



Maryland Aerospace & Technology Commission

FY2025 Annual Report

**Respectfully submitted to Governor Wes Moore and
the General Assembly of Maryland by Secretary Harry Coker, Jr.**

Maryland Department of Commerce

401 East Pratt Street

Baltimore, MD 21202

October 1, 2025

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Introduction

The Maryland Aerospace and Technology Commission (MATC) was created by the General Assembly through CHs 622 and 623 of the Acts of 2024 and signed into law by Governor Wes Moore on May 9th, 2024. Per statute, the MATC resides within the Department of Commerce to promote innovation in the fields of space exploration and commercial aerospace opportunities, including the integration of space, aeronautics, and aviation industries into the economy of the State. The Commission will develop and annually update a strategic plan to be submitted to the Governor, the Maryland Economic Development Commission, and the General Assembly on October 1st each year.

Board Composition

Commission Chair:

Dale Moore President, Southern Maryland Navy Alliance

Commission Vice Chair:

Georgie Brophy Board Member, Maryland Space Business Roundtable

Standing Members:

Barbara Lam	CFO / VP, Association of Universities for Research in Astronomy
Ryan Gerard	President Emeritus, Goddard Contractors Association
Robert Braun	Space Exploration Sector Head, Johns Hopkins University Applied Physics Lab
Jennifer Lotz	Director, Space Telescope Science Institute
Charles Ichoku	Director, GESTAR II, University of Maryland-Baltimore County
Alison Flatau	Chair, Department of Aerospace Engineering, University of Maryland-College Park
Harry Coker Jr.	Secretary, Maryland Department of Commerce

Appointed Members:

Robert Rashford [#]	CEO, Genesis Engineering
Janeen Tracy Uzzell [^]	CEO, National Society of Black Engineers
Cedric Jacob [#]	Director of Operations, Space Structures Complex, Rocket Lab
Willie Brown [*]	Vice Provost for Faculty Affairs, University of Maryland-Eastern Shore

Ex-Officio Non-Voting Members:

Alonzo Washington	Prince George's County, Maryland General Assembly – Senate
Mark Chang	Anne Arundel County, Maryland General Assembly – House
Cynthia Simmons	Acting Director, NASA Goddard Space Flight Center
Declined participation	Federal Bureau of Investigation
Declined Participation	National Oceanic and Atmospheric Administration

[#] Appointment expires 10/1/2028

[^] Appointment expires 10/1/2026

^{*} Appointment expires 10/1/2025

2025 Commission Activities

MATC’s activities focused on the following priorities:

1. Organization of the commission and election of leadership;
2. Identification of the strengths, weaknesses, opportunities and threats for the aerospace industry in Maryland; and
3. Creation of the MATC Strategic Plan.

The MATC held three meetings in fiscal year 2025 beginning with information exchange and ecosystem knowledge building and culminating in the development of the FY25 MATC Strategic Plan ([Appendix A](#)). Meetings were hosted at locations across Maryland, including the University of Maryland, Annapolis and the Maryland Department of Commerce in Baltimore. Discussions covered the formation of working groups, workforce development strategies, sources of financial investment, and industry support in a shifting federal landscape. Full meeting minutes are provided in [Appendix B](#).

MATC meetings held in fiscal year 2025

- | | |
|----------------------|--|
| 1. October 23, 2024 | College Park (University of Maryland campus) |
| 2. February 20, 2025 | Annapolis (Historic Inns of Annapolis) |
| 3. April 22, 2025 | Baltimore (Maryland Department of Commerce Spaces) |

Appendix A - FY25 MATC Strategic Plan



Maryland Aerospace & Technology Commission Strategic Plan

October 1, 2025

Elevating Maryland to Global Aerospace Leadership

Prepared For:

Governor Wes Moore
Maryland Economic Development Commission
Maryland General Assembly

Prepared By:

Maryland Aerospace and Technology Commission

Chair:	Dale Moore, Ed D	Southern Maryland Navy Alliance
Vice Chair:	Georgie Brophy	Maryland Space Business Roundtable

Maryland Department of Commerce

Executive Summary

Maryland is an aerospace state. Anchored by NASA’s Goddard Space Flight Center, Naval Air Station Patuxent River, Johns Hopkins University Applied Physics Laboratory, National Oceanic and Atmospheric Administration, and more than 9,000 aerospace companies, the state brings together a concentration of federal assets, industry partners, and specialized talent unmatched in the region. With the highest density of aerospace engineers in the nation and a strong pipeline of dual-use technologies, Maryland already plays a critical role across the aerospace value chain.

Maryland is also poised for growth. Federal research centers, top universities, and a highly skilled workforce are attracting “new space” and commercial sector investment positioning the state to expand its share of a global market that is scaling rapidly in areas such as space systems, autonomy, and advanced materials and manufacturing. These assets give Maryland a unique competitive advantage and a clear opportunity to convert national investments into lasting economic impact.

Importantly, aerospace investment delivers measurable returns. Maryland aerospace companies generate above-average wages, drive significant private investment, and expand the state’s tax base. Independent analyses, such as those conducted by the Maryland Economic Development Association, demonstrate that every state dollar invested in economic development yields many times that amount in economic impact—underscoring why aerospace merits prioritization.

To guide this growth and communicate Maryland’s strategic strengths, the state is defining its aerospace identity through the **SMART Aerospace Hub** framework—highlighting leadership in **Systems & Missions, Materials & Manufacturing, Autonomy, Resilient Navigation, and Talent**. This framework reflects Maryland’s rare ability to deliver end-to-end aerospace missions and technologies and serves as the foundation for its vision and strategy moving forward.

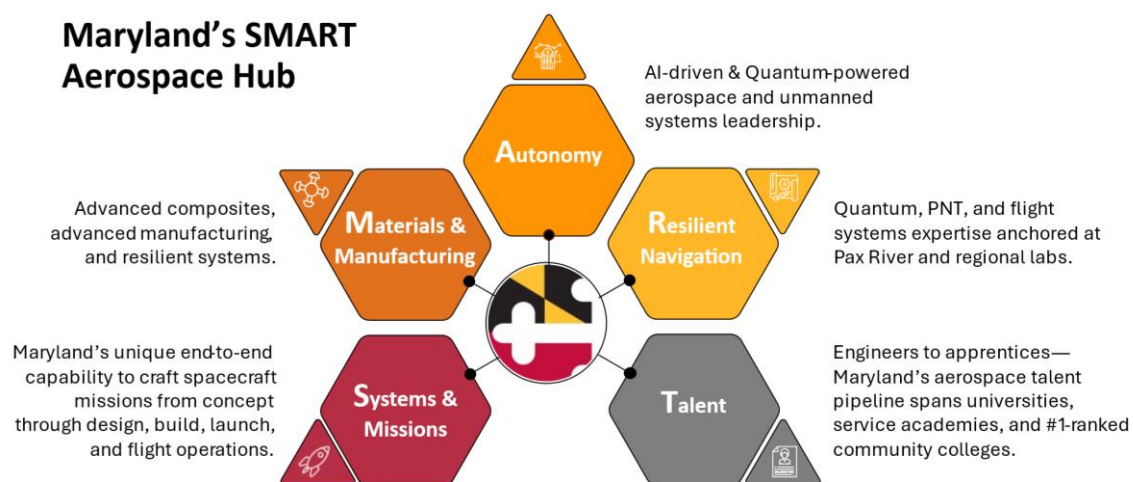


Figure 1: Maryland's SMART Aerospace Hub

Vision

To establish Maryland as the nation’s most advanced, agile and integrated aerospace hub—where discoveries are made, missions are born, built, and flown, and where innovation in autonomy, materials, manufacturing, and navigation drives the future of flight and space.

Mission

Create an integrated, collaborative aerospace ecosystem that attracts leading businesses and top talent, fosters breakthrough innovations in systems, materials, manufacturing, autonomy, and navigation, and generates high-value economic growth for Maryland.

Scope of this Strategy

This strategic plan is intentionally focused and disciplined, reflecting both Maryland’s fiscal realities and the need to avoid duplication with other state-led efforts. The Maryland Aerospace and Technology Commission concentrates on areas where Maryland has unique assets and can achieve outsized impact, specifically:

- Space technology and exploration
- Defense and security systems
- Advanced materials and manufacturing and resilient supply chains
- Aerospace software, AI, quantum, and precision navigation & timing (PNT)
- End-to-end workforce and talent development pipelines

Areas outside this scope, such as advanced air mobility and certain commercial aviation initiatives, are recognized as important but are being addressed through other commissions and state-led processes.

A regional approach grounds this strategy, aligning local strengths—from federal anchors in Central and Southern Maryland to launch capacity on and flight test ranges off the Eastern Shore—within a cohesive statewide framework.

Current Urgency

Maryland’s aerospace economy is at an inflection point. Aerospace is at the leading edge of competitive global markets. Federal investments in space, defense, and dual-use technologies are accelerating nationally, and other states are moving aggressively to capture these opportunities. Without near-term action, Maryland may forfeit competitive ground to states making aggressive investments.

At the same time, Maryland faces immediate challenges. Several of our federal anchors, including NOAA, NIST, and NASA Goddard, are experiencing uncertain or reduced growth trajectories. These headwinds underscore the importance of diversifying and strengthening Maryland’s aerospace economy.

Strategy Development Approach

The approach to developing this strategy has been straightforward and conversational, drawing on commissioner input and feedback from stakeholders. Early tools, such as an “As-Is State” diagram of Maryland’s aerospace ecosystem and a force field analysis of enablers and constraints, helped surface themes for discussion. From there, the Commission outlined the Maryland SMART Aerospace Hub Framework, design principles, and regional focus areas.

Guiding Design Principles

These principles provide a framework for immediate decision-making and investment, ensuring Maryland’s aerospace strategy is disciplined, high-impact, and aligned with measurable outcomes. They may be refined as the Commission advances its work and Maryland’s aerospace brand evolves.

- **Accelerate Innovation Through Speed and Agility** – Adopt models that shorten timelines and position Maryland as the fastest partner.
- **Focus on Dual-Use and High-Growth Technologies** – Concentrate resources on AI, autonomy, quantum, advanced materials, and resilient PNT.
- **Catalyze Private Capital, Don’t Replace It** – Use incentives to de-risk first builds/tests and spark private and corporate investment.
- **Build on Regional Strengths, Act as One Maryland** – Harness diverse assets across regions under a unified state plan.
- **Leverage Federal Anchors for State Growth** – Maximize opportunities from federal assets while building resilience against shifting priorities.
- **Invest in People, Not Just Infrastructure** – Prioritize apprenticeships, internships, clearances, and credentials that create lasting, high-wage careers.
- **Maximize Visible Returns for Citizens** – Tie every initiative to jobs, wages, supply chain resilience, and student STEM pathways.

Strategic Goals and Expected Outcomes

The Commission is committed to producing results that can be measured within the next year, while also laying the foundation for growth through 2035 and beyond.

To help decision-makers understand the range of possible impacts, the Commission has outlined potential outcomes at three levels of investment for both near-term action and long-term positioning. These scenarios illustrate what can be achieved with modest resources, how greater commitment can accelerate progress, and what transformational impact is possible with bold investment.

Immediate Action (next 20 months)

To move from strategy to action, we outline steps achievable within 20 months under three funding scenarios, giving policymakers clear options for speed and scale.

\$0 Level of Investment = Low Maintain Current Path	\$750k Level of Investment = Medium Targeted Progress	\$1.5M Level of Investment =High Accelerated Positioning
● Continue convening & coordination ● Produce a snapshot economic impact statement with very limited new data collection ● Leverage existing partnerships and branding channels	● Launch 2 pilot workforce/supplier programs ● Expanded economic impact analysis, strategic intelligence, & strategy refinement ● Seed marketing campaign for SMART Aerospace Hub (few key trade events)	● Multi-site pilot programs for workforce, expanded supplier incentives ● Expand the economic impact statement into a 10-year Aerospace Strategy baseline with policy levers and investment scenarios.

Risk: Maryland remains reactive; loses momentum to peer states	• Build initial public-private partnership commitments toward future investments	• Full-spectrum strategic intelligence and marketing campaign • Formalize statewide Aerospace Investment Council with early capital pooling mechanisms
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Figure 2: Recommended investment pathways over the next 20 months, showing how different funding levels translate into action, outcomes, and long-term positioning for Maryland's aerospace strategy.

Positioning for the Future (FY2028 - 2035)

The figure below illustrates how different levels of long-term investment can scale the SMART Aerospace Hub -- from maintaining Maryland's role as a convener and coordinator, to driving targeted growth in workforce and suppliers, to achieving transformational impact as a nationally recognized aerospace leader.

