

# Virginia Unmanned Stakeholder Update

## A New Emphasis on Virginia's Unmanned Maritime



UxS Industry Engagement Summit 2021, Norfolk, Virginia

## Unmanned Systems Project to Leverage Virginia's Maritime Legacy

The Virginia Institute for Space Flight & Autonomy (VISA) and Virginia's Center for Innovative Technology (CIT) have launched a program to develop a Hampton Roads-Eastern Shore Unmanned Systems (UxS) Strategic Playbook to focus on the continued development and expansion of unmanned ground, aerial, maritime, and space technologies.

The announcement of the playbook and search for UxS solutions began with the Unmanned Systems UxS Industry Engagement Summit on July 28 at Half Moone Cruise & Celebration Center at Nauticus. The event, attended by more than 150 Hampton Roads innovation leaders, presented challenges identified by public safety leadership during an intensive maritime safety workshop held a few weeks ago. Those challenges were presented at the Summit to industry representatives to initiate creative solutions and problem-solving options that utilized autonomous technologies for faster, safer, and more cost-effective emergency response.

The workshop was conducted with support from the Office of the Virginia Secretary of Public Safety and Homeland Security. The participants, which included the U.S. Coast Guard, the Virginia Port Authority, the Center for Naval Analysis, and local public safety agencies, evaluated new autonomous technologies and determined their potential impact and effectiveness at maritime ports. It also included several mock challenges to focus engagement with industry on specific real-world scenarios using autonomous technology for better, faster, cleaner, and more efficient emergency responses.

VISA is a research enterprise of the Virginia Modeling, Analysis, and Simulation Center (VMASC) at Old Dominion University in Norfolk. As the nonprofit operations arm of the Virginia Innovation Partnership Authority (VIPA), CIT is the primary source for information, grants, partnerships, and seed funding for UxS in the Commonwealth. Through a memorandum of understanding, VISA will initiate and implement pilot programs in Hampton Roads and the Eastern Shore to support CIT's UxS strategic plan to grow the industry across Virginia.

"VISA and CIT will work together to identify promising business opportunities for innovators of unmanned technology in Hampton Roads and the Eastern Shore," said Tracy Tynan, director of the Virginia Unmanned Systems Center at CIT. "By working with VISA, we will capitalize on the strengths of the region to build on the Commonwealth's industry leadership to encourage customer demand."

In addition, CIT is creating the Virginia Public Safety Innovation Center (VPSIC), which will be led by Chris Sadler, the deputy chief/deputy director of York County Fire and Life Safety. The VPSIC will test emerging technologies and their ability to aid and benefit first responders and the communities they serve. It will help ensure public safety agencies across the Commonwealth have access to the latest technology to support their missions. [MORE...](#)



## Walmart Invests in DroneUp, the Nationwide On-Demand Drone Delivery Provider



Last year, Walmart partnered with DroneUp, a nationwide drone services provider, to launch trial deliveries of at-home COVID-19 self-collection kits. The trial demonstrated we could offer customers delivery in minutes versus hours. Now, after safely completing hundreds of drone deliveries from Walmart stores, they are making an investment in DroneUp to continue our work toward developing a scalable last-mile delivery solution.

DroneUp operates an on-demand drone delivery network that matches their database of more than 10,000 Federal Aviation Administration (FAA) certified pilots to missions nationwide. Since partnering with DroneUp last year, we've valued their technological expertise, world-class operations and experienced management team – and their commitment to helping the FAA ensure the highest levels of safety with every delivery. As a well-respected industry innovator, DroneUp was the first operator to use the FAA 107.39 waiver, an operation that allows for delivery flights to be conducted over people and moving vehicles. DroneUp operates commercially throughout the U.S. and is an authorized government drone services provider for 11 U.S. states serving public sector organizations. [MORE...](#)



“Virginia is #1 State for Unmanned Aerial Systems Business, AGAIN!” -*Business Facilities Magazine*

Company Spotlight: Linebird



The Unmanned Systems Revolution  
Linebird

Power line inspection and maintenance is one of the most dangerous jobs in the U.S., with lineman fatality rates close to those of law enforcement and construction workers. Specifically, work on high-altitude, energized infrastructure is the most hazardous part of line work and requires capital equipment such as helicopters for crew access. Linebird is addressing these risks by offering UAS payload systems that enable unmanned work in contact with live lines, greatly reducing cost and liability of operations and maintenance.

