FBI."Aviation Week (5/10) and ExecutiveBiz (5/10) provide additional coverage.

FAA Solicits Public Input On System For Suspicious Drone Reporting. In a Forbes (5/10) column, John Goglia reports that "the FAA is asking for public comment" on its planned web-based system for public reporting of "drone behavior that they consider suspicious or illegal." The system is being developed in response to direction from Congress to the FAA to "assess the flight behavior of [drones] and enable the reporting of [drone] sightings that cause public concern for safety, national security, and/or privacy." The FAA is soliciting public input on: "(a) whether the proposed collection of information is necessary for FAA's performance; (b) the accuracy of the estimated burden; (c) ways for FAA to enhance the quality, utility and clarity of the information collection; and (d) ways that the burden could be minimized without reducing the quality of the collected information."

DOT Opens UAS Task Force Meeting Documents Because Of FOIA Lawsuit.

<u>FierceGovernmentIT</u> (5/10) reports that the Department of Transportation (DOT) has opened documents from closed meetings of the FAA's Unmanned Aircraft System Registration Task Force, "under pressure from a Freedom of Information Act...lawsuit" filed by the Electronic Privacy Information Center (EPIC). EPIC has expressed concerns about "how drones affect the privacy rights of the average citizen and how a reasonable expectation of privacy can be hindered by the presence of drones."

DHL claims its drones are first to deliver

The German shipping firm's drones have carried over 100 parcels with full autonomy through rural and sometimes difficult terrain. The tests have emboldened DHL to set its sights on the arrival of urban drone deliveries.



Deutsche Post DHL, Germany's market leader in shipping and logistics, said that its trial drone program delivered over 130 packages within the Bavarian town of Reit im Winkl between January and March this year.

This makes DHL the first company worldwide to utilize drone technology to deliver parcels to customers, according to a press statement DHL released Monday.

During the three month trial, residents were invited to drop off shipments in "packstations" - centers of parcel lockers run by the company for drones to carry off to another packstation, all without human aid.

The Bonn-based company has dubbed its fleet of drones "parcelcopters," which it first began testing in 2013. It aims to integrate them into its logistics chain to complete the "last mile" of deliveries. http://www.dw.com/en/dhl-claims-its-drones-are-first-to-deliver/a-19245002

FAA Expands Pathfinder Program to Evaluate Drone Detection Technologies Published: 10 May 2016

The Federal Aviation Administration (FAA) is expanding the part of its Pathfinder Program that focuses on detecting and identifying unmanned aircraft systems (UAS) flying too close to airports and has signed Cooperative Research and Development Agreements (CRDAs) with Gryphon Sensors, Liteye Systems Inc. and Sensofusion. The FAA will evaluate procedures and technologies designed to identify unauthorized UAS operations in and around airports. This research effort, part of the FAA's Pathfinder Initiative, addresses one of the significant challenges to safe integration of UAS into the nation's airspace. http://www.unmannedsystemstechnology.com/2016/05/faa-expands-pathfinder-program-to-evaluate-drone-detection-

technologies/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=fde2b0f3f0-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-fde2b0f3f0-111778317#sthash.wUzvf1Aa.dpuf

12May16

BI Intelligence Report Highlights Transformation Of Global UAV Market Over Next Five Years.

<u>Business Insider</u> (5/11) highlights a 32-page report from BI Intelligence, which explores "the various levels of the growing global industry for commercial drones." Among the key takeaways from the report: the global commercial UAV market will center on "applications in a handful of industries," including agriculture, energy, utilities, mining, construction, real estate, news media, and film production. The article adds that the commercial UAV market is expected to "grow at a compound annual growth rate (CAGR) of 19% between 2015 and 2020, compared with 5% growth on the military side."

South Dakota County Emergency Officials Set To Receive UAV For Search-And-Rescue Missions.

The <u>AP</u> (5/11) reports that the Emergency Management Department in Lincoln County, South Dakota, is set to receive a new UAV this week to assist with its search-and-rescue missions. Emergency Manager Harold Timmerman told the Argus Leader newspaper that the UAV will be able to capture photos and video, and create thermal imaging scans to help detect individuals in the dark. Timmerman added that the department has had "definite times when [a UAV] would have been useful when searching for people."

Arizona Governor Signs Statewide Rules Regulating Drone Use.

The <u>AP</u> (5/11) reports that Arizona Gov. Doug Ducey signed into law legislation preventing cities from making their own rules regulating drone use. The legislation "was designed to prevent a patchwork of regulations that would make it harder for businesses." Businesses that want "to use drones commercially pushed for uniform statewide rules." The bill also "makes it a crime to use drones if they interfere with police or fire operations or if they are photographing sensitive locations like nuclear power plants." The AP mentions that FAA regulations on UAVs are still being revised.

13May16

Stanford University Researchers Developing Wall-Landing UAV.

The Verge (5/12) reports that Stanford University researchers are looking to provide UAVs with the insect-like ability "to land on vertical walls, and even upside down," and have thus far made substantial progress. According to one of the researchers, the UAV's system has a rigid tail, and a pair of "microspines." The article explains that the tail allows the UAV "to correctly position itself while landing," as the two microspines "are then dragged along the wall, where they catch on microscopic grooves in the surface." Researcher Morgan Pope writes at IEEE Spectrum, "While it's still not as foolproof as landing on a level surface, we are closer than ever to making perching accessible outside of a research environment."

AirMap Signs Up 75 Airports For Its Drone Air Traffic Control System.

Ars Technica (5/12) reports that Amazon Prime Air Vice President Gur Kimchi recently outlined his ideas for drone air traffic control (ATC) at the Xponential conference in New Orleans, and Santa Monica, California-based software developer AirMap already is laying "the groundwork for such a system." With its iOS app, drone pilots can create a profile, which includes their contact and aircraft information, and "the app collects geolocation data, gives a color-coded message about flight restrictions, and offers the drone pilot the ability to notify airports within five miles of flight plans simply through a tap on the screen." Airports can tap into the system through a "dashboard" app that lets them view "all of the notifications within their operating area." So far, 75 airports have started using the AirMap system, including Houston George Bush Intercontinental, Los Angeles International, and Denver International.

Google UAV Group Looking For Engineer Who Thinks "Flying Airplanes Is Cooler Than Crashing Airplanes."

<u>Business Insider</u> (5/12) reports that Alphabet subsidiary Google X, which manages its parent company's UAV efforts, "is looking to hire various aerospace experts, from guidance and navigation control managers to computer vision engineers." In a new job listing for an engineer focused on "airspace management," Google X states that the ideal candidate will have "an interest in airspace management practices and think that flying airplanes is cooler than crashing airplanes."

Video Highlights Why SpaceX Lands Rockets On Drone Ships.

In a video, <u>Mashable</u> (5/12) reports on why SpaceX "loves to land rockets on tiny barges out in the middle of the ocean," rather than simply returning rockets back to land after its launch missions. Mashable explains that certain launch mission requires so much fuel that a returning rocket, having a traveled a significant distance from its launch location, can only be safely landed at sea.

FAA Seeks Industry Input On Pathfinder Program.

<u>UAS Magazine</u> (5/12) reports that an update on the FAA's UAS Pathfinder program "packed a room at AUVSI's Xponential event in New Orleans with nearly every FAA test site represented in the room (each of which asked questions during the Q&A) along with several prominent UAS entities." FAA Manager of Airspace Policy and Rules Leslie Swann said that while the FAA has been working on developing police for the Pathfinder program, the FAA is still looking for industry input.