\$0 Annual Program Budget Level of Investment = Low No New Annual Funding	\$10M Annual Program Level of Investment = Medium Comparable to Build our Future Investment	\$50M Annual Program Budget Level of Investment = High Comparable to Rural Maryland Economic Development Fund
• Continued MATC convenings and Maryland ecosystem analysis • Expand international partnership forums • Industry coordination and partnership with federal agencies	• Establish competitive grant programs for workforce training targeting 1,500 workers • Fund supplier readiness programs such as AS9100 and AS9120 through partnership with Maryland Manufacturing Extension Partnership) • Fund accelerator sprints targeting SMART Technologies • Offer enhanced location and expansion incentives • Support early-stage site readiness at strategic aerospace locations through MEDCO partnership	• Scale workforce grant programs to reach 6,000 workers • Expand supplier readiness, accelerator sprints, and relocation incentives • Create a Maryland Aerospace Growth Fund to co-invest with federal and private partners in technology acceleration and commercialization • Partner with MEDCO on bond-backed infrastructure investments (range enhancements, test facilities)

Figure 3: Potential annual investment levels 2028-2035 and the projected outcomes for Maryland's aerospace industry.

Public investment in aerospace should yield measurable benefits for Maryland’s economy and citizens. Comparable state initiatives in other states, such as Space Florida, have documented multi-billion-dollar impacts on state GDP, job creation, and tax revenues.¹

Requests of the Maryland General Assembly

To realize Maryland’s aerospace potential, we recommend targeted statutory adjustments to strengthen the Maryland Aerospace & Technology Commission (MATC), including expanded authorities, membership, and reporting flexibility. We also request budget support for innovation funding, staff capacity, and a dedicated funded aerospace program line within the Department of Commerce. These changes will equip Maryland to attract commercial investment, secure federal tenants, elevate small businesses, and ensure the aerospace sector is recognized and resourced as a core driver of the state’s economy.

Conclusion and Next Steps

This strategy reflects Maryland’s commitment to act with discipline, urgency, and foresight. Every initiative outlined here is designed to maximize the return on each state dollar invested by leveraging federal anchors and private capital to deliver jobs, innovation, and long-term economic growth for Maryland’s citizens.

The release of the draft economic strategy on October 1 marks the beginning of Maryland’s aerospace momentum. While future investment decisions will ultimately shape the scale of impact, there are important no-cost actions the Commission can take immediately to sustain visibility, deepen stakeholder engagement, and position Maryland for success once resources are appropriated. These follow-on steps, taken by MATC and partner organizations, are designed to keep aerospace front-of-mind for policymakers, industry, and the public while demonstrating the Commission’s commitment to implementation and accountability.

- **Out-briefs for Legislative Staff** – Deliver tailored updates either in person (during Aerospace Day) or via Zoom, ensuring early alignment with General Assembly priorities.
- **Governor’s Office Briefing Note** – Provide a concise summary and talking points that link the strategy to statewide economic priorities, equity, and workforce agendas.
- **Federal Agency Alignment Sessions** – Convene briefings with NASA Goddard, Wallops, NAVAIR, NOAA and other federal anchors to share the strategy and identify joint opportunities.
- **Industry Listening Sessions** – Host 2–3 virtual roundtables with Maryland aerospace firms to gather feedback on implementation priorities and refine near-term action items.
- **Media/Comms Rollout** – Coordinate with Commerce communications to place op-eds, issue press releases, and brief trade press.
- **Regional Council Engagement** – Present the strategy at regional economic development councils and chambers of commerce to encourage local buy-in and advocacy.
- **Higher Education & Training Engagement** – Build on the momentum of the proposed Mid-Atlantic Aerospace Talent Hub (coordinated by the Maryland Space Grant Consortium) by

¹ **Space Florida.** “Space Florida: \$5.9 Billion Economic Impact on Florida’s Economy.” *Space Florida*, 21 May 2024, <https://www.spaceflorida.gov/news/space-florida-5-9-billion-economic-impact-on-floridas-economy>

convening universities, community colleges, training providers, and industry partners to design a scalable approach to workforce pipeline alignment with the SMART Aerospace Hub framework.

MATC Overview

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MATC Representatives

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Southern Maryland Navy Alliance	Dale Moore	President
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Commission Vice Chair:

Maryland Space Business Roundtable	Georgie Brophy	Board Member
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Commission Members:

Assoc. of Univ. for Research in Autonomy	Barbara Lam	CFO / VP
Genesis Engineering	Robert Rashford	CEO
Goddard Contractors Association	Ryan Gerard	President Emeritus
Johns Hopkins University Applied Physics Lab	Robert Braun	Space Exploration Sector Head
National Society of Black Engineers	Janeen Tracy Uzzell	CEO
Rocket Lab	Cedric Jacob	Director of Operations, Space Structures Complex
Space Telescope Science Institute	Jennifer Lotz	Director
University of Maryland-Baltimore County	Charles Ichoku	Director of GESTAR II
University of Maryland-College Park	Alison Flatau	Dept. Chair Aerospace Engineering
University of Maryland-Eastern Shore	Willie Brown	Vice Provost for Faculty Affairs
Maryland Dept of Commerce	Harry Coker Jr.	Secretary

Ex-Officio Non-Voting Members:

Maryland General Assembly – Senate	Alonzo Washington	Prince George's County
Maryland General Assembly – House	Mark Chang	Anne Arundel County
NASA Goddard Space Flight Center	Cynthia Simmons	Acting Director
Federal Bureau of Investigation		No Representative
National Oceanic and Atmospheric Administration		No Representative

Maryland's Aerospace Assets & Innovation Ecosystem: An Overview

Maryland is home to a unique concentration of federal laboratories, research institutions, military installations, and industry anchors that together create one of the nation's most robust aerospace and defense ecosystems. These assets are reinforced by state-level leadership, including Maryland Department of Commerce's Office of Strategic Industry Engagement – Aerospace and the Maryland Advanced Air Mobility Council, which align emerging technologies and defense priorities with long-term economic strategy. These assets provide both stability and opportunity, positioning Maryland as a state where cutting-edge science, national defense, and commercial enterprise intersect.

Federal Science and Research Anchors

NASA Goddard Space Flight Center (Greenbelt)

As NASA's largest space research center, Goddard is a cornerstone of Maryland's space and science innovation. Its projects like the Hubble Space Telescope or James Webb Space Telescope have transformed humanity's understanding of the earth, sun, and universe. Closer to home, for example, Goddard supports agriculture productivity with Precision Agriculture, enhances safety and resilience during natural disasters with the Earth Observing System measurements of flood mapping and wildfire monitoring. Goddard also manages the *Tracking and Data Relay Satellite System (TDRSS)*, providing critical global communications for both government and commercial missions including human space flight. Engineers and scientists at Goddard also develop and maintain advanced Earth- and space-science data systems and build satellite systems for other agencies such as NOAA. Beyond its high-profile missions, Goddard fuels Maryland's economy through partnerships with universities, private industry, and a highly skilled workforce.

Johns Hopkins University Applied Physics Laboratory (APL) (Laurel)

The Johns Hopkins APL is the largest University Affiliated Research Center (UARC) in the nation. With twelve specialized laboratories and hundreds of active projects, APL advances research in defense, cybersecurity, space systems, and national security. Its deep partnership with NASA (including leadership of the New Horizons mission to Pluto and the DART planetary defense test) demonstrates Maryland's central role in space science and applied innovation.

National Institute of Standards and Technology (NIST)

Located in Gaithersburg, NIST plays a critical role in advancing the measurement science and standards that underpin aerospace and aviation innovation. From developing precise time and frequency standards essential to Positioning, Navigation, and Timing (PNT), to establishing frameworks for quantum information systems, advanced materials, and cybersecurity, NIST research strengthens both commercial space ventures and defense applications. Its work ensures the reliability and interoperability of technologies that Maryland's broader aerospace ecosystem depends on, making NIST a foundational partner in the state's leadership in next-generation aerospace systems.

National Oceanic and Atmospheric Administration (NOAA)

Headquartered in Silver Spring, NOAA operates the Satellite Operations Facility (NSOF), the command and control hub for the nation’s environmental satellites. From this facility, NOAA manages the GOES (Geostationary Operational Environmental Satellites) and JPSS (Joint Polar Satellite System) constellations, which provide real-time data for weather forecasting, climate monitoring, and disaster response. NSOF is critical to both national resilience and global science, and it works closely with NASA, the University of Maryland, and private industry partners to advance Earth observation capabilities. This presence cements Maryland’s role at the center of satellite operations and environmental monitoring that support aviation safety, defense readiness, and commercial innovation.

Space Telescope Science Institute (STScI)

Located on the Johns Hopkins University campus in Baltimore, STScI operates the science program for the Hubble Space Telescope and the James Webb Space Telescope, and is preparing for the Nancy Grace Roman Space Telescope. As the global hub for mission science operations and data analysis for flagship observatories, STScI attracts top talent, manages billions of dollars in research activity, and enables groundbreaking discoveries in astrophysics and planetary science. Its presence in Maryland cements the state’s role as a leader in space science, data systems, and international collaboration.

Association of Universities for Research in Astronomy (AURA)

AURA is a nonprofit consortium of universities and institutions that operates astronomical observatories and space science facilities on behalf of NASA and the National Science Foundation. Headquartered in Baltimore alongside the Space Telescope Science Institute, AURA manages the operations of the Hubble and James Webb Space Telescopes and will operate the forthcoming Nancy Grace Roman Space Telescope. Its presence in Maryland anchors a significant share of the nation’s astrophysics research infrastructure, linking Maryland’s universities with a global community of scientists and reinforcing the state’s leadership in space science.

Military Installations Driving Innovation:

- **Naval Air Station Patuxent River (Pax River):** Pax River is the home of Naval Air Systems Command (NAVAIR) Headquarters responsible for the full life cycle program management of naval aviation weapon systems, and the Naval Air Warfare Center Aircraft Division, which provide the full spectrum of research, development, test, and evaluation (RDT&E). Facilities such as the *Atlantic Test Range* – the busiest flight test center in the world – and the *Joint Simulation Environment* enable cutting-edge physical and virtual aviation testing and training. Patuxent River is also the home of the U.S. Navy Test Pilot School which trains elite aviators from around the world. Pax River is not only a hub for aerospace innovation but also a pillar of Maryland’s regional economy and workforce.
- **U.S. Army Garrison Aberdeen Proving Ground (APG):** APG hosts the Army’s Combat Capabilities Development Command (DEVCOM) Army Research Laboratory, where next-generation technologies in robotics, artificial intelligence, energetics, and communications are developed. As a center for Army science and technology, APG drives innovation that directly shapes the future of national defense.
- **U.S. Army Research Laboratory (Adelphi and Graces Quarters):** The Army Research Laboratory (ARL) serves as the Army’s corporate research hub, conducting foundational science that informs future defense and aerospace capabilities. With major campuses at Adelphi Laboratory Center and Graces Quarters, ARL advances work in autonomy, artificial intelligence, energetics, advanced materials, and secure communications. Its research underpins Army modernization priorities and directly supports aerial platforms, unmanned systems, and resilient networks. ARL also collaborates extensively with

Maryland universities, creating a strong pipeline for innovation and workforce development while transitioning early-stage discoveries into applied defense systems.

Several of Maryland’s most prominent federal anchors—including NOAA, NIST, and NASA Goddard—face uncertain growth trajectories, as noted in the [Current Urgency](#) section. This dynamic reinforces the need to complement federal assets with strong commercial and defense sector growth.

Transportation and Logistics Infrastructure

Baltimore/Washington International Thurgood Marshall Airport (BWI)

BWI is a major national hub, serving as a key operations center for Southwest Airlines and ranking among the busiest commercial airports in the Mid-Atlantic. Its cargo capacity and connectivity support both business and defense logistics, making it a vital component of Maryland’s aerospace ecosystem.

Port of Baltimore

The Port of Baltimore is one of the nation’s leading gateways for international trade. It ranks first among U.S. ports in the import and export of passenger vehicles and is a top hub for roll-on/roll-off cargo. With the deepest harbor in the Chesapeake Bay and unmatched access to Midwest markets, the Port enhances Maryland’s strategic value for both defense supply chains and commercial trade.

Chesapeake Bay and Regional Connectivity

Maryland’s Chesapeake Bay serves not only as an ecological treasure but also as a transportation and logistics corridor, linking the state’s defense and aerospace assets to the broader Mid-Atlantic region. The Bay connects Maryland directly to **Virginia’s Wallops Flight Facility (managed by NASA Goddard Space Flight Center)** and the **Mid-Atlantic Regional Spaceport (MARS)**, extending the state’s role in space launch and testing activities.

Regional Airports and Multimodal Connectivity

Beyond BWI, Maryland’s network of regional airports adds agility and resilience to the aerospace ecosystem. Martin State Airport near Baltimore provides long runway capacity and recent infrastructure investments that support aerospace testing and operations. St. Mary’s County Regional Airport, located just miles from Naval Air Station Patuxent River, supports charter flights, training, and close industry collaboration. Hagerstown Regional Airport offers dual runways and proximity to interstate freight corridors, making it a key node for logistics and supply chain operations. Together, these airports enhance mobility for people, parts, and test activities across the state. Their value is reinforced by abundant rail access and highway connectivity, which enable rapid overland transport of aerospace components.

