Advanced Air Mobility in Virginia

Virginia Aviation Caucus, February 2024

Now is the time for AAM

Virginia Unmanned Systems Center at VIPC

AAM is forecast to be a $16 Billion industry for Virginia with 17,000 mostly high-tech jobs

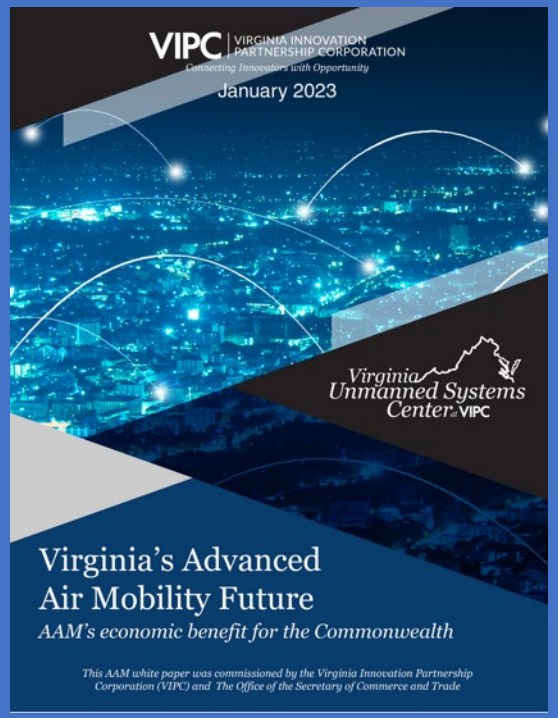
States and industry to develop and present a path forward for AAM that the FAA can endorse for safe operations

Virginia is a recognized AAM leader thanks to early pilot projects and research and development

VEDP, DOAV/Transportation, VIPC are working with VDEM, other users, and industry via the Virginia AAM Alliance (VAAMA)

VIPC's role in the nascent AAM industry is convening stakeholders and proving new innovations through technology demonstrations

DOAV will become the operational entity for Virginia when the regulatory process is clearer



VIPC report forecasts $16 billion Advanced Air Mobility industry to transform transportation in Virginia

Virginia Unmanned Systems Center at VIPC

$2.8 billion in local, state, and federal tax revenues

17,000 full-time aerospace industry and other jobs to all regions of the Commonwealth

By 2045, about 7.7 million passengers per year, or over 21,000 passengers per day

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How will Advanced Air Mobility be used?

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Small/Medium Unmanned Aircraft Systems (UAS)

- Local missions for aerial work or cargo delivery (food, packages)
- Takeoff/landing infrastructure range none to specialized
- Electric vertical take-off and landing (eVTOL) aircraft

Urban Air Mobility

- “Local” missions up to ~75 miles around metropolitan areas
- Largely novel “vertiport” infrastructure
- eVTOL, potentially electric conventional take-off and landing (eCTOL) and electric short take-off and landing (eSTOL) aircraft
- 1 to ~6 passengers or equivalent cargo

Regional Air Mobility (RAM)

- "Intraregional" missions up to ~500 miles
- Primarily utilize existing (smaller) airports
- eCTOL and eSTOL aircraft
- Up to 19 passengers or equivalent cargo

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Roles and Responsibilities

Virginia Department of Aviation (DOAV)

- Policy, Regulations
- Digital and physical infrastructure
- Licensing and certification of AAM facilities
- Long-term, sustainable funding; taxes, user fees, grants

Virginia Innovation Partnership Corporation (VIPC)

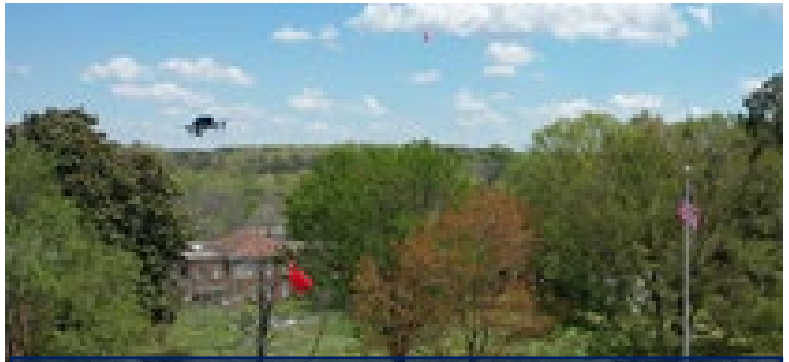
- Convening critical stakeholders in industry, academics and government
- Technology development, testing and operational demonstrations
- Virginia entrepreneur and small business support through grant programs and commercialization assistance
- Community outreach and education