“Linebird is transforming the way power transmission infrastructure is inspected and maintained. We are reducing risk factors for work that is traditionally handled by a manned crew, which can now be done remotely or autonomously,” said Michael Beiro, Founder and CEO of Linebird. “Our mission is to continue innovating and improving UAS technology so that jobs such as manually running diagnostics and conducting repairs on live power lines can be done without human contact. We thank CIT GAP Funds for their support and financial investment, which is contributing to our plans for rapid growth.” **MORE...**

Company Spotlight: Airgility

AFWERX Revolutionizing USAF Flight Line Operations Challenge  
Airgility

Airgility is proud to announce that we have been selected to attend the AFWERX Revolutionizing USAF Flight Line Operations Challenge in order to solve Air Force flight line security problems. Out of 208 companies' submitted technologies, only 34 were selected for the pitch and showcase!

The AFWERX Revolutionizing USAF Flightline Operations initiative is made up of three challenges targeted at leveraging the best technology and services to create an integrated flightline while maintaining security, being resilient and increasing agility. These three challenges are running concurrently but are focused on separate topics. Airgility was selected to attend under the Flightline Security Subtopic, where we will be showcasing our very own MS-1 Kampe™. **MORE...**



Company Spotlight: Xelevate



New Unmanned Systems Flight Facility in Virginia  
Xelevate

As we get closer and closer to the big day, we have already begun strategizing and planning how we will be integrating and showcasing our sponsors for this event, ranging from UAS manufacturers from around the country, counter UAS, academic institutions, law enforcement, even local partners that are looking to have a role in promoting their services to the many industry facing organizations that will be on the field that day!

While our sponsorship levels are certainly catered towards UAS companies that are looking to showcase and highlight their emerging technologies, we'd like to at least give you and your team the opportunity to decide how much visibility and involvement you're looking to have, and we certainly want to maximize your importance to the local UAS community to the various companies and organizations that could really benefit from working alongside you in the future.

Get the benefits of showcasing your organization in front of a targeted audience! The Xelevate Grand Opening is expecting approximately 500 attendees from around the country, with local and state politicians, former directors of federal agencies, and industry leaders/Fortune 50 companies expected to be in attendance, come celebrate the first UAS Center of Excellence in the Washington D.C. region! **MORE...**



**VT**  
VIRGINIA TECH.  
\$60 Million  
NOVA Innovation  
Campus

Virginia Tech is expanding its presence in Northern Virginia after the university received a total of \$60 million to fund separate programs that will expand post-graduate technology education and conduct research to further integrate automated vehicles on roads and highways.

Boeing is making a \$50 million, multiyear commitment to help **create the Virginia Tech Innovation Campus in Alexandria**, which will be the most diverse graduate technology campus in the nation. It is the largest gift ever made to the university.

The funding will provide student scholarships, foster the recruitment of world-class faculty and researchers, and fund STEM pathway programs for underserved K-12 students looking to pursue a college degree and enter high-tech career sectors.

The Virginia Tech Innovation Campus, which will anchor a 65-acre innovation district in Alexandria, will be a major component of the Talent Investment Program. Through agreements with Virginia Tech and 11 other universities, the Commonwealth of Virginia launched the program to create 31,000 computer science and computer engineering graduates over 20 years to help meet the need for a highly skilled workforce to support the rapidly growing technology industry.

Virginia Tech has also received major funding for technology research at its campus in Falls Church. The General Assembly recently passed the biennial budget, which included \$10 million requested by Sen. Dick Saslaw of Falls Church to support a **Smart City testbed**. The City of Falls Church and the Virginia Tech Transportation Institute (VTTI) will develop the testbed in partnership with the Virginia Department of Transportation.

VTTI is widely recognized as a world leader in transportation safety research and analysis using a range of tools that include the Virginia Smart Roads, the Virginia Connected Corridors, and data acquisition systems.

City of Falls Church Mayor P. David Tarter said the testbed will focus on cutting-edge transportation solutions, including support for autonomous vehicles, adaptive lighting, and parking garage utilization indicators, which will reduce pollution and traffic congestion and improve public safety.

“The Future of Unmanned Systems in Virginia is Bright.” -Gov. Ralph Northam



AUVSI Xponential 2021

There’s no lack of technology or new products. Our coverage only touches on some of what’s on display at the show. The wide variety ranges from heavy-duty VTOL drones developed by Airgility to maritime marvels like Deep Trekker’s portable remotely operated vehicles (ROVs).

The technology at the show continues to trend toward commercial and military solutions—toys and consumer solutions migrating in the direction of the Consumer Electronics Show (CES). **MORE...**



AAC Awarded First Place

The U.S. Department of Commerce’s National Institute of Standards and Technology (NIST) recently announced the four winners of the 2021 PSCR First Responder UAS Endurance Challenge. In the four-stage challenge, participants designed, built and flew an unmanned aircraft system (UAS) with the goal of flying for the longest time possible while carrying a 10-pound (4.5-kilogram) payload. The first-place prize of \$100,000 went to Team AAC from Advanced Aircraft Company; the second-place prize of \$40,000 went to Team IE from Intelligent Energy Ltd; and the third-place prize of \$20,000 went to Team ARCC from Penn State’s Autonomous Robotics Competition Club. Additional honors were awarded to these teams and one other team, Team Endure Air, for eight \$5,000 Best-in-Class prizes. **MORE...**



NC Joins VA-FIX

The Virginia Department of Aviation (DOAV) has signed the North Carolina Department of Transportation (NCDOT)—Division of Aviation as the first state to collaborate, coordinate and disseminate information as a user of the Virginia Flight Information Exchange (VA-FIX). NCDOT—Division of Aviation’s plan is to create and develop a FIX system for its state.

