Queen Elizabeth II To Promote UAVs, UK Spaceport In Wednesday Speech.

The Guardian (UK) (5/15) reports that the Queen of the United Kingdom will mention driverless cars, UAVs, and a proposed first commercial spaceport in her speech outlining new domestic legislation on Wednesday. The UK Department for Transport has said that the technologies are critical the country's economy and that the proposed laws will help create jobs. According to the article, the spaceport is part of a UK government plan "to raise revenues in the space sector from £12bn to £40bn by 2030, which would mean capturing about 10% of the sector worldwide." Eight locations across the country are "currently under consideration for the port, which could launch commercial satellites and tourists into space."

The <u>Telegraph (UK)</u> (5/14) reported that UK Transport Secretary Patrick McLoughlin said, "Driverless cars and commercial space flight might seem like science fiction, but the economic potential of the new technology is huge," adding, "If we want to propel Britain's economy into the modern age, and generate the jobs that will come with it, it is vital that the right rules are in place to allow new transportation to flourish." McLoughlin also said that new rules would be implemented to regulate the growth of commercial UAVs across British skies.

Analysis: SpaceX Continuing To Prove Critics Wrong.

In an analysis, The Motley Fool (5/14) reported on how SpaceX has continued to prove its critics wrong, successfully landing three of its last five launch rockets. Noting that the critics are correct that "space is hard," the article highlights how it took the spaceflight company "two failed attempts before it finally stuck a landing on solid ground." The Motley Fool adds that it also took "two more failures before Falcon 9 would land safely on a boat at sea." The article adds that if SpaceX is eventually able to launch and land and relaunch a functioning rocket consistently, the company "will be able to underprice all comers, and change the economics of space exploration forever."

17May16

Silent Falcon UAS Monitors Oil & Gas Operations in New Mexico

Published: 11 May 2016

Air Silent Falcon UAS Technologies has announced that its solar electric Silent Falcon Unmanned Aircraft System (UAS) has successfully performed flights to demonstrate the effectiveness of using the system to inspect and monitor oil and gas production and distribution assets. The flights were performed over 2 days in northwestern New Mexico for a leading international oil and gas company and were flown under the direction of Indiana State University in compliance with the FAA COA issued to them permitting them to conduct these flights. Silent Falcon believes this is the first time a fixed wing, long range and long endurance unmanned aircraft system has been used for this purpose in the continental United States. http://www.unmannedsystemstechnology.com/2016/05/silent-falcon-uas-monitors-oil-gas-operations-in-new-

<u>mexico/?utm_source=Unmanned+Systems+Technology+Newsletter&utm_campaign=96be825971-Unmanned Systems Technology eBrief&utm medium=email&utm term=0 6fc3c01e8d-96be825971-111778317#sthash.FJ4NaLJq.dpuf</u>



Lockheed Martin UAV Illustrates Future Of Flying Robots.

BBC News (UK) (5/17) reports that UAVs may soon be able to play an "indispensable" role in human society, "building skyscrapers using 3D printing technology; transporting cargo across town; crop spraying; or helping find people trapped in buildings." The article highlights Lockheed Martin's remote-controlled Aerial Reconfigurable Embedded System (Ares) aircraft, which features "rotating engines that allow it to take off and land vertically like a helicopter, but also fly fast like a conventional aeroplane." Lockheed Martin's Business Development Manager Andy Horler explained that Ares "can carry lots of different types of pods under it," which allows "the system to be used for a wide range of tasks, such as transporting personnel or carrying cargo or medical supplies."

NGA To Open Silicon Valley Innovation Center, Poised To Benefit Small-Satellite Startups.

Space News (5/16, Subscription Publication) reports that National Geospatial-Intelligence Agency (NGA) Director Robert Cardillo has said that the agency plans to open a new facility in Silicon Valley in order to be able to more directly collaborate with startup ventures, including several small satellite-imagery outfits based in California. While speaking at the 2016 GEOINT Symposium currently underway in Orlando, Florida, Cardillo said, "This summer, we'll create a presence there, what we call NGA Outpost Valley (NOV)," adding, "This NOV will leverage the organic capabilities and energy of the Valley's open, vibrant, geospatial community." The article explains that the NGA is currently in "the early stages of working with commercial satellite operators for imagery data that would benefit the intelligence community."