Looking ahead, the planned retirement of A-10 aircraft currently operated by the Air National Guard at Martin State will free additional capacity at the airport. This transition creates a strategic opportunity for Maryland to repurpose facilities and runway capacity for aerospace testing, maintenance, and commercial applications.

Industrial and Manufacturing Capabilities

Maryland hosts a long history of aircraft and aerospace manufacturing, with key hubs in Hagerstown and Middle River. These industrial centers continue to produce air and space systems that support both defense and

commercial markets, complementing the state’s research, testing, and logistics infrastructure. Together with small and medium-sized suppliers across the state, Maryland’s manufacturing base ensures that ideas generated in labs and test facilities can transition to production at scale.

Maryland also holds a unique place in aerospace manufacturing history. The Glenn L. Martin Company established one of the nation’s first full-scale aircraft manufacturing facilities in Middle River in 1929, a site that remains in aerospace use today. Western Maryland shares this legacy: the Kreider-Reisner Aircraft Company (later purchased and operated by Fairchild Aviation) produced its first plane in Hagerstown in 1926, launching a century of contributions to aviation. Together, these histories highlight Maryland’s role as one of the oldest and most enduring aerospace manufacturing centers in the United States.

State Leadership and Governance

Maryland complements its federal, military, and industrial anchors with strong state-level coordination and policy leadership. The **Maryland Advanced Air Mobility (AAM) Council**, established by the state legislature, is guiding the integration of emerging aviation technologies such as electric vertical takeoff and landing (eVTOL) aircraft, urban air mobility (UAM), regional air mobility (RAM) and supporting infrastructure. This council brings together public agencies, industry leaders, and research institutions to ensure Maryland is at the forefront of next-generation aviation. In addition, bodies such as the **Maryland Military Installation Council (MMIC)** and the **Maryland Defense Forum** provide regular venues for collaboration among military leadership, state and local officials, and private industry. Together, these governance structures ensure that Maryland’s aerospace ecosystem is not only rich in assets but also strategically aligned and future-focused.

Educational Excellence

Maryland’s aerospace and defense leadership is strengthened by a world-class education system producing engineers, scientists, and leaders in the field. Three universities in Maryland rank among the top research universities in the nation (R1 in the Carnegie Classification of Institutions of Higher Education), namely, the University of Maryland College Park (UMD/UMCP), the University of Maryland Baltimore County (UMBC), and Johns Hopkins University. Both UMD and UMBC are part of the University System of Maryland (USM), the state’s public higher education system.

University of Maryland, College Park

The A. James Clark School of Engineering is ranked #16 nationally for undergraduate engineering and #18 for graduate engineering, according to *U.S. News & World Report*. Specifically, among public institutions, the aerospace engineering program is ranked #11, and the undergraduate engineering school overall is #16, while the graduate school is at #18. Additionally, College Factual places UMCP’s aerospace & aeronautical engineering bachelor’s program at #11 in the nation. U.S. News also ranks UMCP’s engineering school #11 among public universities overall, with aerospace among five specialties in the Top 25.

University of Maryland, Baltimore County (UMBC)

UMBC is nationally recognized for its strength in computer science, engineering, and data analytics, with particular expertise in cybersecurity and human-centered computing. In the 2025 edition of Best Colleges by the U.S. News & World Report, UMBC is nationally ranked as No. #14 in Most Innovative Schools and #15 in Best Undergraduate Teaching (tie). Through programs such as the Center for Cybersecurity and the Earth & Space

Institute, UMBC contributes directly to Maryland’s leadership in aerospace software, autonomy, and earth observation. Its close partnerships with NASA Goddard, federal agencies, and the region’s tech sector make UMBC a critical pipeline for talent and applied research in aerospace-aligned fields.

Johns Hopkins University

The Whiting School of Engineering is consistently ranked among the nation’s top engineering schools, with its graduate programs positioned #13 nationally by *U.S. News & World Report*. Its undergraduate engineering programs are also highly ranked at #13 (tie), and the Department of Biomedical Engineering frequently holds the #1 spot for both undergraduate and graduate BME programs.

United States Naval Academy

A premier institution among service academies, USNA was ranked the #1 Top Public School from 2021 to 2024 and its engineering program stands #4 among National Liberal Arts Colleges. It is also one of only 25 institutions to receive the prestigious Carnegie “Leadership for Public Purpose” classification.

Community Colleges and Trade Schools

Maryland’s network of 16 state community colleges is ranked #1 nationally by *WalletHub* for their combined performance and impact. The Pittsburgh Institute of Aeronautics in Hagerstown was ranked the #1 two-year trade school in the nation by *Forbes*, recognizing its critical role in training the aerospace and technical workforce.

Maryland Blueprint for Education

The Blueprint for Maryland’s Future is a comprehensive statewide education reform that expands access to early childhood programs, strengthens college and career readiness, and raises teacher pay and professional standards. For aerospace, the Blueprint is especially relevant in its emphasis on career and technical education pathways, STEM exposure, and alignment with workforce needs. By ensuring a strong foundation from K-12 through postsecondary training, the Blueprint expands the long-term pipeline of skilled technicians, engineers, and innovators essential to sustaining Maryland’s aerospace ecosystem.

Looking ahead, Maryland can expand its leadership by developing world-class apprenticeship and internship programs in next-generation aerospace technologies. Focused on electric aircraft, launch vehicles, and satellite systems, such programs would deepen the talent pipeline while signaling to industry and federal partners that Maryland is investing in the workforce of the future.

Strong Industry Presence

Maryland hosts an unparalleled assembly of aerospace and defense companies, spanning established primes, major suppliers, and innovative “new space” startups.

Aerospace and Defense Prime Contractors

Maryland is home to significant operations of major defense and aerospace firms, including **Lockheed Martin, Northrop Grumman, Boeing, Bell Textron Systems, BAE Systems, General Dynamics, Raytheon, L3Harris Technologies, DCS Corporation, and Kratos Defense & Rocket Support Systems.**

Aerospace Services & Technology Suppliers

A broad supplier ecosystem supports the industry, with firms such as **AVIAN LLC, Platform Aerospace, Coherent Technical Services (CTSI), SPARC Engineering, Genesis Engineering, Leidos, Leonardo DRS, Sierra Nevada Corporation, KBR, Booz Allen Hamilton, and The MIL Corporation** bringing cutting-edge technologies and project support.

Emerging Aerospace/Aviation Firms

A surge of innovation is evident in Maryland's emerging firms:

- **Rocket Lab** is developing its Neutron rocket in Middle River, utilizing robotic additive manufacturing with carbon-fiber composites, typifying new space manufacturing practices.
- Other fast-growing aerospace and aviation startups like **Quantum Space, IonQ, Edgybees Inc, Patero Inc., Treseder AI, and Ten One Aerospace** reflect Maryland's vitality in agile, high-technology aerospace-related development.

Industry Spotlight

Lockheed Martin – Global aerospace and defense leader with major operations in Maryland supporting advanced aircraft, space systems, and national security programs.

Kratos Defense & Rocket Support Systems – Provides high-performance unmanned systems, space vehicles, and rocket support services for defense and commercial customers.

Platform Aerospace – Specializes in aircraft modification, integration, and rapid prototyping for mission-critical applications.

SPARC Engineering – Engineering services firm delivering systems integration, test, and sustainment solutions for aerospace and defense clients.

Quantum Space – Innovator developing cislunar spacecraft and services to support navigation, logistics, and operations in the Earth-Moon system.

Ten One Aerospace – Emerging company with expertise in Rendezvous, Proximity Operations and Docking (RPOD)

International Partnerships: Korea Aerospace Agency (KASA)

Maryland's aerospace ecosystem is increasingly global in scope. In 2025, Maryland formalized a partnership with the Korea Aerospace Agency (KASA), headquartered in Gyeongsangnam-do Province. With Maryland home to NASA Goddard and Gyeongsangnam-do home to KASA, both regions face similar opportunities and challenges in workforce and infrastructure development to support their respective aerospace industries. The partnership builds on a 2023 Memorandum of Understanding (MOU) between Maryland and Gyeongsangnam-do and reflects shared goals of fostering private-sector leadership in commercial space while positioning government-funded institutions to focus on long-term, high-risk research.

KASA, established in 2024 under Korea's Ministry of Science and Information and Communications Technology (ICT), seeks to emerge as a top five global aerospace agency. Its policies emphasize repeated

launches of the Nuri rocket, development of advanced and reusable launch vehicles, and construction of a spaceport and supporting infrastructure. Under the Maryland–Gyeongsangnam-do partnership, the two regions intend to support one another in growing their aerospace industries. This agreement highlights Maryland’s role as an international collaborator and its attractiveness as a partner for emerging space powers.

Maryland's SMART Aerospace Hub

Purpose

The SMART framework organizes Maryland's aerospace identity around five strengths: **Systems & Missions**, **Materials & Manufacturing**, **Autonomy**, **Resilient Navigation**, and **Talent**. The framework aligns assets, investments, and partnerships so Maryland can deliver end-to-end missions from concept through design, build, test, launch, and operations.

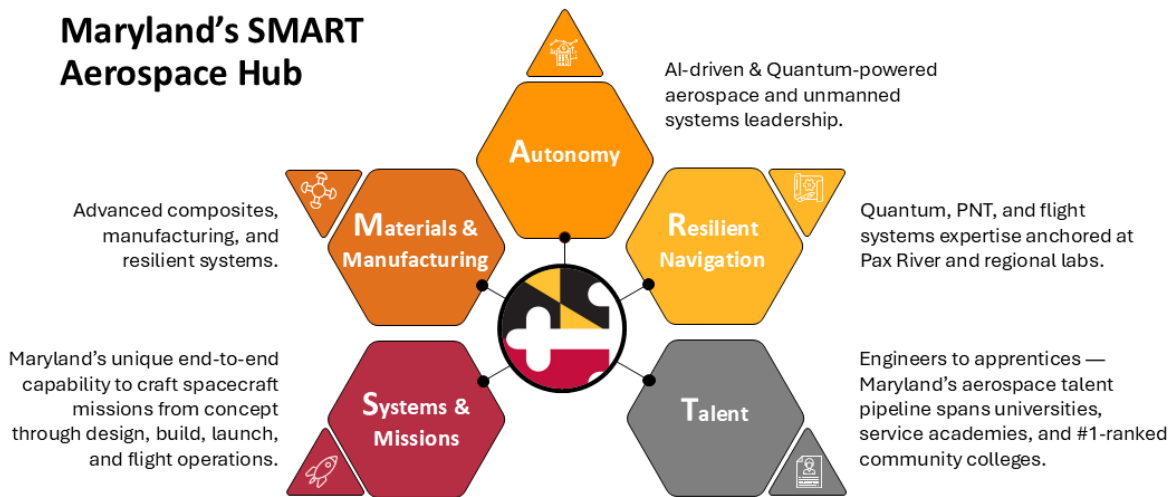


Figure 4: Maryland's SMART Aerospace Hub

Systems & Missions. Mission design, integration, test and evaluation, and operations across civil, defense, and commercial domains.

→ *Aligned assets:* NASA Goddard Space Flight Center; Johns Hopkins Applied Physics Laboratory; Naval Air Station Patuxent River with NAVAIR and NAWCAD (including Atlantic Test Range and Joint Simulation Environment); Space Telescope Science Institute; NOAA's Satellite Operations Facility.

Materials & Manufacturing. Advanced composites, additive and other advanced manufacturing, and resilient systems for air and space platforms.

→ *Aligned assets:* Middle River and Hagerstown manufacturing hubs; Rocket Lab Neutron development; UMD and USM materials programs; NIST materials and metrology leadership; statewide SME supplier base.

Autonomy. AI and PNT-enabled flight systems, robotics, software-defined aerospace, and test environments.

- *Aligned assets:* DEVCOM Army Research Laboratory and APG AI/robotics programs; APL autonomy; UAS and avionics test capabilities at Naval Air Station Patuxent River; and the St. Mary’s County AeroPark Innovation District integrating leading businesses with the University System of Maryland – Southern Maryland (USMSM) “Southern Maryland Autonomous Research & Technology” (SMART) Facility; and University of Maryland Clark School of Engineering’s “Maryland Autonomous Technologies Research Innovation and eXploration” (MATRIX) Lab.

Resilient Navigation. Positioning, navigation, and timing (PNT), quantum-enabled sensing, and robust comms and timing for contested environments.

- *Aligned assets:* NIST time and frequency standards; APL and UMD PNT research; Pax River range capabilities; NOAA and NASA Earth-observation data that feeds navigation, weather, and safety systems; quantum companies and labs in the DC–Maryland corridor.