“VA-FIX demonstrates great innovation and collaboration among state and local governments, industry partners, and the FAA,” said Secretary of Transportation Shannon Valentine. “Virginia welcomes North Carolina in prioritizing safety as we promote this emerging sector of our economy.”

The Commonwealth of Virginia developed VA-FIX as a platform for state and local government agencies to publish and share UAS advisory information with each other, UAS Service Suppliers, UxS operators, and the public to promote transparency and public safety. **MORE...**



Drone Flight Mgmt System

Mobius Logic, Inc. presents The Drone Flight Management System (“FMS”). FMS addresses the top challenges facing drone program directors—staying current on drone flight regulations and remaining compliant with corporate procedures. FMS enables drone program directors to reduce their risk exposure and control their costs of operations by providing an enterprise system that ensures compliance with all laws, abides by corporate health, safety, and environmental (HSE) guidelines, audits all flight activities and provides a collaborative flight planning and flight mission analysis capability to enhance productivity. The Drone FMS offers three core competencies:

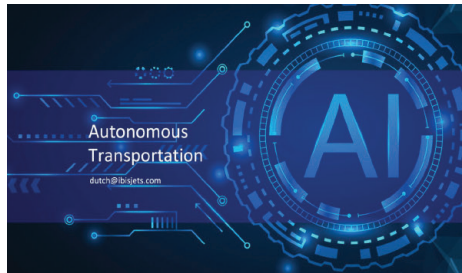
- 1) Airspace Access and Flight Planning;
- 2) Efficient Low-risk Flight Operations; and
- 3) A Complete System of Record for all flight activities.

The Drone FMS integrates with most ERP systems to streamline flight hour tracking and work order/mission statuses. It connects with the national airspace notification services such as NOTAM (notice to airman) and LAANC and is available in a multi-tenant and single-tenant installation on Azure. Using artificial intelligence, the Drone FMS creates safety profiles for pilots and missions enhancing the overall safety of corporate drone flights.

With FMS, companies can ensure safe, efficient drone operations. With our interactive airspace map, companies can review regulations and TFRs, plan flights, collaborate with crews, and gain access to fly in controlled airspace with LAANC (low altitude authorization and notification capability). FMS is a complete system of record where all your pilot certifications, flight hours, authorizations, aircraft, and projects are all located in one place. FMS provides transparency for managers and legal teams.

For any questions or assistance, please contact *Stephanie Johnson* [sjohnson@mobiuslogic.com](mailto:sjohnson@mobiuslogic.com)

IbisJets



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Our unique-in-the-world, self-running, manned and unmanned autonomous fleet management AI dynamically automates complex and

time-consuming dispatching and scheduling processes, in Real-Time (Virtual Fleet Dispatcher) thereby significantly reducing inefficient asset utilization (aircraft, ground vehicles, UAM, drones, employees), reducing operating expenses, enhancing safe operations (UTM and ATM), reducing employee workload and thus enabling safer, more efficient and more profitable fleet operations.

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For more information, please contact Dutch Jonkers at [dutch@ibisjets.com](mailto:dutch@ibisjets.com) or call 904-537-9347



New FAA Rules Increase Airspace Access for UAS

UAS Operators Have More Access to the Airspace After the FAA Recently Finalized Two New Regulations

Remote pilots who are licensed under Part 107 of the Federal Aviation Rules may now routinely fly UAS over people depending on the level of risk that a small UAS operation presents to people on the ground. These factors include the weight of the UAS and aircraft worthiness certification, among others.

The **Operation of Unmanned Aircraft Systems Over People** rule also permits nighttime operations for pilots who complete additional training or pass knowledge tests and equip their UAS with flashing lights that are visible from at least three statute miles.

The rule eliminates the requirement for a certificate of waiver from the FAA for typical operations over people and during nighttime. According to a report by the Association for Unmanned Vehicle Systems International, which is based in Arlington, 128 waivers to fly a drone at night were granted in Virginia since Aug. 2016 when Part 107, the Small UAS Rule, was implemented.

