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North Dakota UAV Agency Providing Assistance Nationwide.

The AP (4/29) reported that in April, the FAA authorized the Northeast Region Unmanned Aircraft System unit in Grand Forks, North Dakota to use UAVs anywhere in the country, becoming "one of only a handful of law enforcement groups with the capability of responding to incidents like natural disasters, crime scenes or search-and-rescue missions." Alan Frazier, chief pilot and architect of the UAV program for the Grand Forks unit, "said the agency's pilots and sensor operators are able and willing to hop on a plane with its drone in a suitcase," noting, "If there was a major disaster or a multi-day search for dangerous suspects like that, my guess is that the sheriff would approve that."

New Report Highlights Growth Of Commercial UAV Market.

Business Insider (5/1) highlights a few of the key takeaways from a recently released *BI* Intelligence report, which "provides forecasts for the business opportunity in commercial drone technology, looks at advances and persistent barriers," and "digs into the current state of US regulation of commercial drones." According to the article, the commercial UAV market "will grow at a compound annual growth rate (CAGR) of 19% between 2015 and 2020, compared with 5% growth on the military side."

Editorial: Stricter Drone Rules Needed.

The Rochester (NY) Democrat & Chronicle (5/1) editorializes that as drones become more popular, the FAA and Congress need to put in place "ironclad policies...along with stiff fines." The editorial cites the example of a sheriff's office helicopter in Fresno, California, which almost collided with a drone that was flying 150 feet higher than is allowed by current FAA regulations. The *Democrat & Chronicle* adds, "The FAA says final rules are still a few years away. Obviously, the administration is going to have step up the process. That's particularly true because some states aren't waiting, further complicating matters and creating a dizzying patchwork of rules to follow."

Op-Ed: States Should Take More Action To Promote UAS Industry.

In an op-ed for the Salina (KS) Journal (5/1), Kansas State Rep. J.R. Claeys discusses Salina, Kansas' "comprehensive statewide strategy to harness the emerging UAS industry to position Kansas as a national leader." Across the rest of the state of Kansas, however, the "government needs to make the growth of the UAS industry a priority," Claeys says.

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Google Awarded UAV Delivery Patent.

The San Jose (CA) Mercury News (5/2) reports that last week, Google was awarded a patent for a UAV delivery system that "uses a tether to lower a box containing a package." According to Gartner analyst Gerald Van Hoy, there is "a lot of money" to be made in UAV delivery, which is "why FedEx, UPS, the U.S. mail, DHL … all have drone programs, they're all invested in some kind of drone delivery system." Still, Wedbush Securities analyst Michael Pachter expects that it could be between five and 10 years before regulators allow companies to use drones to deliver packages.

First FAA-Approved Delivery UAV Joins Smithsonian Collection.

On its website, Smithsonian (5/2) reports that the first UAV to make an FAA-sanctioned delivery, performed by Australia-based medical supply company Flirtey, is joining the aircraft collection at the Smithsonian's National Air and Space Museum. Speaking to Quartz (4/28) about the prospects of UAV delivery, Flirtey CEO Matt Sweeney said,

"Now people feel this as an inevitability," adding, "This is now just a question of when, not if." Meanwhile, museum spokesperson Alison Mitchell said that the use of UAVs is "one of the hottest topics in the aerospace industry today and has inspired intense public interest," adding that in response, "the National Air and Space Museum has taken the opportunity to acquire the examples of unmanned systems that are achieving milestone events in the so-called drone revolution."

FAA Official Laments Growing Patchwork Of State UAV Laws.

Flightglobal (5/2) reports that the FAA UAS integration office "has cautioned state and local government legislators in America against creating a patchwork of rules and regulations relating to the operation of drones." The article notes that while UAVs, legally defined as aircraft, are primarily regulated by the FAA, "a 'quirk' in the legal system means laws that are out of step with federal regulations stay in place until challenged in court." Speaking at the Xponential conference on Monday, Jim Williams, head of the FAA's UAS integration office, said that there is unfortunately "a lot of ignorance and arrogance going on in state legislatures," adding that "the patchwork is already out there and it will be some time before it gets dampened down."