Virginia Economic Development Partnership (VEDP)

- Recruit AAM operators and suppliers to Virginia
- Continue with ready-site program for manufacturing
- Coordinate with DOAV and VIPC to include most current information about Virginia's AAM ecosystem for proposal responses
- Conduct an aviation-related supply chain study.

VIPC Funds AAM Development for Virginia

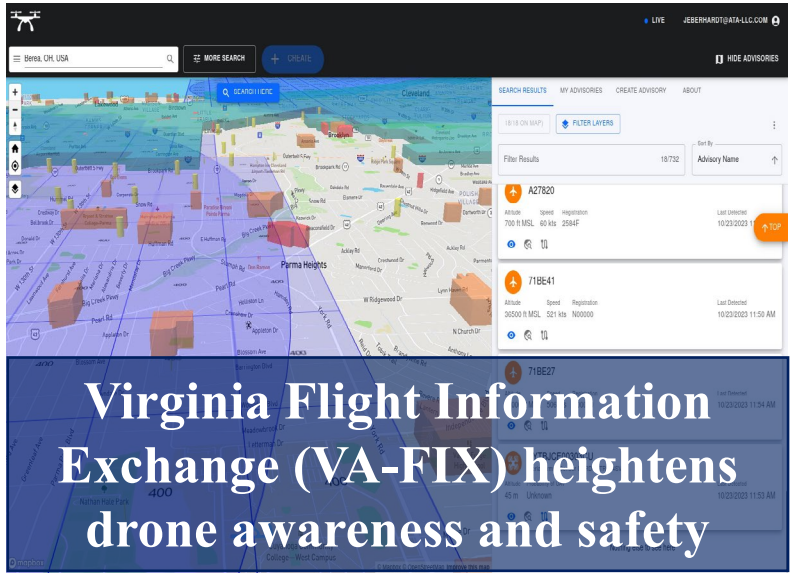
Virginia Unmanned Systems Center at VIPC



GO Virginia Grant for DroneUp to deliver Covid test test kits in Brunswick County

FAA BEYOND Program at Virginia Tech drone test site in Blacksburg

Virginia Venture Fund invests in Electra AAM aircraft developer in Manassas



Virginia Flight Information Exchange (VA-FIX) heightens drone awareness and safety

Nation's first FAA-designated Vertiport at Blackstone Perkinson Airport

Competition for Port Security and Emergency Response in Hampton Roads

VIPC Funds AAM Development for Virginia

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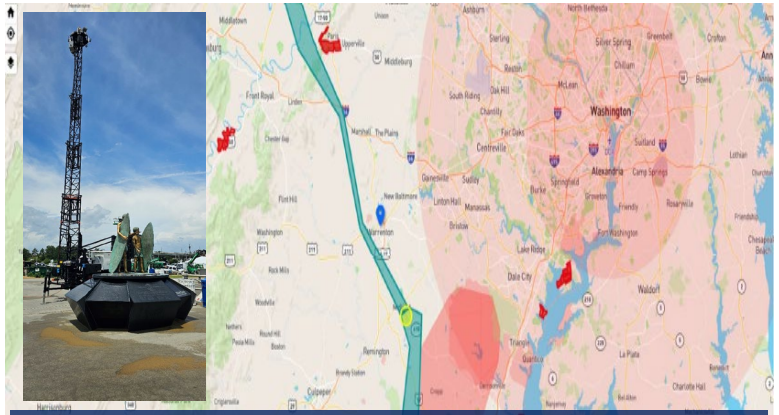
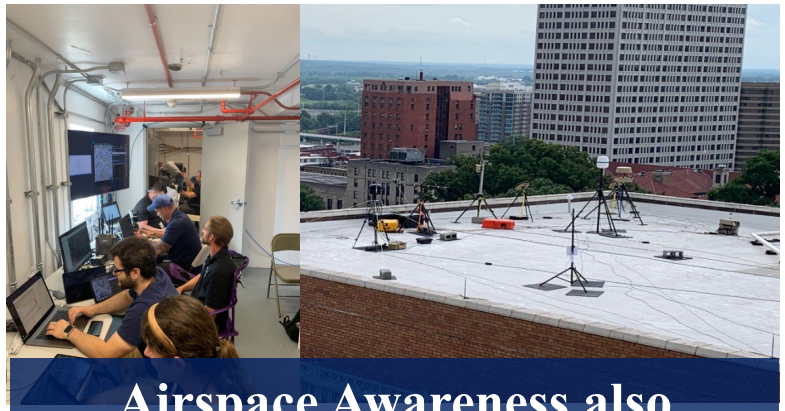