In a separate rule, the FAA will require drones to emit Remote Identification to locate aircraft in flight and their control stations. The FAA said the **Remote Identification of Unmanned Aircraft Systems** rule provides crucial information to national security, law enforcement, and other agencies charged with public safety to find a drone when it appears to be flying in an unsafe manner or where it is not allowed. It will also serve as the foundation of the safety and security requirements that will be needed for more complex drone operations, including beyond visual line of sight.

Drone pilots have until Sept. 16, 2023, to upgrade their aircraft with remote ID and start complying with the rule. **MORE...**



“The Future of Unmanned Systems in Virginia is Bright.” -Gov. Ralph Northam



## VUSC’s Annual Stakeholder Meeting Goes Virtual

This year our Annual Stakeholder Meeting featured 18 different companies, representing each region of the Commonwealth. Despite our yearly industry celebration needing to be held virtually this year the excitement for unmanned systems and its growth in Virginia was obvious with more than 872 UxS industry representatives attending.

If you missed the Stakeholder Meeting here is your link to the video Replay of those presentations: [PLAY VIDEO](#)

### 2021 UMS Advisory Board



**Andrew (Andy) Alden**  
Program Leader, VA Tech Transportation Institute



**Jon Greene**  
Associate Director for Strategic Development, Institute for Critical Technology and Applied Science at Virginia Tech



**Chris Sadler**  
Deputy Chief/Deputy Director, York County Department of Fire and Life Safety



**Joe Allman**  
CEO, UAV Pro



**Lindsay Hurt**  
Managing Director, Products Sectors, Virginia Economic Development Partnership (VEDP)



**Scott Strimple**  
Chief Executive Officer, Virginia UAS



**David Barton**  
Formerly Director Aerial Services, Chief Pilot , Draper Aden



**Nick Swayne**  
Executive Director, 4-Virginia, James Madison University



**David Bowles**  
Executive Director, VA Institute for Spaceflight & Autonomy



**Tombo Jones**  
Director, Virginia Tech Mid-Atlantic Aviation Partnership (MAAP)



**Tom Walker**  
CEO, DroneUp



**Nevin Carr**  
Vice President, Navy Strategic Account Executive, Leidos



**Samantha Magill**  
Business Development Manager, Aeronautics Research Directorate, NASA Langley Research Center



**Charles Werner**  
Director, DroneResponders and Chair, National Council on Public Safety UAS



**Nick Devereux**  
Policy and Government Affairs, Wing



**Tom McMahon**  
Strategic Communications and Government Relations Advisor



**Amber Wilson**  
Aviation Technology Manager, Virginia Department of Aviation



**Lisa Ellman**  
Executive Director, Commercial Drone Alliance (CDA)



**Kimberly Read**  
External Relations Manager, Virginia Commercial Space Flight Authority



**Todd Yeatts**  
Senior Manager of Government Operations, The Boeing Company



**Mike Fry**  
Director of Undersea Navy – C5 Systems Division, L3Harris Technologies



**Nate Robie**  
Manager, Unmanned Systems, Dominion Energy

### A Message from the Director

Hello everyone!

I hope this message finds you and your family well, especially in the midst of the COVID resurgence.

When I look back at the several months since our last update, what predominately comes to mind is the tremendous amount of support our stakeholders have provided to the Virginia Unmanned Systems Center at CIT! That specifically applies to many of the initiatives featured in this edition of the newsletter.

Here are just a few examples of efforts that needed and received your support:

- In the spring, we produced an Unmanned Systems Stakeholder Webinar that highlighted several efforts underway to help grow the UxS industry in the Commonwealth. Not only did 18 companies agree to participate in the online meeting, but we had a virtual attendance of over 400 viewers. There is a considerable appetite for information about UxS, and we plan to do more of these types of events.

- Earlier this summer, we held a series of workshops and meetings with the Virginia Institute for Spaceflight and Autonomy (VISA) and the Center for Naval Analysis (CNA) to explore opportunities for unmanned systems in the maritime environment. In addition to Virginia’s Secretary of Public Safety and Homeland Security Brian Moran, there were numerous representatives from public safety organizations in the Hampton Roads region, the U.S. Coast Guard, the Port of Virginia, the FBI, and over 100 companies at our maritime kick-off summit in Norfolk. Stay tuned for follow-up information, including an “Announcement of Opportunity,” coming out soon.

- Most recently, many members of Virginia UxS community flew to Atlanta to participate in AUVSI Xponential. Although we chose not to host a pavilion at this year’s conference, we were able to meet with many key companies, both from within Virginia as well as outside the state, to discuss industry issues and potential opportunities while walking the trade show floor and attending seminars.

We are grateful for all you do to support and extend Virginia’s national leadership in UxS. There are many more activities planned for the remainder of 2021, and we appreciate your continued interest in our programs and your significant contributions that make them successful.

Sincerely,  
Tracy Tynan  
Director, Virginia Unmanned Systems Center at CIT