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New Advocacy Group To Focus On Commercial UAV Applications.

Fortune (5/3) reports on the Tuesday launch of the Commercial Drone Alliance, a UAV advocacy group focused on commercial UAV applications. The group is based in Washington, DC, and Silicon Valley, and its board members include "the likes of networking giant Cisco, a drone-centric data crunching startup called Data Wing, and drone startup Measure." In addition, *CNN* is also a member of the advocacy group, having received FAA approval last year "to test drones for news gathering purposes." While other UAV advocacy groups already exist, Lisa Ellman, co-executive director of the Commercial Drone Alliance, explained that new consortium differentiates itself by being "laser focused" on the commercial applications of UAVs.

Senator Mikulski Tours Wallops Flight Facility.

The Delmarva (MD) Daily Times (5/3) reports that on Tuesday, at the Wallops Flight Facility, NASA dignitaries paid tribute to Senator Barbara Mikulski (D-MD), who is set to retire at the end of her current term. The article notes that during her tenure on Capitol Hill, Mikulski, a member of the Senate Appropriations Committee, "has been a champion for NASA and Wallops Flight Facility." Calling her the Virginia-based facility's "patron saint," Wallops Director Bill Wrobel said, "We wouldn't be here without you." Similarly, NASA Administrator Charles Bolden referred to Mikulski as NASA's "own supernova." Addressing a crowd gathered at the facility, Mikulski said, "May the force continue to be with us."

On its website, WMDT-TV Salisbury, MD (5/3) explains that Mikulski visited Wallops "as part of her Maryland jobs tour." She understands how important Wallops is for economic development in Maryland.

FAA: UAS Developing Too Fast For Airspace Restructuring.

Aviation International News (5/3) reports that the FAA "has no current plan" to "reclassify low-altitude airspace" to accommodate small UAS. Speaking at the Xponential 2016 conference in New Orleans, FAA Air Traffic Organization Manager Randy Willis said that the establishment of a new airspace structure is inhibited by the fast pace of change in UAS technology. At the conference, Harris Corporation unveiled an "ADS-B Xtend" service to help UAS tracking below 500 feet. However, an FAA rulemaking process would still be required for airspace restructuring.

Amazon Prime Air's Kimchi Argues For Automated ATC System For UAS. Aviation International News (5/3) reports that Amazon Prime Air co-founder Gur Kimchi spoke at the Xponential 2016 conference in New Orleans, arguing for an air traffic control system that uses "automated, federated traffic controllers" to manage UAS

traffic. Amazon has proposed a similar system in which controllers would communicate with each other over the Internet, *Aviation International News* notes, and says "safe and fair deconfliction" would be "accomplished through an automated process." AVweb (5/3) reports that Kimchi described this as "as a multi-tiered airspace system monitored and controlled by real-time data flow from manned aircraft and unmanned systems, via transponders or dependent surveillance," calling it "NextGen for low altitude."

Draganfly Innovations Adds GLONASS Support to UAS 02 May 2016

Draganfly Innovations, a developer of unmanned vehicle technologies, has announced that it has added support for GLONASS (GLObal NAvigation Satellite System) satellite navigation to its unmanned aerial vehicles (UAVs), which will provide higher accuracy and function in more locations than GPS alone. GLONASS is a Russian space-based navigation system similar to GPS. Both systems consist of orbiting satellites that transmit reference signals that allow portable receivers to determine their own position using trilateration. The satellites orbit around the earth and at any given time only a portion of them are in the receiver's line of sight. The more satellites that a receiver can see, the more accurate the calculated position is. Adding GLONASS support allows additional satellites to be detected, which is very important in situations where fewer satellites are in line of sight because of obstruction by mountains, buildings, trees, and other objects.
http://www.unmannedsystemstechnology.com/2016/05/draganfly-innovations-adds-glonass-support-to-uas/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=f2ef418c88-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-f2ef418c88-111778317#sthash.jdh4wEec.dpuf

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Amazon Looking Toward Integration Of UAV Services.