Talent. A complete talent stack from skilled trades and technicians to world-class engineers and researchers.

- *Aligned assets:* JHU, UMD, UMES, Capitol Technology University, and the University System of Maryland; U.S. Naval Academy; Maryland’s #1-ranked community college network; Pittsburgh Institute of Aeronautics (Hagerstown); Maryland’s Blueprint for Education, internships and apprenticeships; and security clearance pipelines.

How SMART guides implementation

The framework translates directly into action: prioritize projects that integrate multiple SMART elements, fund pilots that demonstrate measurable outcomes within 12–20 months, and scale initiatives that connect regional strengths into a single statewide value chain. Example signals of progress include:

- Mission milestones achieved and transitions from prototype to program of record.
- Supplier certifications (AS9100/9120), additive and composites capacity added, and time-to-first-article reduced.
- Autonomy and PNT test events completed with published results and standards contributions.
- Workforce indicators: internships and apprenticeships started, credentials earned, placements and security clearances in process.

SMART is also the organizing lens for collaboration across Maryland’s aerospace

AS9100 and AS9120 are international Quality Management System (QMS) standards from the International Aerospace Quality Group (IAQG) that build on ISO 9001, a broadly used industry quality standard, by adding aerospace-specific requirements. AS9100 applies to organizations that design and produce aerospace products and services, while AS9120 is for distributors of aerospace parts and materials. Both standards enhance quality, safety, and traceability within the aerospace supply chain, but AS9100 includes requirements for design change control and risk management not found in AS9120, which focuses on traceability.

ecosystem. The governance model that operationalizes SMART is detailed in the Implementation Framework.

By grounding strategy in SMART and tying each element to named assets and regions, Maryland presents a coherent, investable story: a state that can design, build, test, and operate aerospace systems, while growing the materials, autonomy, navigation, and talent foundations that make those missions possible.

Current Urgency

Federal and commercial activity in space and defense is accelerating as is interstate competition for key firms and assets. Maryland's assets position the state to capture this growth, but the window is narrowing as neighboring states invest aggressively, and federal priorities continue to shift. Acting now reduces the risk of supply-chain erosion and talent flight while signaling that Maryland will lead in systems, materials, autonomy, resilient navigation, and talent.

- **The market is surging.** The global space economy reached a record \$613B in 2024, with commercial activity driving most of the growth; launch cadence also hit new highs and is increasing through 2025.²
- **Competitor states are moving fast.** Virginia opened Rocket Lab's Launch Complex 3 on Wallops Island and is supporting spaceport infrastructure, while the company targets Neutron's first flight and a rapid ramp thereafter. These are all moves that strengthen Virginia's claim on Mid-Atlantic launch and test capacity, and that Maryland can leverage via strategic effort and unique proximity.
- **Federal demand is pivoting toward autonomy and rapid fielding.** DoD's Replicator initiative is transitioning attritable³ autonomous systems to the services, with recent milestones and early procurement choices underscoring urgency around uncrewed systems and counter-UAS (areas aligned with Maryland's autonomy and software strengths.)⁴
- **Earth-observation and PNT-relevant programs remain active but volatile.** NOAA's GeoXO constellation continues instrument and spacecraft contracting, even as policymakers revisit acquisition approaches and budgets.⁵ The current federal administration has signaled a demand for faster and cheaper, changing long-established norms.
- **Budget timing and uncertainty raise execution risk.** NASA and related science accounts face late-cycle appropriations dynamics and potential continuing resolutions, which can delay program starts and contract flow-downs, making state-level actions that bridge timing gaps more valuable.
- **Federal Anchors Under Pressure.** Maryland's federal science anchors, long the backbone of the state's aerospace economy, are facing a period of uncertainty. NOAA, NIST, and NASA Goddard are not currently on growth trajectories, and in some cases are confronting reductions. While these institutions remain vital assets, Maryland must be prepared to offset any contraction through new commercial investment, defense sector expansion, and deeper industry partnerships. Recognizing these

² Space Foundation Editorial Team. "The Space Report 2025 Q2 Highlights Record \$613 Billion Global Space Economy for 2024, Driven by Strong Commercial Sector Growth." *Space Foundation*, 22 July 2025, <https://www.spacefoundation.org/2025/07/22/the-space-report-2025-q2/>. Accessed 10 September 2025.

³ Magnuson, Stew. "The Meanings of 'Attritable' and 'Expendable.'" *National Defense Magazine*, 9 Feb. 2022, www.nationaldefensemagazine.org/articles/2022/2/9/the-meanings-of-attributable-and-expendable

⁴ Vincent, Brandi. "DOD Touts 'Successful Transition' for Replicator Initiative — but Questions Linger." *DefenseScoop*, 3 Sept. 2025, <https://defensescoop.com/2025/09/03/dod-replicator-drone-tech-transition-fielding-questions-linger/>. Accessed 10 September 2025.

⁵ Fernholz, Tim. "NOAA's Weather Sat Do-Over Starts with Less." *Payload*, 29 Aug. 2025, <https://payloadspace.com/noaas-weather-sat-do-over-starts-with-less/>. Accessed 10 September 2025.

headwinds underscores the urgency of diversifying Maryland's aerospace economy to ensure resilience in the face of shifting federal priorities.

Implication for Maryland: With commercial launch momentum nearby, DoD accelerating autonomy, and federal EO/PNT programs evolving, *Maryland must move within the next 12–20 months to lock in supplier readiness and workforce pipelines, and position facilities and financing tools that keep programs, companies, and talent anchored here.* At the same time, several of Maryland's federal anchors, including NOAA, NIST, and NASA Goddard, face uncertain growth trajectories. Addressing these headwinds through diversification into commercial markets, defense expansion, and private capital leverage will be essential to sustaining Maryland's leadership in aerospace.

Approach to Strategy Development

Developing a strong aerospace strategy requires more than cataloging assets—it requires a framework that connects current capabilities with future opportunities. MATC’s approach has combined qualitative insights from convenings and commissioner input with early analytical tools to shape the foundation of this strategy. The “As-Is State” diagram provides a preliminary picture of Maryland’s aerospace and technology ecosystem as understood by stakeholders today. A force field analysis, mapping enablers and constraints, highlights where momentum exists and where barriers must be addressed. While both were developed qualitatively, they point to important themes that the Commission intends to validate and quantify through data, benchmarking, and continued engagement. Both diagrams can be found within [Appendix A. 1: Methodology and Strategic Inputs](#).

Building from this foundation, the Commission developed the Maryland SMART Aerospace Hub Framework and design principles that guide investment and policy choices. These are paired with a regional focus that recognizes the unique strengths of each part of Maryland while advancing a unified vision. To stretch our thinking, commissioners also engaged in an exercise of imagining “what could be possible” if fiscal or policy constraints were lifted.

Design Principles

Maryland’s aerospace and defense economy is defined by world-class research, federal anchors, and an industry base driving innovation. To translate those strengths into sustainable economic growth, the following design principles will guide the state’s strategy. They reflect lessons learned from past efforts and a forward-looking posture that ensures Maryland can compete, adapt, and lead in an era of rapid technological change.

- **Accelerate Innovation Through Speed and Agility** – Adopt models that shorten timelines and position Maryland as the fastest partner.
- **Focus on Dual-Use and High-Growth Technologies** – Concentrate resources on AI, autonomy, quantum, advanced materials, and resilient PNT.
- **Catalyze Private Capital, Don’t Replace It** – Use incentives to de-risk first builds/tests and spark private and corporate investment.
- **Build on Regional Strengths, Act as One Maryland** – Harness diverse assets across regions under a unified state plan.
- **Leverage Federal Anchors for State Growth** – Maximize opportunities from federal assets while building resilience against shifting federal priorities.
- **Invest in People, Not Just Infrastructure** – Prioritize apprenticeships, internships, clearances, and credentials that create lasting, high-wage careers.
- **Maximize Visible Returns for Citizens** – Tie every initiative to jobs, wages, supply chain resilience, and student STEM pathways.

Together, these principles form the backbone of Maryland’s aerospace strategy: bold in vision, pragmatic in execution, and anchored in measurable outcomes that benefit both industry and community.

Geographic Focus Areas

Maryland’s aerospace economy is not concentrated in one place; it is distributed across distinct regions, each with unique strengths and assets. Taking a regional approach ensures that the strategy reflects geographical equity, builds on existing industry bases, and leverages the federal anchors, academic institutions, and commercial ventures already rooted in each community. This approach aligns with our design principles by amplifying what Maryland already does well, while also creating pathways for innovation and investment in every part of the state.

A regional structure also strengthens governance and implementation. By empowering local innovation boards and integrating commercial and federal stakeholders across the state, Maryland can foster ownership at the regional level while maintaining statewide coordination. This balance enables the state to respond to local needs, attract private capital, and better align with federal priorities while presenting a unified statewide aerospace strategy.

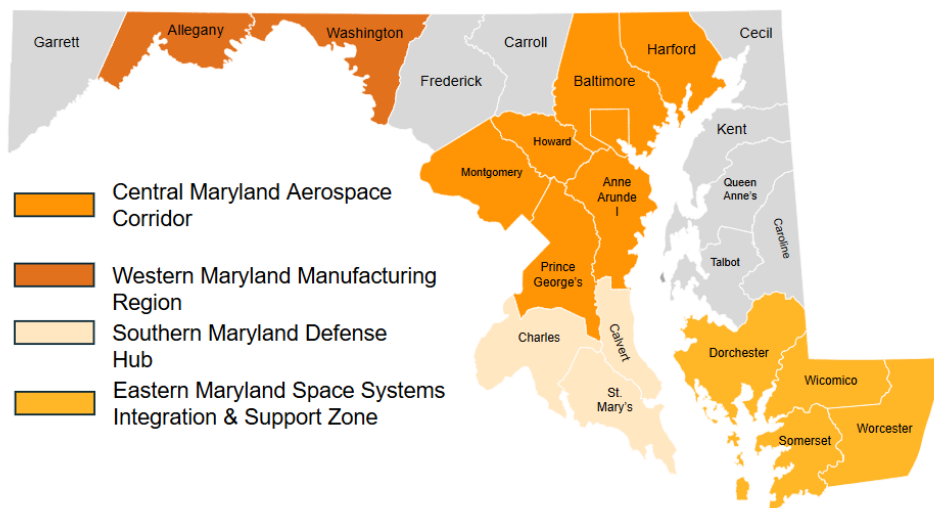


Figure 5: Proposed Regional Structure for Maryland's Aerospace Strategy 2025

This strategy proposes four regional centers:

- **Central Maryland Aerospace Corridor**
This region is Maryland’s knowledge and innovation hub, combining world-class research institutions, federal science anchors, and a growing commercial aerospace and mobility sector.
- **Southern Maryland Defense Hub**
Southern Maryland is home to Maryland’s naval aviation core, but is also diversifying into advanced materials, prototyping, autonomy, and emerging dual-use technologies.
- **Western Maryland Manufacturing Region**
Western Maryland offers scale-up capacity for production and supply chain growth, supported by materials R&D and a skilled technical workforce.
- **Eastern Maryland Space Systems Integration and Support Zone**
Eastern Maryland is Maryland’s gateway to space, with Wallops as a federal anchor and a growing ecosystem of commercial launch, logistics, and in-space manufacturing ventures.

Implementation Roadmap

Maryland’s aerospace strategy must be more than vision; it requires disciplined execution. This roadmap places Maryland’s three funding tiers up front so decision-makers see clear choices on speed and scale. **Because portfolio choices hinge on resources, the State’s target investment level should be set early.** That decision will define scope, pacing, and sequencing across regions and SMART elements.

Each tier aligns to our design principles, the SMART framework, and regional strengths, ensuring near-term action builds durable statewide capacity. MATC will serve as the central forum to align state, federal, and private efforts. As the MATC currently has no dedicated funding, the roadmap is presented in two tracks: (1) Immediate Action (first 20 months), focused on steps we can launch now under various funding scenarios, and (2) Positioning for the Future (FY2028–2035), focused on scalable investments and infrastructure. The graphics that follow summarize the moves at each tier and how those moves advance Maryland’s identity as a SMART Aerospace Hub.

Immediate Action (first 20 months)

This track focuses on visible progress within 20 months. It sequences efforts that can launch now, demonstrate outcomes quickly, and build credibility with federal and private partners. Results in this track are meant to inform the longer-term portfolio and set conditions for larger investments.