Lack Of FAA Regulations Could Hold Back Commercial UAS Growth In US.

<u>Fierce Mobile IT</u> (5/16) notes that a report on the UAS industry released last week by Research and Markets estimates the commercial drone market "will grow at a compound annual growth rate of 109 percent and reach \$1.27 billion by 2020," with law enforcement expected to hold the largest share of the market at 25 percent. Fierce Mobile IT reports that the commercial US UAS industry is advancing "at a snail's pace, while other countries are far ahead," and that growth in the US is hampered by the lack of FAA UAS regulations.

Insitu's ScanEagle UAS used in BVLOS Natural Gas Operations Published: 16 May 2016

Air Insitu Pacific, a provider of unmanned aircraft system (UAS) solutions, has announced that after 18 months of successful trials, natural gas company Queensland Gas Company (QGC), a Shell-owned business, is introducing the ScanEagle Remotely Piloted Aircraft System (RPAS) to inspect gas wells, pipelines and processing facilities. Insitu Pacific Managing Director Andrew Duggan said the unmanned Beyond Visual Line of Sight (BVLOS) operations had never before been used commercially on this scale.

http://www.unmannedsystemstechnology.com/2016/05/queensland-gas-company-uses-insitu-scaneagle-for-natural-gas-operations/#sthash.zlmzyke7.dpuf

Textron Opens New UAS Service and Support Center in Virginia

By AUVSI News posted 7 days ago

Textron Systems has opened its new unmanned aircraft system training and maintenance facility in Blacksburg, Virginia, which will serve as the new home of its training and global service facility for aircraft such as the Textron Aerosonde and Shadow M2. The new, 14,700-square foot facility adds 1,700 square feet and includes three classrooms and two simulator rooms. It also includes an engine test cell; air vehicle test cell; and space for air vehicle assembly, composite structure and engine maintenance, repair, and operations.

Textron started operations in the area in 2010 for engineering testing, then started a schoolhouse operation a year later, says Bill Irby, Textron Systems senior vice president and general manager. It expanded in the years after to include such functions as logistics, repair and overhaul, and acceptance testing for aircraft it delivers to the military. There are now about 40 employees at the site, which is named the Unmanned Systems Service and Support Center.

18May16

France Implementing Anti-UAV Measures At Euro 2016.

The AP (5/17) reports that on Tuesday, organizers of Euro 2016 said that new technology will be deployed at the month-long soccer tournament beginning June 10 in France to protect against unauthorized UAV operations. Speaking to the AP, Euro 2016 Security Chief Ziad Khoury explained that during most matches, "anti-drone measures – which are quite innovative – will be deployed, working with the state, which will interfere with drones and take control of them if they are spotted." France's General Secretariat for Defence and National Security "confirmed to the AP that anti-drone measures will be in place for Euro 2016 but said the exact type of technologies to be deployed will be decided in coming days."

"Most Sci-Fi Looking" Anti-UAV Weapon Highlighted In Video.

<u>Gizmodo</u> (5/17) reports that the Navy Times features a new video of Battelle's DroneDefender, the "most sci-fi looking" anti-UAV gun, which is "definitely the future of shooting down your neighbor's pesky drone." The article explains that the DroneDefender "is designed to jam electromagnetic waves, causing the drone pilot on the ground to lose control of their UAV." In addition, according to the article, the Department of Defense and the Department of Homeland Security "reportedly already have about 100 of these things."

US Navy To Test LOCUST UAS In June.

<u>Seapower Magazine</u> (5/17) reports that the US Navy is planning to test its Low Cost Unmanned Swarming Technology (LOCUST) small UAS in June. LOCUST, designed to fly in formation and "saturate a potential adversary," according to Rear Adm. Mathias Winter of the Office of Naval Research, who spoke on the LOCUST program on May 17 at the 2016 Sea-Air-Space Exposition. June tests will include flying the swarming UAS over land, and in July they will be tested over waters in the Gulf of Mexico.