Flightglobal (5/5) reports that while speaking at the AUVSI Xponential show on Monday, Amazon Prime Air Vice President Gur Kimchi "stressed that movement needs to be made on airspace integration methods now, so that services are ready to be carried out when the necessary authorisations are granted." The article notes that Amazon is proposing that "a no-fly zone be established at 400-500ft, to allow for UAVs to travel to delivery destinations," and that real-time no-fly zones "can also be imposed on UAV operations to allow for manned operations as necessary, and the systems can simply wait until it is safe to enter the zone again." Kimchi maintained, "The only way this will work is if everybody speaks the same language."

FAA Establishes Drone Advisory Committee.

Air Transport World (5/4) reports that the FAA "will establish a Drone Advisory Committee (DAC) to help the agency navigate issues related to unmanned aerial vehicle (UAV) integration in the US national airspace." FAA Administrator Michael Huerta said the DAC "is intended to be a long-lasting group…[to] help identify and prioritize [UAV] integration challenges and improvements, and create broad support for an overall integration strategy." He added, "Input from stakeholders is critical to our ability to achieve that perfect balance between integration and safety. We know that our policies and overall regulation of this segment of aviation will be more successful if we have the backing of a strong, diverse coalition."

Feds Facilitate UAV Use For Students.

The Hill (5/4) reports the FAA on Wednesday "announced new guidelines meant to make it easier for students to use drones for academic purposes." Students and professors need not apply for authorization or exemptions from the FAA. FAA Administrator Michael Huerta on Wednesday said, "Schools and universities are incubators for tomorrow's great ideas, and we think this is going to be a significant shot in the arm for innovation." Association for

Unmanned Vehicle Systems International president Brian Wynne said, "[Unmanned aerial systems] are an exciting way to promote STEM education and wider use among young people will no doubt inspire the next generation of UAS operators and aviators."

Feds Should Facilitate UAV Use In Education. Indiana State University's Department of Aviation Technology Chair Richard Baker and federal affairs consultant with FaegreBD Consulting in Washington, DC, Rob Ehrich write for The Hill (5/4) about the need for schools to adopt a regulatory framework that backs the development of research and educational programs. Baker and Ehrich say, "The current regulatory requirements do not support such sector growth." They add, "We encourage Congress to act to make it as easy as possible, while still maintaining safety, for higher education institutions to operate small UAS for educational and research purposes."

U.S., European Regulators Assessing UAV Risk To Airliners.

The Wall Street Journal (5/4, Subscription Publication) reports the FAA and the European Aviation Safety Agency are examining the potential risks posed by UAVs to airliners. The FAA in April said, "Reports of unmanned aircraft have increased dramatically since 2014," with more than 1,400 reports of near-collisions in 2015. The European task force is expected to release results in July.

CIRCOR Unveils TruLaunch Pneumatic Launching System for Unmanned Aircraft Published: 04 May 2016

Air CIRCOR Aerospace & Defense has announced the introduction of TruLaunch, a lightweight, high-pressure pneumatic rail launcher for commercial Unmanned Aerial Vehicles and Systems (UAVs/UAS). TruLaunch is designed for optimal flexibility, portability and durability in the field. TruLaunch is made from high-tech carbon fiber, a material that is significantly lighter and stronger than steel. The carbon fiber advantage means TruLaunch can be easily transported and set up in minutes by a single operator, yet the unit is highly durable to withstand any field application or extreme terrain. TruLaunch can be used for multiple UAV launches and configurations for supremely flexible operation. Operators can also fine-tune launch parameters based on individual UAV specifications.
http://www.unmannedsystemstechnology.com/2016/05/circor-announces-trulaunch-pneumatic-launching-system-for-unmanned-aircraft/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=233015ed10-Unmanned_Systems_Technology_eBrief&utm_medium=email&utm_term=0_6fc3c01e8d-233015ed10-111778317#sthash.Sa1t21k1.dpuf

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SpaceX Launches Communications Satellite, Sticks Sea Landing For Second Time.

