



MARYLAND AAM

101 & FAQs

WHAT IS AAM?

AAM has emerged as an umbrella term describing the most recent set of emerging aerospace vehicles and technologies. AAM is a rapidly emerging sector within the advanced mobility field, differentiated from traditional aviation by using highly automated, often electric-drive aircraft types, that will become increasingly connected to an integrated network of vehicle systems over the next 10+ years.

AAM is anticipated to improve functions that are currently served by automobiles, helicopters, small/light aircrafts, and fixed/mobile structures such as cranes and structural tethering. It will enhance the movement of people, goods, and services while also yielding positive economic, societal, and environmental benefits.

WHAT IS THE MARYLAND AAM COUNCIL?

The Maryland AAM Council was established by Governor Wes Moore in January 2025. It is a collaborative effort between State and private partners to make recommendations to the Governor on how Maryland can best leverage and regulate AAM Systems.

Per Executive Order 01.01.2025.05, the council is to catalog existing State assets related to the advanced air mobility industry; engage with the advanced air mobility industry, regulators, local governments, and other relevant parties regarding the operation of advanced air mobility technologies in Maryland; study and identify opportunities to attract, develop, and grow the State's advanced air mobility industry; and identify potential use cases for advanced air mobility systems in the State.

AAM CAN BE BROADLY DIVIDED INTO THREE PRIMARY CATEGORIES:



Uncrewed Aircraft Systems (UAS)

Systems incorporating uncrewed aerial vehicles (UAVs) commonly referred to as 'drones'. UAS are used for a wide variety of purposes, both commercial and public service, in addition to recreationally.



Regional Air Mobility (RAM)

Electric or hybrid aircraft that transport people and goods between regions carrying between 5 and 30 passengers (or equivalent freight) along a distance of 30 to 300 miles or more. RAM vehicles will be able to utilize much of the existing infrastructure.



Urban Air Mobility (UAM)

Highly automated aircraft that provide commercial services to the public within an urban area. Will transport small passenger groups (5 or less) over short distances (5-40 miles), performing many roles currently fulfilled by helicopters at lower cost and with less environmental impact.

WHAT ARE THE BENEFITS OF AAM?

- Societal: offers an enhanced quality of life by providing the public affordable, safe, efficient, and accessible transportation of people, goods, and services
- Economic: creates jobs that stimulate the economy and generate tax revenue
- Environmental: offers alternative forms of transportation designed to reduce noise and emissions
- Enhancement of:
 - » Cargo & Freight Operations
 - » Commercial Delivery
 - » Medical Delivery
 - » Emergency Services
 - » Disaster Response
 - » Infrastructure Inspection
 - » Environmental Monitoring
 - » Regional Mobility
 - » Urban Mobility

COMMON AAM AIRCRAFT TYPES:

- Uncrewed Aerial Vehicle (UAV): aircraft that operates autonomously as part of a UAS
- VTOL: Aircraft capable of vertical climbs and/or descents and of using very short runways or small areas for takeoff and landings (FAA)
- Electric Vertical Takeoff and Landing (eVTOL) Vehicle: an electric VTOL
- Electric-Hybrid Vertical Takeoff and Landing (eh-VTOL) Vehicle: an electric-hybrid VTOL
- Hydrogen Vertical Takeoff and Landing (hVTOL) Vehicle: a hydrogen VTOL
- Electric Conventional Takeoff and Landing (eCTOL) Vehicle: electric versions of general aviation aircraft that require standard runways for takeoff and landing
- Short Takeoff and Landing (STOL) Vehicle: aircraft designed to operate from short runways
- Electric Short Takeoff and Landing (eSTOL) Vehicle: an electric STOL

*Advanced Air Mobility (AAM) terminology is constantly evolving; these definitions are widely accepted at present.



WHY IS AAM IMPORTANT TO MD?

In addition to the general benefits outlined above, AAM has the potential to significantly strengthen Maryland's robust aeromedical programs, capitalize on the state's many underutilized airports, and alleviate congestion in densely populated areas while improving connectivity to remote regions. The aerospace sector is already a significant employer in Maryland, offering opportunities to position for the future. There is an urgent need to evaluate and modify job training, skills development, and higher education to fully capture the potential of the AAM industry.

WHAT IS THE CURRENT STATE OF AAM?

UAS is an existing industry that is progressing rapidly. Drones generally weigh less than 55 pounds and operate within the site of the operator on the ground, but federal approval for larger commercial drones that can fly beyond visual line of sight (BVLOS) is imminent. Many companies are already using UAS for inspection and monitoring and others are actively using or testing UAS for delivery.

RAM and UAM vehicles are being developed and are in the demonstration phase. Electric chargers are being installed at airports throughout the country, with one install complete in Maryland and two under construction. Airports are assessing improvements to accommodate new AAM vehicle operations, often as part of a master planning process. RAM is anticipated to emerge sooner than UAM, as it can leverage existing infrastructure.

The regulatory environment for AAM is not yet established and there are critical gaps in low altitude communications, navigation, surveillance, weather systems, and integrated mobility. Federal guidance will need to be clarified and necessary infrastructure will develop over time as the industry grows.