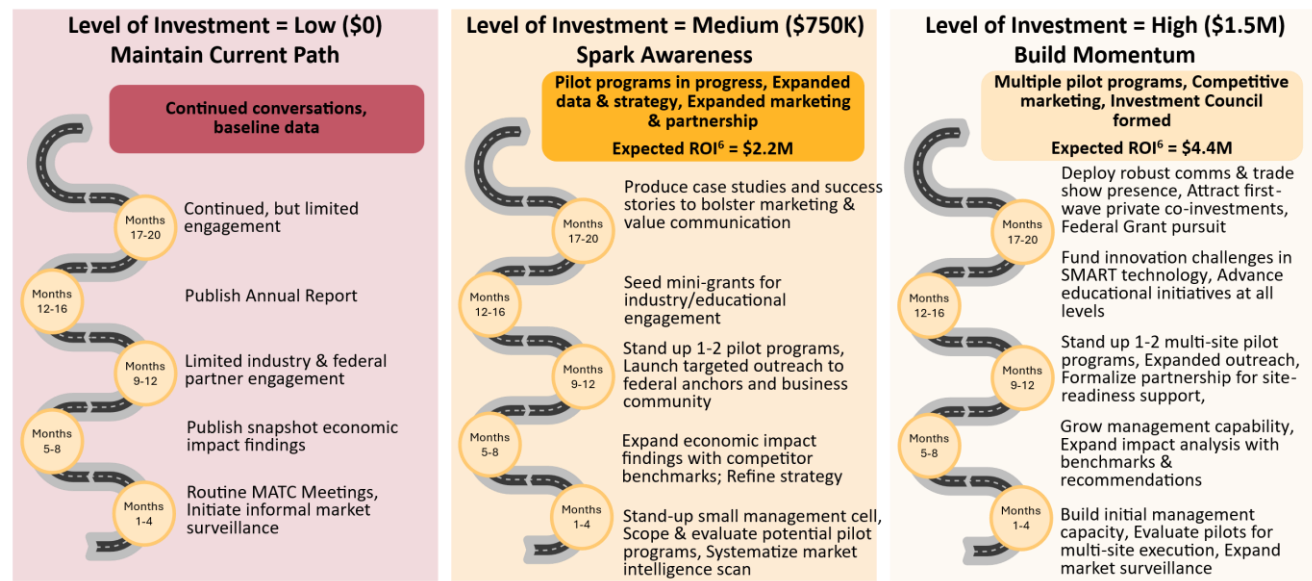


Figure 6: Immediate Action Investment Pathways. Early investment sparks visibility and builds momentum. ROI source: Maryland Economic Development Association.⁶

⁶ Derived from “MEDA Announces \$8.81 Return on Investment from Every Dollar Invested in Maryland Economic Development.” Maryland Economic Development Association, www.medamd.com/news/meda-announces-8-81-return-on-investment-from-every-dollar-invested-in-maryland-economic-development/. Accessed 11 Sept. 2025. \$8.81 figure is a 3-year total. To present an annualize ROI, we used a proportionally reduced multiplier of \$2.937 per dollar of state investment.

Positioning for the Future (FY2028-2035)

This track outlines how sustained investment scales Maryland’s capabilities over multiple years. The three tier options map to different growth paths, from maintaining coordination to building statewide capacity and achieving national competitiveness. Actions in this track prioritize platforms and infrastructure that compound over time, expand the talent and supplier base, and connect regional strengths into a resilient statewide value chain aligned with SMART.

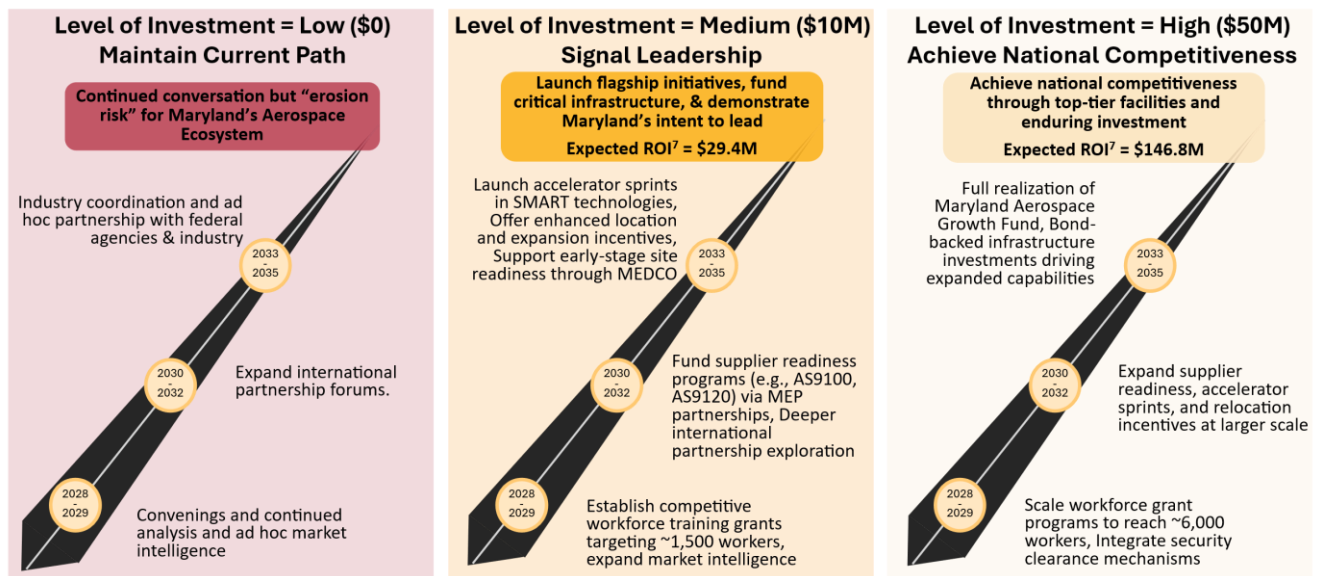


Figure 7: Positioning for the Future Investment Pathways. Sustained investment shapes Maryland’s long-term trajectory. ROI source: Maryland Economic Development Association.⁷

Governance

Governance turns intent into accountable execution. MATC coordinates partners, sets portfolio priorities, and ensures transparency through regular reviews and public reporting. To succeed, MATC must function as an integrator unifying Maryland’s aerospace ecosystem around shared goals. In the near term, this requires examining operating models to ensure the Commission evolves into a structure that maximizes agility, eliminates duplication, and delivers on the state’s design principles. Governance elements scale with the tiers so that roles, decision cadence, and engagement mechanisms deepen as investment grows.

State-Level Coordination and Oversight (existing)

Maryland provides clear leadership at the state level, aligning aerospace efforts with broader economic development, workforce, and regional priorities. This function ensures the portfolio advances the SMART framework, honors regional strengths, and remains synchronized with related bodies such as the Maryland Advanced Air Mobility Council. It also anchors transparency through public reporting on outcomes that matter to citizens.

- **Tier cue:** Active at all tiers; scope and reporting deepen as resources grow.

⁷ See note above.

Aerospace Industry Council (expansion of MATC)

The Aerospace Industry Council anchors Maryland’s strategy in long-standing federal and defense partnerships, providing continuity with national missions and mission-adjacent suppliers. Representative organizations include the Maryland Space Business Roundtable, Maryland Aerospace Alliance, Goddard Contractors Association, Wallops Contractors Association, The Patuxent Partnership, and the Southern Maryland Navy Alliance. The council advises on priorities that strengthen Systems & Missions and sustain Maryland’s role as a trusted partner to DoD, NASA, and other agencies.

→ **Tier cue:** Active at all tiers; broadens at higher tiers to guide multi-site efforts and federal alignment.

Commercial & Investment Advisory Board (new)

To capture fast-growing commercial and dual-use markets, this board brings the perspective of entrepreneurs, investors, and emerging ventures.

Membership profile:

- Venture capital and angel investors with deep-tech and aerospace portfolios
- Founders in autonomy, space logistics, manufacturing, advanced materials
- Leaders of incubators and accelerators (TechPort, UMD Discovery District, bwtech@UMBC, Eastern Shore Innovation Hub, and others)
- Commercial aviation, UAS, and space ventures outside traditional contracting channels

Role: Advise on commercial opportunities, capital attraction and leverage expectations, and integration of startups into regional hubs so SMART elements move from prototype to adoption.

→ **Tier cue:** Activates at Tier 2 and matures at Tier 3 and long-term tiers.

Regional Innovation Boards (new)

Each of the four geographies—Central, Southern, Western, and Eastern Maryland—hosts a regional board that convenes federal anchors, higher education, workforce partners, local government, and industry. The boards surface projects that leverage local strengths, recommend sequencing, and ensure “One Maryland” delivery by avoiding duplication and filling gaps in the statewide value chain.

→ **Tier cue:** Piloted at Tier 2; fully active at Tier 3 with clear roles in proposing and reviewing regionally led initiatives.

Operating Model Analysis (new)

To ensure MATC evolves into the most effective coordinating body for Maryland’s aerospace economy, an immediate-term priority will be to conduct an operating model analysis. This process will examine best practices from peer organizations, such as Space Florida and the Texas Space Commission, while assessing Maryland’s unique mix of assets, stakeholders, and policy environment. The analysis will evaluate structural options for MATC or its successor, with the goal of eliminating needless competition for limited resources while adopting a model that provides agility, speed, and alignment with Maryland’s design principles.

The outcome will guide recommendations on governance structure, authorities, and long-term sustainability, ensuring the Commission is positioned to integrate partners, catalyze investment, and advance the SMART Aerospace Hub vision.

As part of this assessment, MATC should also examine why certain aerospace firms and skilled workers have left Maryland in recent years, where they relocated, and what factors influenced those decisions. Understanding these patterns will help shape incentive strategies that both retain existing assets and attract new investment, ensuring growth that is sustainable over the long term.

- **Tier cue:** Initiated at Tier 1 to define options; refined and adopted at Tier 2 with a formal operating model chosen and resourced.

Federal Elected Official Engagement (new)

To realize the SMART Aerospace Hub vision, Maryland must coordinate not only state and local leaders but also federal elected officials. Other states, such as Florida and Alabama, demonstrate the impact of unified advocacy by convening federal, state, and local officials around aerospace priorities. Maryland should adopt a similar approach, with the Governor convening joint sessions that include MATC members, state legislators, and Maryland's Congressional delegation to build alignment and strengthen the state's case for federal investment.

- **Tier cue:** Piloted at Tier 1 through targeted engagement; formalized at Tier 2 with recurring convenings and shared advocacy agendas.

Risk & Adaptation

Implementation must anticipate change and adapt. Maryland's aerospace portfolio will be managed to absorb shifts in federal timelines, competitor activity, technology cycles, workforce supply, and capital conditions while protecting momentum across SMART elements and regions.

Review cadence.

- **Bi-Monthly** portfolio reviews led by MATC to track delivery, leverage, and regional balance.
- **Semiannual** public roadmap updates to report outcomes, confirm tier choices, and rebalance the mix.
- **Annual** strategy alignment to ensure consistency with statewide priorities and long-range goals.

Out-of-cycle review triggers. MATC will call an out-of-cycle review if any of the following key risk indicators exceed thresholds:

- **Federal timing and priorities.** Continuing resolution beyond two quarters; major NOAA, NASA, or DoD program rebaselines or cancellations; procurement delays that push planned starts by more than six months.
- **Competitor moves.** Announced spaceport, range, or incentive packages in peer states within the Mid-Atlantic that materially affect supplier location or test access.
- **Market signals.** Sharp changes in launch cadence or commercial space demand that alter supply-chain needs; venture or capital market shifts that reduce expected private match.

- **Underperformance on established metrics.** Sustained variance below agreed targets across key KPIs, such as workforce outcomes, supplier readiness, leverage and finance, regional coverage, or other approved measures, sustained over multiple review cycles, indicating performance risk.

Requests of the Maryland General Assembly

To achieve the ambitions outlined in this strategy and ensure Maryland’s aerospace economy remains globally competitive, we recommend a set of legislative actions and budgetary commitments. These asks fall into two categories: (1) Authorities and Composition of the Maryland Aerospace & Technology Council (MATC), and (2) Budget Investments.

