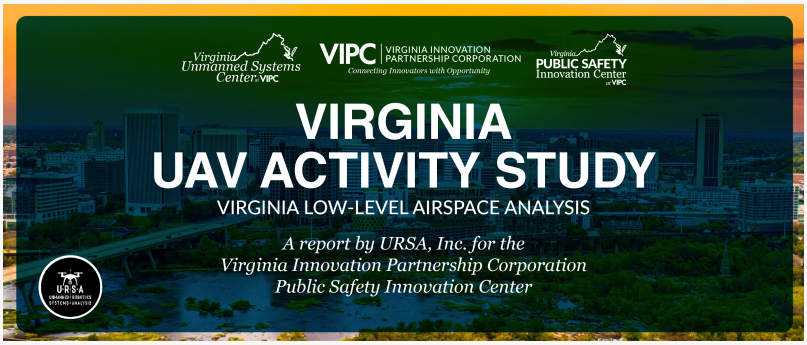
VIPC's Public Safety Innovation Center Study Analyzes Realtime Drone Activity in Virginia's Airspace

Enhanced awareness and education are key to drone safety



RICHMOND, VIRGINIA, UNITED STATES, February 14, 2024 /EINPresswire.com/ -- As drone usage continues to grow among hobbyists and businesses, a study commissioned by the Public Safety Innovation Center (PSIC) at the Virginia Innovation Partnership Corporation (VIPC) indicates the need for effective tools and policy to detect and identify aircraft and operators to enhance safety in the skies over Virginia.

"Overall, most of the drones detected during the study operated safely and in compliance with federal regulations," PSIC Director Chris Sadler said. "However, it's the careless, clueless and criminal operators that either are not aware of the rules for flying drones or simply ignore them that pose a danger to our communities."

> Airspace awareness technology enables law enforcement to detect, identify, and locate the offending operator and then inform them of the rules surrounding responsible drone ownership and flight."
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> *Chris Saddler, VIPC Director, Public Safety Innovation Center (PSIC)*

The Virginia UAV Activity Study, conducted by Unmanned Robotics Systems Analysis, Inc. (URSA), was based on data from a sample of more than 3,000 flights the PSIC collected using sensors designed to detect and identify a drone, also known as an uncrewed aerial vehicle (UAV), and their operators. The sensors were deployed on a portable trailer at several locations throughout Virginia and at a fixed site in Richmond from March to November 2023.

The duration of most flights was very short, with an average of less than six minutes. That is typical of small drones, which are limited by the small, on-board batteries that power the aircraft. In addition, the drones were mainly operated in daylight and on weekdays, indicating they were

likely being flown for commercial purposes.

The sensor data also showed most of the flights were below 400 feet above ground level, which is the maximum altitude the Federal Aviation Administration (FAA) allows for drones that weigh less than 55 pounds. However, more than 26 percent of the drones were detected at flight levels above 400 feet, with about five percent at more than 1,000 feet.

About 35 percent of the flights detected near airports exceeded the maximum altitude for those operations, which is typically less than 200 feet when they are authorized by the FAA. Separately, nearly 130 flights operated within 500 feet of a critical infrastructure, such as hospitals, stadiums, prisons, police stations, and electric power facilities.

The study described several concerns associated with the increase of drones in the airspace. Their widespread scale, automated capabilities, and operator anonymity raise worries of misuse and accountability challenges. Additionally, their adaptability and affordability heighten potential illicit activities and disposal after incidents.

“The key to maintaining drone safety is education,” Sadler said. “Airspace awareness technology enables law enforcement to detect, identify, and locate the offending operator and then inform them of the rules surrounding responsible drone ownership and flight. In most cases, that solves the problem and improves the operator’s competency. However, policy changes are needed at the federal level to allow state and local public safety to regularly use the technology.”

Currently, Congress has authorized only four federal agencies – the Departments of Defense, Energy, Justice, and Homeland Security – to deploy counter UAS technology for security and protection under certain circumstances. However, due to the increased use of UAS in the national air space, the authority for State, Local, Tribal, and Territorial (SLTT) public safety agencies to also use these systems is being considered because they are the first responders to drone incidents. This will enable them to effectively detect, track, classify and, in extreme situations, the limited ability to mitigate threats.

To tackle these issues, the study said, proactive regulatory measures and increased oversight are essential for responsibly managing the increase in drone activity in the commonwealth.

"Our findings underscore the urgent need for proactive measures to address the challenges posed by drone proliferation," URSA CEO David Kovar said. "By leveraging advanced analytic tools, we can better understand the evolving landscape of drone activities and develop targeted strategies to mitigate associated risks."

The PSIC plans to continue using the sensor-equipped trailer in 2024 to further characterize the airspace in other areas of Virginia. The data will be updated, analyzed, and shared with the FAA and other federal agencies that are involved with airspace safety.

In addition, the data will help inform Advance Air Mobility (AAM) operators as they begin to develop route systems after gaining FAA certification for their aircraft. These small and often electric-powered “air taxis” are designed to transport cargo and passengers at lower flight levels than legacy commercial airlines.

About Virginia Innovation Partnership Corporation (VIPC)□: Connecting innovators with opportunities. As the nonprofit operations arm of the Virginia Innovation Partnership Authority (VIPA), VIPC is the commercialization and seed stage economic development driver in the Commonwealth that leads funding, infrastructure, and policy initiatives to support Virginia's innovators, entrepreneurs, startups, and market development strategies. VIPC collaborates with local, regional, state, and federal partners to support the expansion and diversification of Virginia’s economy.

VIPC Programs include: Virginia Venture Partners (VVP) | VVP Fund of Funds (SSBCI) | Virginia Founders Fund (VFF) |Commonwealth Commercialization Fund (CCF) | Petersburg Founders Fund (PFF) | Smart Communities | The Virginia Smart Community Testbed | The Virginia Unmanned Systems Center | Virginia Advanced Air Mobility Alliance (VAAMA) | The Public Safety Innovation Center |Entrepreneurial Ecosystems | Regional Innovation Fund (RIF) | Federal Funding Assistance Program (FFAP) for SBIR & STTR | University Partnerships | Startup Company Mentoring & Engagement. For more information, please visit www.VirginiaIPC.org. Follow VIPC on Facebook, Twitter, and LinkedIn.

About URSA: □Unmanned Robotics Systems Analysis, Inc. (URSA) is dedicated to creating software and systems that enhance safety and security across various domains, including air, land and sea. URSA's Airspace Awareness Platform specifically delivers crucial insights into unmanned systems activity, playing a pivotal role in ensuring safety and security on the ground and in the sky. More information is available at www.ursasecure.com

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