Stafford-Warrenton-Winchester AAM Enablement Area

Medical Package Delivery on Eastern Shore/Tangier Island

AAM Multistate Initiative to harmonize policy

UAV Activity Study indicates need for tools to identify operators to enhance safety



Airspace Awareness also supports Public Safety and Critical Infrastructure Security

Virginia AAM Alliance coordinates development across the Commonwealth

Operationalizing AAM: A natural development progression

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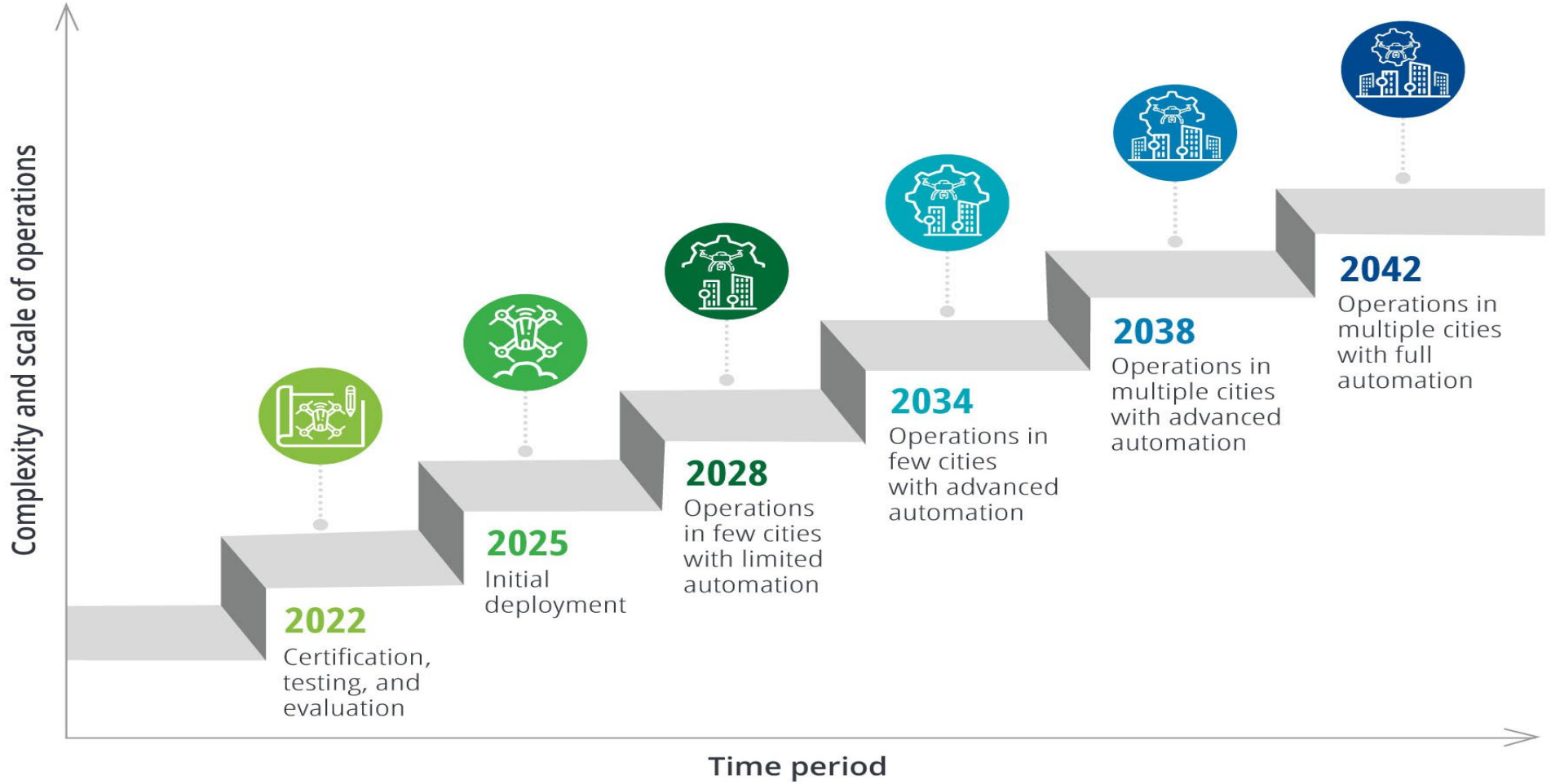