CBS News (5/6) reports that SpaceX's Falcon 9 booster blasted off from Cape Canaveral early Friday morning, "lighting up the night sky with a streak of fiery exhaust as it boosted a powerful Japanese communications satellite into space." In a dual success, the JCSAT-14 relay satellite "was delivered to the intended preliminary orbit," while the Falcon 9's first-stage booster landed smoothly on a droneship at sea following the launch, "the second such

successful landing in a row." A few moments after the landing, SpaceX founder and CEO Elon Musk, tweeted, "Woohoo!!" He also tweeted, "This was a three engine landing burn, so triple deceleration of last flight," adding, "That's important to minimize gravity losses." Impressive!

Boeing UAV Unit Opens New Facility At Mississippi State University.

The Chicago Tribune (5/5) reports that Boeing's UAV division Insitu revealed on Wednesday that it is opening a new facility in Starkville, Mississippi "to work with Mississippi State University's unmanned aircraft center." According to the article, Insitu "plans to hire 25 people, working on engineering, software development and customer service support, working with the university."

The Seattle Times (5/5) reports that the university "is home to a Federal Aviation Administration (FAA) center of excellence for unmanned aerial systems, set up to partner with technology companies on research initiatives." In addition, Insitu President and CEO Ryan Hartman said that the Boeing division is "investing time, talent and resources in Mississippi to develop industry-leading technology that can safely operate in the National Airspace System."

Puma UAS Deploys To Arctic In Support Of USCG Resupply Mission.

Flightglobal (5/5) reports that the National Oceanic and Atmospheric Administration (NOAA) "has completed the first deployment of the AeroVironment RQ-20A Puma AE" UAS to Antarctica in support of the US Coast Guard's Deep Freeze resupply mission onboard the icebreaker Polar Star. The Puma AE UAS took on the role of reconnaissance, in lieu of helicopters, which are normally used for this role.

AeroVironment, SmartC2 To Join NASA's UTM TCL 2 Flight Demo. Aerospace Technology (5/5) reports that AeroVironment and SmartC2 "will join NASA's unmanned traffic management (UTM) technology capability levels (TCL) 2 flight demonstration" in October. Aerospace Technology reports the demonstration "will build on results from UTM TCL1 field testing last August, as well as ongoing operational demonstration and field testing of AeroVironment's Puma AE (All Environment)" UAS, and will concentrate on beyond-visual line-of-sight operations.

Orbital ATK's Updated Antares To Launch In July. The Verge (5/5) reports the first flight of Orbital ATK's newly updated Antares rocket will occur in July, and will send cargo to the International Space Station as part of the company's partnership with NASA. It will be the first Antares launch after an explosion during a similar resupply mission in October 2014, after which Orbital has spent several years re-designing the rocket, including replacing the Aerojet Rocketdyne engines it says were responsible for the accident. Launching from Wallops.

FAA Will Not Release UAS Airspace Regulations Before 2019.

Business Insider (5/5) reports that the FAA announced "it will not change current low-altitude airspace regulations for drones until 2019," and says it's "bad news" for companies like Amazon, which has hopes to use small UAS to deliver packages. *Business Insider* notes that the FAA "may have made this announcement" to buy time for results from its UAS traffic management platform project with NASA, which would "allow the tracking of drones to make sure they don't fly into prohibited airspace and could even ground the drones in case of emergency." *Business Insider* reports that NASA and the FAA plan to publish its requirements in 2019, so "it's unlikely the FAA will budge on drone regulations" before then. Looks like more business by waiver.