Authorities and Composition of the MATC

To strengthen MATC’s ability to guide Maryland’s aerospace strategy, we request the following adjustments to its statutory authorities and membership:

- a. **Strategic Planning Cadence** – Provide relief from the current requirement to update the strategy annually. Instead, require MATC to issue an annual progress report and update the full strategy on a three-year cycle, aligning with best practices for strategic planning and implementation.
- b. **Grantmaking Authority** – Authorize MATC to administer small-scale grants to support advocacy, independent studies, and strategy support activities, ensuring Maryland maintains thought leadership in the aerospace sector.
- c. **Rebranding Authority** – Permit MATC to rebrand and rename the commission when the timing is appropriate, aligning its identity with the state’s broader aerospace vision.
- d. **Competitive Authorities for Federal Tenancy** – Empower MATC to support state competitiveness in attracting or retaining federal agencies, including authority to consider incentive tools when federal tenancy or restationing opportunities arise.
- e. **Expanded Industry Representation** – Broaden MATC membership to include small and mid-sized businesses and emerging technology firms, balancing the current academic and infrastructure-heavy composition and ensuring the voices of innovators and entrepreneurs are represented.
- f. **Special Aerospace Zones & Subcommittees** – Authorize MATC to designate aerospace zones and establish sub-commissions or committees to respond flexibly to specific opportunities, challenges, or regional needs.
- g. **Aerospace Data Tracking** – Create a dedicated “aerospace” category/tag within the RSTARS/FMIS financial management system, allowing for comprehensive tracking of all state aerospace-related investments and enabling evidence-based decision-making.
- h. **Executive Visibility and Alignment** – Strengthen the connection between MATC and the Governor’s office to ensure high-level visibility and advocacy. The Governor may designate a chair or liaison to facilitate rapid decision-making, while MATC leadership should represent Maryland at industry conferences, company site visits, and major aerospace events. This ensures the state’s aerospace agenda has a direct pipeline to executive leadership and strong external visibility.

i. Public-Private Partnership and Federal Facility Access Authority – Authorize MATC to negotiate and execute agreements with federal agencies (e.g., NASA, NOAA, NIST, DoD) that allow Maryland companies to use under-utilized federal facilities and test ranges on a cost-reimbursable basis.

Budgetary Investments

To complement enhanced authorities, the following budget commitments are requested:

- a. Innovation Funding** – Continue and expand funding for SBIR/STTR match programs and other grant/OTA match programs supporting Maryland-based entities. The programs exist in statute but require ongoing appropriations to realize their potential.
- b. Staff Support** – Provide dedicated staff resources to MATC. At a minimum, this should include an Executive Director. An expanded model would also fund an Aerospace Economist, a Project Management Office (PMO) to manage the growing portfolio of activities, and strategic market intelligence capabilities.
- c. Aerospace Program Line** – Establish and expand a dedicated aerospace program line under the Maryland Department of Commerce, creating flexibility to support trade show participation, marketing, and targeted programmatic activities. At present, no stand-alone program code exists for aerospace in FY2026. Each year, appropriations under this program line should include funding for a recurring economic impact statement. Drawing on models such as Space Florida, this statement will quantify job creation, leveraged private capital, and tax base growth. For example, each increment of state funding should be linked to gains in jobs and revenue, creating transparency and building public confidence.
- d. Maryland Aerospace Growth Fund** – Establish a dedicated fund to attract and deploy private capital alongside state investment. This would create a flexible vehicle to (i) convene regular Investor Summits that connect Maryland aerospace businesses with venture capital, private equity, and strategic investors; (ii) provide targeted co-investment or first-loss capital to de-risk early-stage commercialization efforts; and (iii) align with existing state programs to maximize leverage of federal and private resources. The Fund would serve as a cornerstone for scaling dual-use technology ventures, strengthening supply chain resilience, and ensuring Maryland companies remain competitive in capturing growth opportunities. In addition to its investment functions, the Growth Fund should be paired with competitive incentive tools and a coordinated marketing campaign that raise Maryland's visibility with aerospace firms in the mid-Atlantic region and nationally. This approach will ensure Maryland competes effectively with peer states that deploy both capital and branding to attract companies.

Leveraging Federal Facilities: Lessons from Other States

Space Florida – Operates NASA's 15,000-foot Launch and Landing Facility at Kennedy Space Center under a 30-year lease, investing in infrastructure and marketing the site to commercial users while meeting NASA's needs.

Mississippi Enterprise for Technology (MSET) – A public-private partnership at NASA's Stennis Space Center that connects companies with federal facilities and technology while serving as the state's tech-transfer office.

Risk Management and Mitigation

Any strategy of this scale must anticipate uncertainties and build resilience into its design. The aerospace and defense ecosystem in Maryland faces a unique mix of risks shaped by shifting federal priorities, workforce dynamics, rapid technological change, and broader economic conditions. To remain effective, our approach must not only identify these risks but actively incorporate mitigation strategies into execution.

Federal Funding Uncertainty

Much of Maryland’s aerospace and defense economy is dependent on federal investment, which can fluctuate due to budget cycles, policy shifts, or changes in national priorities. Over-reliance on these funding streams exposes programs to sudden disruptions.

Mitigation: By diversifying funding sources—through state investments, private capital partnerships, and regional collaborations—we reduce vulnerability and ensure continuity of effort even during periods of federal uncertainty.

Talent Competition

Maryland’s innovation economy is fueled by a highly skilled workforce, but talent competition is fierce both within the Mid-Atlantic region and nationally. Without deliberate strategies, Maryland risks losing critical expertise to competing regions or industries.

Mitigation: Comprehensive retention strategies—including internships, apprenticeships, upskilling programs, credentialing pipelines, and clear career pathways—will help build and sustain a workforce that anchors Maryland’s long-term competitiveness.

Technology Disruption

The aerospace sector is undergoing rapid technological transformation in areas like autonomy, quantum, advanced materials, and space systems. Failing to anticipate or adapt to disruptive technologies could diminish Maryland’s leadership position.

Mitigation: A continuous innovation focus, supported by public-private partnerships and flexible program design, ensures Maryland remains at the forefront of emerging technologies while avoiding lock-in to legacy systems.

Economic Volatility

Global economic trends—ranging from inflationary pressures to supply chain shocks—can quickly alter the investment climate. Maryland’s aerospace initiatives must remain resilient in the face of such volatility.

Mitigation: A flexible implementation approach, paired with adaptive strategy updates and a diversified industry focus, allows Maryland to pivot in response to changing conditions while maintaining forward momentum.

Mitigation Framework

Across these risk categories, four key strategies can strengthen Maryland’s resilience:

- Strong private sector partnerships to broaden funding and accelerate innovation.
- Diversified industry focus to prevent over-dependence on any single technology or sector.
- Continuous workforce development to ensure Maryland remains a magnet for top-tier talent.
- Adaptive strategy updates to keep programs aligned with shifting market and policy conditions.

Taken together, these measures ensure Maryland can adapt to disruption while sustaining long-term growth in the aerospace sector.

Conclusion

Maryland's Aerospace and Technology Strategy provides a framework for establishing the state as a global leader in aerospace innovation. By leveraging existing strengths, investing in key capabilities, and fostering collaboration across sectors, Maryland can capture significant value in the rapidly growing aerospace market.

The strategy's success depends on sustained commitment from state leadership, strong partnerships with federal agencies and private industry, and continuous adaptation to emerging opportunities. With proper execution, Maryland will not only strengthen its economy but also contribute significantly to America's aerospace leadership and national security.

With deliberate execution, Maryland can strengthen its economy, secure its aerospace leadership, and contribute to America's national security and space exploration future.

Appendix A. 1: Methodology and Strategic Inputs

The development of this strategy has been shaped by an organic process of conversation, commissioner input, and informal stakeholder feedback. Early efforts produced tools such as an “As-Is State” diagram and a force field analysis of enablers and constraints, which surfaced perceptions of strengths, gaps, and opportunities across Maryland’s aerospace ecosystem. Though qualitative and requiring further validation, these tools provided a starting point for identifying common themes. From these discussions, the Commission outlined the SMART Aerospace Hub framework, design principles, and geographic focus areas, while also exploring aspirational flagship initiatives envisioning what Maryland could achieve under ideal conditions. The following sections describe these inputs and highlight next steps to refine and strengthen the strategy.

Qualitative Landscape Assessment

As an early step, commissioners and stakeholders worked together to create a qualitative “As-Is State” diagram of Maryland’s aerospace and technology ecosystem. This visualization, developed through convenings and informal feedback, was intended to spark discussion and provide a shared point of reference for where the state currently stands. The diagram maps perceived strengths, gaps, and areas of opportunity across institutions, industry, and infrastructure. While useful for initiating dialogue, the assessment is based primarily on qualitative input and therefore requires additional validation through data collection, benchmarking, and structured stakeholder surveys. Moving forward, the Commission intends to build upon this initial framework with quantitative analysis to ensure accuracy and robustness.

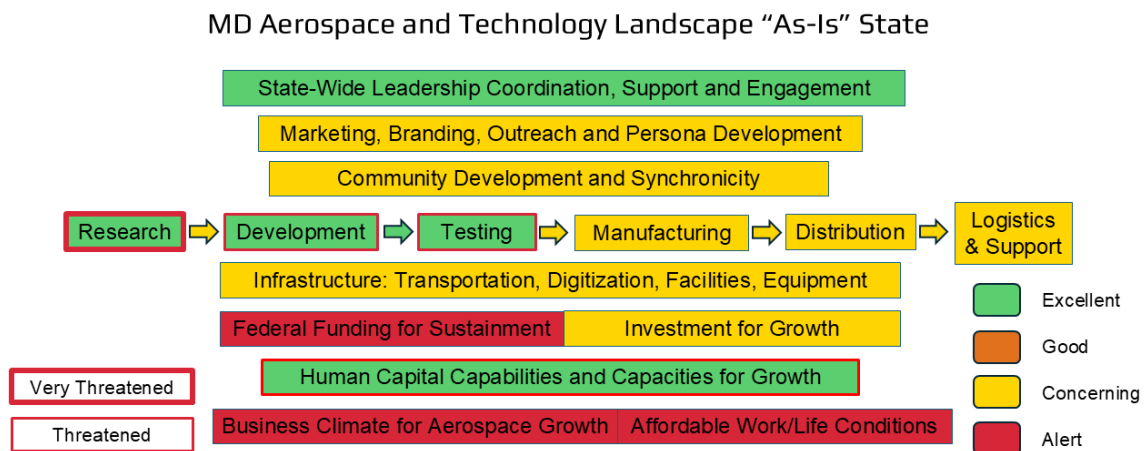


Figure 6: Maryland’s aerospace ecosystem as understood through commissioner input and stakeholder discussions. This qualitative “As-Is” diagram highlights perceived strengths, gaps, and opportunities across institutions, industry, and infrastructure, serving as a starting point for strategy development.

Force Field Analysis

A complementary tool developed during this process was a force field diagram identifying the key enablers and constraints influencing Maryland’s aerospace future. Enablers include factors such as federal anchor institutions, a deep STEM talent pool, and strong industry clusters, while constraints reflect challenges such as workforce competition, funding uncertainty, or infrastructure bottlenecks. By highlighting where momentum exists and where friction must be overcome, the diagram provides a useful early view of Maryland’s leverage points. Like the “As-Is State” diagram, it was generated through conversations and qualitative input and is best understood as a directional tool that will benefit from refinement and validation in subsequent phases of work.

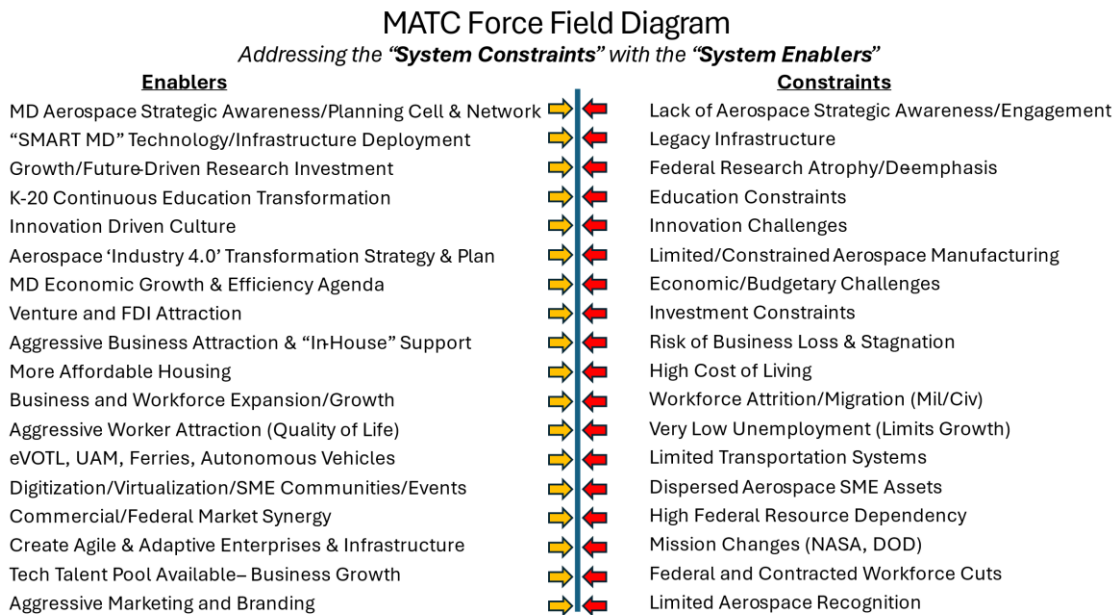


Figure 7: Key enablers and constraints shaping Maryland’s aerospace future. This force field analysis illustrates areas of momentum (federal anchors, STEM talent, industry clusters) and friction (workforce competition, funding uncertainty, infrastructure bottlenecks), guiding the Commission’s focus on where action is most needed.