Source: Deloitte and AIA analysis and estimates based on 2021 Advanced Air Mobility Survey

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Additional Information

Social and Economic Benefits of AAM

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- Enables safer, faster travel
- Increases daily commute radius to 200 miles
- Leapfrogs infrastructure projects to deal with transportation deserts
- Unites geographically constrained areas and lessens the burden on ground infrastructure
- Brings housing options closer to economic centers and closes social divides.

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Social and Economic Benefits of AAM

Virginia Unmanned Systems Center at VIPC

- Stronger connection of rural to urban areas for education and job opportunities
- Shortens emergency response times and enhances medical services in underserved areas
- Reduces carbon emissions and noise by using efficient and quiet electric aircraft
- Increases utility of general aviation airport infrastructure
- Expands workforce and economic development opportunities

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Eastern Shore / Tangier Island Medical Package Delivery

- Lab work / Medical Tests
- Prescriptions
- Testing supplies
- Vaccines
- Critical paperwork
- Critical supplies
- Other government immediate needs

RIVERSIDE

VISA VIRGINIA INSTITUTE FOR SPACEFLIGHT & AUTONOMY

droneUp

ACCOMACK NORTHAMPTON Virginia's Eastern Shore

TEMS, Inc.

Virginia Unmanned Systems Center at VIPC

Virginia PUBLIC SAFETY Innovation Center at VIPC

How we get there

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Create an AAM-enabled route system

Establish specific, complete, AAM-ready sites

Advance AAM operational development and demonstrations

Expand the supply chain to support the industry

Community Engagement and Education Initiative

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- Land use regulation of siting vertiports, other landing areas
- Building code, fire code, electric code
- Use in public safety by local governments
- Constructing & operating vertiports
- Equity in access to electric aviation
- Local airports as vertiports, STOL ports, charging stations, repair & maintenance stations.
- One area local governments won't have a role – the flying part of electric aircraft regulated by FAA.

Some things communities can be doing today to prepare for AAM

- Gather data about today's transportation patterns, ambient noise landscapes, and weather
- Understand current airspace usage in their jurisdictions
- Review existing heliport and airport facilities for AAM suitability
- Begin identifying new vertiport location opportunities, both through new development and through partnership with existing infrastructure
- Begin stakeholder conversations (e.g., community leaders, business community) to provide information on AAM as well as understand concerns
- Explore potential public/private partnership structures and opportunities for UAM Understand electric grid capacity and what needs to be done to facilitate broader transportation electrification, including AAM
- Identify their point person to lead the AAM conversation and open a dialogue with industry and the associations that are here to assist in this process

CAMI
Community Air Mobility Initiative

The Community Air Mobility Initiative (CAMI) provides resources for state and local decision makers in support of the responsible integration of AAM.

AAM/Airspace Awareness