USAF Puts Small UAS In ISR, Major Attack Roles. Defense News (5/17) reports that the US Air Force "rolled out its 20-year flight plan" for UAS on Tuesday, which involves a focus on swarming UAS for both intelligence, surveillance, and reconnaissance (ISR) and major offensive operations. Defense News notes that swarming UAS "may even help the Air Force save money" by forcing the enemy to "track and kill multiple, low-value targets" rather than shoot down a \$20 million Reaper UAS or a \$2 billion B-2 bomber. According to USAF remotely piloted aircraft (RPA) capabilities division chief Col. Brandon Baker, UAS swarms have the virtue of being able to "take multiple hits, reconfigure, and keep going," which Baker calls "self-healing." USAF Deputy Chief of Staff for ISR Lt. Gen. Robert

Otto said, "We do believe that small, unmanned aerial systems will be the cornerstone of Air Force ISR as we look through the next 20 years."

FAA, FBI Initiate UAS Detection Research At JFK International Airport.

The <u>Washington Post</u> (5/17) reports that the FAA said it will explore ways to spot "rogue" UAS operations near airports, and that it has, in partnership with the FBI, initiated a research program to evaluate UAS detection technology at JFK International Airport in New York. <u>PC Magazine</u> (5/17) reports that according to an FAA statement, "Five different rotorcraft and fixed wing UAS participated in the evaluations, and about 40 separate tests took place."

Aviation Lawyer: FAA Will Streamline UAS Processes, Create Additional Requirements For Some Applications.

<u>Business Insider</u> (5/17) reports that new FAA UAS regulations could open the doors to the use of UAS in commercial applications from land surveying to package delivery, and says currently, UAS permit applicants must go through "an absurd amount of paperwork," hire law firms, and must additionally hold a pilot's license for traditional aircraft. Business Insider cites aviation lawyer Dan Ridlon, who anticipates that the FAA will streamline its approval process for some applications, and create additional requirements for riskier applications. Ridlon also foresees the elimination of a rule that prohibits Beyond Line Of Sight operations.

19May16

California Has Most Drones In US.

MarketWatch (5/18) reports that according to the FAA, California has the highest number of registered drones in the US, with the cities of Menlo Park, Los Angeles, and Burbank topping the list. Also at the top of the list is Maxwell Air Force Base in Alabama. In terms of commercial drone registrations, Menlo Park, California, is number one, while Houston comes in first place for recreational drone registrations.

UK Proposes Bill To "Spur" Spaceport, UAV Industry, Driverless Cars.

The AP (5/18) reports that Queen Elizabeth II "donned an ermine-trimmed robe and diamond-studded crown" on Wednesday to announce the new government policies intended to put the UK at the leading edge of technology and social progress in the 21st century, including plans for UAV deliveries, commercial space travel and driverless cars. Among the 21 proposals outlined in the Queen's Speech, "an annual tradition that mixes lavish pomp and modern politics," the Modern Transport Bill promised to put the UK "at the forefront of safe technology" in the UAV sector, attract investment in "autonomous vehicles, spaceplane operations and spaceports," and roll out insurance for driverless cars.

FAA, FBI Team Up To Battle Drone Threat.

In continuing coverage, Flyer Talk (5/18) reports that the FAA and the FBI are cooperating to test and evaluate "data from FBI's UAS detection system" at John F. Kennedy International Airport (JFK) as the FAA increases "its efforts to combat the threat that unmanned aircraft systems (UAS) pose to some of the nation's busiest airports." Tests of the system for use in commercial aviation environments started on May 2 at JFK, and will supplement data already collected from the Atlantic City International Airport. According to FAA Senior Advisor on UAS Integration Marke "Hoot" Gibson, "We face many difficult challenges as we integrate rapidly evolving UAS technology into our complex and highly regulated airspace." Aviation Department at The Port Authority of New York and New Jersey Director Thomas Bosco said, "We applaud the FBI and FAA for their efforts to detect and track unmanned aerial systems (UAS)."

20May16

MIT, Harvard Researchers Design Perching Bee-Like UAV.

<u>UPI</u> (5/19) reports that scientists at MIT and Harvard University have developed "tiny bee-like robot capable of pausing mid-flight to perch on a variety of objects before once again taking to the air." The article explains that although perching does not improve the UAV's actual flight time, "the technology could empower UAVs to employ their power more strategically — periodically taking a moment to rest their wings, or blades." According to the article, the researchers suggest that RoboBee's perching ability may "eventually improve the performance of robots used in search and rescue missions."