Maryland SMART Aerospace Hub Framework & Design Principles

From these preliminary assessments the Maryland SMART Aerospace Hub Framework and design principles emerged. These were developed by distilling common themes raised in stakeholder discussions and aligning them with national best practices in aerospace strategy. The SMART framework provides broad thematic categories of action while the design principles articulate how Maryland intends to approach these areas (for example, catalyzing private capital rather than replacing it). Together, they ensure that the strategy is not only comprehensive but also aligned with the state’s overarching goals: leveraging federal anchors, sparking private investment, and generating visible returns for Maryland’s citizens.

Geographic Focus Areas

Recognizing that Maryland’s aerospace strengths are not evenly distributed but clustered in distinctive regions, the Commission adopted a geographic lens as part of its strategy. This approach both

acknowledges geographic equity across the state and leverages the natural concentrations of assets in specific areas—whether naval aviation in Southern Maryland, manufacturing in Western Maryland, or space systems integration on the Eastern Shore. The geographic focus areas allow the strategy to speak to local priorities while advancing a unified statewide vision. From a governance perspective, this regional framing also creates clear entry points for stakeholders and ensures that local voices are integrated into the state’s broader aerospace agenda.

Appendix A. 2: Additional Charts & Graphics

Ecosystem Approach Illustration

This illustration conveys Maryland’s vision of an interconnected innovation ecosystem. At its center is the ambition to be a global leader in aerospace, supported by a highly valued and engaged citizenry, a knowledge-driven society committed to lifelong learning, and digitally enabled innovation networks. Surrounding these elements are communities of excellence, expert leadership, and collaborative cultures that drive accelerated research, engineering, and test capabilities. Together, these components emphasize transformational leadership, collective societal impact, and a focus on critical needs and opportunities that enable growth and resilience in Maryland’s aerospace strategy.

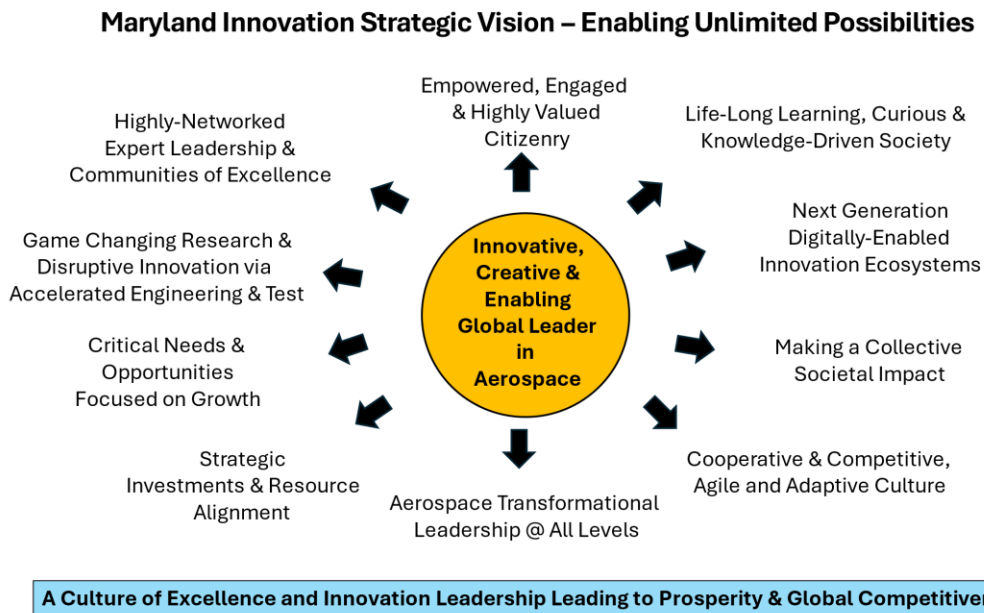


Figure 8: Ecosystem Approach Illustration. This illustration depicts Maryland’s vision for an interconnected aerospace innovation ecosystem—linking research, leadership, and communities of excellence with a knowledge-driven society, digitally enabled networks, and a culture of collaboration to achieve global leadership in aerospace.

Appendix A. 3: Abbreviations

Abbreviation	Full Term
AAM	Advanced Air Mobility
APL	Applied Physics Laboratory (Johns Hopkins University)
APG	Aberdeen Proving Ground
AS9100 / AS9120	Aerospace Quality Management Standards (for suppliers)
COMAR	Code of Maryland Regulations
DEVCOM	U.S. Army Combat Capabilities Development Command
DoD	U.S. Department of Defense
eVTOL	Electric Vertical Takeoff and Landing
FDI	Foreign Direct Investment
FMIS	Financial Management Information System
FY	Fiscal Year
GEO / GOES	Geostationary Operational Environmental Satellites
GeoXO	Geostationary Extended Observations (NOAA satellite program)
ICT	Information and Communications Technology
JPSS	Joint Polar Satellite System
JSE	Joint Simulation Environment
KPI	Key Performance Indicator
MATC	Maryland Aerospace and Technology Commission
MARS	Mid-Atlantic Regional Spaceport
MEDA	Maryland Economic Development Association
MEDCO	Maryland Economic Development Corporation
MEP	Maryland Manufacturing Extension Partnership
MMIC	Maryland Military Installation Council
MRL	Manufacturing Readiness Level
NASA	National Aeronautics and Space Administration
NAWCAD	Naval Air Warfare Center Aircraft Division
NAVAIR	Naval Air Systems Command
NOAA	National Oceanic and Atmospheric Administration
NSOF	NOAA Satellite Operations Facility
OTA	Other Transaction Authority
PNT	Positioning, Navigation, and Timing
RAM	Regional Air Mobility
ROI	Return on Investment
RSTARS	Relational Statewide Accounting and Reporting System
SME	Small and Medium-Sized Enterprises (supplier base)

Abbreviation	Full Term
SMART	Systems & Missions, Materials & Manufacturing, Autonomy, Resilient Navigation, Talent (Maryland’s Aerospace Hub framework)
STEM	Science, Technology, Engineering, and Mathematics
STScI	Space Telescope Science Institute
T&E	Test and Evaluation
TRL	Technology Readiness Level
TDRSS	Tracking and Data Relay Satellite System
UAM	Urban Air Mobility
UARC	University Affiliated Research Center
UMBC	University of Maryland, Baltimore County
UMD/UMCP	University of Maryland, College Park
UMES	University of Maryland Eastern Shore
USM	University System of Maryland
USMSM	University System of Maryland, Southern Maryland
USNA	United States Naval Academy

Appendix B: MATC Meeting Minutes

Wednesday, October 23, 2024

10:00 AM - 12:00 PM

Wasmer Conference Room, IDEA Factory

4462 Stadium Dr., College Park, MD, 20740

Commission Members in Attendance

- | | |
|---------------------------|---|
| 1. Kevin Anderson | Secretary, Maryland Department of Commerce |
| 2. Robert Braun, Ph.D. | Space Exploration Sector Head, Johns Hopkins Applied Physics Laboratory |
| 3. Georgie Brophy | Board Member, Maryland Space Business Roundtable |
| 4. Mark Chang | Delegate, Anne Arundel County |
| 5. Alison Flatau, PhD | Chair, Department of Aerospace Engineering, University of Maryland College Park |
| 6. Ryan Gerard | President, Goddard Contractors Association |
| 7. Charles Ichoku, PhD | Professor, Director of GESTAR II, University of Maryland Baltimore County |
| 8. Barbara Lam | CFO/VP, Association of Universities for Research in Astronomy (AURA) |
| 9. Jennifer Lotz, PhD | Director, Space Telescope Science Institute |
| 10. Makenzie Lystrup, PhD | Director, NASA Goddard Space Flight Center |
| 11. Dale Moore, EdD | President, Southern Maryland Navy Alliance |
| 12. Alonzo Washington | Senator, Prince George's County (representing the Senate) |

Department of Commerce Attendees

- | | |
|--------------------------|--|
| 1. Ulyana Desiderio, PhD | Senior Director, Office of Strategic Industries and Entrepreneurship |
| 2. Colter Menke | Aerospace Program Manager |
| 3. Sarah Sheppard | Director, Education & Workforce |

General Public Attendees

- | | |
|--------------------|--|
| 1. Brandon Eden | Johns Hopkins University Applied Physics Lab |
| 2. Dennis Feerick | Maryland Space Business Roundtable (via phone) |
| 3. Kajal Pancholi | Maryland Aerospace Alliance |
| 4. Phillina Tookes | NASA Goddard Space Flight Center |

Welcome and Introductions

Secretary Anderson introduced himself and welcomed everyone to the first MATC meeting and provided some information about the importance of aerospace to the economy of Maryland. He gave an overview of the commission and mentioned the importance of its placement in the Department of Commerce. He let the commissioners know that the MATC was created to promote innovation in the fields of space exploration and commercial aerospace opportunities, including the integration of space, aeronautics, and aviation industries into the economy of the State.

Introduction of Commissioners

Secretary Anderson invited the commissioners to introduce themselves and share a little about their background. The commissioners went around the table and introduced themselves. Secretary Anderson also pointed out the members of the Maryland Department of Commerce staff in the room who may be assisting with the commission.

Welcome Remarks

Senator Washington provided the background for the commission and his thoughts about the creation of an organization focused on strengthening the Maryland aerospace industry after a discussion with Georgie Brophy. He noted that although Maryland is home to national and international scientific research, it is not well known for the work that's taking place here. He also mentioned other states that appear to market their aerospace industries more effectively than Maryland does, including Texas, California and Colorado. Senator Washington provided four primary goals for the MATC:

1. Develop a database of aerospace industry assets in the state
2. Enhance the diversity of workers in the aerospace industry in Maryland
3. Consider establishing an aerospace economic zone within the state to include NASA Goddard Space Flight Center
4. Create policy initiatives to grow the aerospace industry in the state for the legislature to consider

General Discussion

Dr. Lystrup noted that NASA Goddard is in crisis due to funding shortages and because the aerospace ecosystem is so interconnected, the difficulties it is facing affect many other organizations represented in the room. She also clarified that it's not necessarily due to budget appropriation but the way in which funds are allocated.

Dr. Moore mentioned the funding problems extend onto the Department of Defense as well and the commission should work to identify areas for growth across the industry and capture the opportunities to help resolve those challenges.

Dr. Braun noted that the state may be missing incentives for the creation of small businesses. He mentioned a few individuals/groups who have developed technologies in conjunction with JHU APL

but have been unable to find traction within the state for the establishment of their company. He said Maryland could do more to retain businesses and people in the state.

Secretary Anderson noted that the Maryland Department of Commerce has developed a new strategic plan which will be released soon and could address some of these concerns. He mentioned that the state unemployment numbers are low, some of the lowest in the nation, but there remains a need to better train unemployed citizens and students for jobs within the aerospace industry.

Ms. Brophy mentioned that there is a lot happening in the aerospace industry to support the growth of the aerospace industry in the state. She said the state should reinforce the available incentives to be located in Maryland and highlight assets Maryland has that other states are lacking. She also noted that awareness of Maryland in relation to the aerospace industry nationally and internationally is not high. Companies would like to be located in Maryland but end up choosing other states because they are more well known for their aerospace industries.

Dr. Lystrup reinforced Ms. Brophy's points by noting that Maryland has two major aerospace assets, Goddard Space Flight Center and The Johns Hopkins University's Applied Physics Lab (in addition to the other organizations at the table). She said Maryland needs to capitalize on that and build their capabilities.

Mr. Gerard mentioned that there is a general consensus in the Goddard Contractor's Association (GCA) that the aerospace landscape needs help. He said the contractor environment can be challenging for highly specialized businesses. Senator Washington asked that the commissioners shape the commission to best effect change.

Mr. Gerard asked to clarify whether the commission supports service and commercial businesses. GCA general terminology generally regards service, commercial and contractor businesses differently. Secretary Anderson confirmed the commission was established to support all Maryland aerospace businesses with the additional goal of making the state's economy more equitable. Mr. Gerard mentioned that Goddard outperforms other states in equity in business contracts. Dr. Lystrup and Dr. Moore noted that much of the funding at Goddard and NAVAIR goes out of state. Dr. Moore identified housing and cost of living as major challenges in retaining businesses and employees in Maryland. Other leading aerospace states tend to be more affordable in those regards.

Secretary Anderson noted that the Maryland Department of Commerce has access to data pertaining to the economics and population movements of Maryland citizens from 2014 to 2019 and that this information could be distributed to the commissioners upon request. Mr. Gerard mentioned that the COVID-19 pandemic altered the map of the Maryland workforce and where the workforce is located. Dr. Lystrup noted that there is currently no mandate in the NASA enterprise to require everyone to work on the NASA campuses, so not everyone who works on projects at NASA Goddard comes to the office each day which affects the local economy.

Dr. Flatau mentioned that only computer science and aerospace student populations have grown within the University of Maryland College Park engineering departments and the university is looking toward electric vehicles for future growth. She noted that Maryland has an opportunity to lead the nation in this sector. She also noted that Maryland needs a broader, more diverse technology zone.

Summary of Aerospace Workforce Development Meetings Hosted by Lieutenant Governor Miller

Ms. Brophy provided a summary of aerospace roundtable discussions hosted by LG Miller on February 13 and May 29, 2024. There's a lot of competition within the aerospace industry for the qualified workforce. Some service contracts do not allow for less experienced or entry- to mid-level candidates and the speed for hiring can be very slow. Four-year degrees are not always required and the industry needs to help ensure higher education is preparing the workforce for cutting edge careers. Both students and faculty need to be made aware of opportunities in the aerospace industry in the state. Opportunities need to be developed for the handoff from education to career which can include apprenticeships and internships.

Dr. Moore noted that the Southern Maryland 2030 program has been very successful and was awarded funding for three years but needs additional funding to continue. Ms. Lam said there has been a lot of investment in the life sciences in the state and she has seen a lot of participation in that industry with students in Baltimore City, but not the same engagement in the aerospace industry. She mentioned the Space Telescope Science Institute (STScI) is very close to large STEM schools but there is no clear connection to bring those students into the aerospace industry.

Dr. Lotz mentioned that space exploration is a great multiplier, most people see images taken from or of space but those images are not necessarily leveraged to bring opportunities to the organizations who are responsible for the pictures (NASA, STScI). Maryland could do a better job of letting people know where the pictures come from and which organizations are responsible for them. In that way Maryland can make a big impact with a small amount of resources.

Dr. Lystrup mentioned that people may not realize the ecosystem at NASA Goddard is in Maryland and they may not know that there are more career opportunities than just astronomers. Careers at NASA and the aerospace industry have a great service aspect to them. Dr. Moore noted a key phrase that Dr. Lystrup said "Making the world better. . . in Maryland" could make a good catch phrase for the commission and reinforced that people do not understand the technology that exists in order to capture the images such as the ones taken by Hubble and the James Webb Space telescopes.

Senator Washington noted the need to ensure Community Colleges are included in the workforce development efforts. He also clarified that the idea of creating aerospace zones is to help make sure Maryland is known nationally.

Call for Public Comments

None made.

Meeting Summary and Adjournment

Secretary Anderson summarized high points of the discussion from the meeting and called for motions to adjourn. The meeting adjourned at 11:50 a.m.

Thursday, February 20th, 2025

4:00 pm - 6:00 pm

Historic Inns of Annapolis, Governor Calvert Ballroom

58 State Street, Annapolis, MD

Commission Members in Attendance

- | | |
|--------------------------|--|
| 1. Ricardo Benn | Deputy Secretary, Maryland Department of Commerce
(on behalf of Acting Secretary Harry Coker) |
| 2. Robert Braun, Ph.D. | Space Exploration Sector Head, Johns Hopkins Applied Physics Laboratory |
| 3. Georgie Brophy | Board Member, Maryland Space Business Roundtable |
| 4. Willie Brown, Ph.D. | Vice Provost, University of Maryland Eastern Shore |
| 5. Mark Chang | Delegate, Anne Arundel County |
| 6. Alison Flatau, Ph.D. | Chair, Department of Aerospace Engineering, University of Maryland College Park |
| 7. Ryan Gerard | President, Goddard Contractors Association |
| 8. Charles Ichoku, Ph.D. | Professor, Director of GESTAR II, University of Maryland Baltimore County |
| 9. Barbara Lam | CFO/VP, Association of Universities for Research in Astronomy (AURA) |
| 10. Jennifer Lotz, Ph.D. | Director, Space Telescope Science Institute |
| 11. Dale Moore, EdD | President, Southern Maryland Navy Alliance |
| 12. Robert Rashford | President and CEO of Genesis Engineering |
| 13. Janeen Tracy Uzell | CEO, National Society of Black Engineers |

Department of Commerce Attendees

- | | |
|-----------------------|--|
| 1. John Gilstrap | Assistant Secretary |
| 2. Colter Menke | Aerospace Program Manager |
| 3. Matt Cimino, Ph.D. | Senior Manager, Life Sciences Business Development |

General Public Attendees

- | | |
|--------------------|--|
| 1. Brandon Eden | Johns Hopkins University, Applied Physics Laboratory |
| 2. Dennis Feerick | The Aerospace Corporation |
| 3. Phillina Tookes | NASA Goddard Space Flight Center |
| 4. Rob Quigley | Intuitive Machines |
| 5. Lee Greely | St Mary's County Economic Development |
| 6. Joe DeVooght | Textron |
| 7. Kaushik Anantha | Student |

- | | |
|----------------------|--|
| 8. Alexander Rauda | Actum |
| 9. Cedric Jacob | Rocket Lab |
| 10. Jennifer Goodrum | Rocket Lab |
| 11. John Slaughter | UMD UAS Research and Operations Center |
| 12. Matt Cimino | Maryland Department of Commerce |

Welcome and Introductions

Deputy Secretary Ricardo Benn introduced himself and mentioned that Maryland is at an inflection point, with an opportunity to capitalize on a multitude of assets.

He mentioned that this Commission is tasked with the development of a strategic plan which should be coupled with more immediate action plans. Governor Moore has proposed a sweeping growth initiative and has identified aerospace and more specifically precision, navigation and timing (PNT) as a strategic sector. Investment into aerospace and PNT will assist in the work of other commissions.

Deputy Secretary Benn then invited the new commissioners to introduce themselves. Dr. Willie Brown, Vice Provost of UMES and Dr. Robert Rashford, CEO of Genesis Engineering introduced themselves and provided some information about their background.

Minutes of the October 23, 2024 MATC Meeting

Deputy Secretary Benn called for the approval of the meeting minutes from the previous MATC meeting. The minutes were approved unanimously.

Election of Chair and Vice Chair

Deputy Secretary Benn let the commissioners know that they would need to elect a Chair and Vice Chair amongst themselves. The commissioners were invited to consider the roles and reach out to Commerce staff if they would like to be considered or if they wished to submit a nomination.

Strategic Plan Development Kickoff

- ***Introduction to the Strategic Plan Requirements***

Deputy Secretary Benn then opened the meeting up to discuss the strategic plan which the Commission is responsible for developing.

- ***Initial Discussion on Key Components and Goals***

Ms. Brophy asked how the Commission should prioritize what is covered in the report. Dr. Moore mentioned that there is a large landscape that needs to be understood and exploited, which should be step one of the strategic plan. They also discussed that the Commission should set a baseline for the state of the industry and look to other states as examples for best practices. Deputy Secretary Benn reminded the commissioners that they are empowered to employ a consultant and the definition of the scope of the strategic plan may be a good area for the consultant to consider.

Mr. Gerard noted that there may be synergies between aerospace and quantum technologies which can be helpful to connect the state's other lighthouse sectors. Dr. Moore and Deputy Secretary Benn also mentioned artificial intelligence and other strategic industries that may be complimentary to each other. Dr. Brown asked to clarify if the strategic plan will be used for

the purpose of aerospace economic development and Deputy Secretary Benn answered that the focus of the strategic plan is in the purview of the Commission.

Ms. Brophy then asked the research and development organizations what they see as important aspects to be included in the strategic report. Dr. Lotz mentioned that there is currently an uncertain environment within the federal and aerospace organizations in the state. Dr. Ichoku mentioned that creating a center of excellence and/or business incubator within the state would be a valuable asset to promote the aerospace industry. Dr. Moore identified the Aeropark in Southern Maryland as an example of a region within Maryland that has created an identity as a leader in aerospace and suggested that the federal laboratories could also be important partners for the Commission.

Mr. Gerard mentioned that the workforce at NASA Goddard is between major missions at the moment and may have the capacity to support the establishment of a center of excellence. Ms. Brophy pointed out that there are many very capable professionals in the Maryland workforce that find themselves in silos that need to be combined to connect the workforce. Dr. Moore pointed to the work taking place in Southern Maryland that brings great collaboration amongst the groups. Dr. Brown emphasized that there are many industries and organizations outside of aerospace that can contribute and asked how the state can make it easy for these organizations to collaborate. Possibly the creation of a central depository of information about organizations would be helpful. Mr. Gerard mentioned that the creation of an incubator makes a lot of sense to enact quick change.

Deputy Secretary Benn mentioned that a timeline would need to be identified to help a consultant determine priorities for the report and Dr. Braun noted that a strategic plan needs to be thoughtful. He suggested that a consultant identify areas of success from other states which would help develop a plan for Maryland. He also noted that Maryland has a strength in support for the aerospace industry related to federal work, but not with commercial work. Maryland lacks large commercial entities and instead has many federally-focused entities. Dr. Moore said that it would be useful to determine why commercial companies don't choose to locate in Maryland. Mr. Gerard mentioned that Maryland has a very federally-focused workforce and the industry still needs to keep an eye on that. The Commission should focus on areas for expansion that do not directly compete with the federal work that is already in the state.

Ms. Brophy mentioned that Maryland needs commercial organizations to bring resources and jobs into the state. She provided an example of Rocket Lab and wondered why they chose Maryland. There are likely ripe moments to attract companies and stories that exist that can be used to bring other companies here. She mentioned that a role for a consultant would be to establish the baseline of where the state currently stands and the return on investment for plans for the future.

Dr. Flatau mentioned that two areas of growth she has seen from her perspective at the University of Maryland are Cislunar Space and Advanced Air Mobility (AAM), (she later added Supersonic Flight to this list). Ms. Brophy wondered what it would take to become the center for those industries. Dr. Moore mentioned that Maryland needs to improve how it is perceived by the nation, that it needs to wave its flag more. Mr. Gerard noted that a good way to do that would be to choose niche industries in which to excel.

Dr. Flatau said she has seen a trend of students being trained in these industries at the University of Maryland and then being hired by AAM manufacturers and being taken out of state. She also noted that much of the aerospace industry in the state is the home for headquarters of the businesses and not necessarily where the engineers work. The employers here in Maryland are predominantly federal.

Ms. Uzell introduced herself to the Commission and said that tech is a vibe. If people don't feel the vibe in the state, there is a perception that there is no tech vibe here. She mentioned that the vibe is all encompassing and not just focused on the jobs, it is also in the homes, restaurants, entertainment, etc. Once the state is known for its tech vibe, it's here. Ms. Brophy then asked how the state can create the vibe. Ms. Uzell provided Atlanta as an example; it's not necessarily tech-focused but it's attractive to the youth in the industry. She mentioned Miami and its acceptance of cryptocurrencies; it didn't compete against other states in the niche industry. Ms. Uzell mentioned that her organization, the National Society of Black Engineers, will be holding their annual conference in Baltimore in 2026 which will bring 20,000 people to the city. She noted that there are a lot of high-profile conferences which would raise the state's profile.

Dr. Braun mentioned that Johns Hopkins University has developed a mini startup tech venture headquarters on their campus centered around life sciences. Due to the success of businesses coming out of JHU the area has become a good incubator. Deputy Secretary Benn said that Boston does something similar and asked the group how this could be tailored to the aerospace industry. Dr. Brown mentioned that the tech companies the state is trying to attract is a more futuristic experience, and that Maryland needs to develop that environment more. Mr. Gerard noted that the group should keep in mind the federal workforce and environment that's present in Maryland and identify complementary industries to target. Ms. Brophy mentioned that marketing is still pivotal to create buzz and branding for the state and that it must emphasize the importance of aerospace here.

Formation of Advisory Committees and Identification of Committee Leads

Deputy Secretary Benn turned the conversation toward the identification and establishment of committees to help advance the goals of the Commission. The commissioners identified three committees and determined their leadership to be the following:

- Strategic Plan Development – Dr. Moore
- Creation of VC Summit/pitch competition – Ms. Brophy, Dr. Flatau
- Marketing and Messaging – Ms. Uzell

Public Comments/Discussion

Lee Greely, Economic Development Specialist, St. Mary's County – The Commission should continue to support existing businesses in Maryland and help them to grow in addition to looking for new businesses to locate here. He mentioned he would like to have an avenue for local economic development organizations to present issues to the MATC.

Matt Cimino, Senior Manager Business Development Life Sciences, MDOC – MATC should look at the aerospace industry internationally as well and may choose to market to international centers of aerospace to attract new businesses to the state.

Cedric Jacob, Director of Operations Space Structure Complex, Rocket Lab – AAM is specifically applicable to Maryland due to the unique feature of the Chesapeake Bay splitting the state in half. He noted that the MATC should highlight federal and commercial aerospace as a strength for the state and not as silos. As a new aerospace company in the state, Mr. Jacob mentioned that the hard part for a new company in the state is understanding and building connections to solve problems associated with local regulations and zoning. He proposed helping startups and new Maryland businesses with the “boring” stuff and helping to develop connections which would create an atmosphere that’s attractive to bring businesses here.

Dennis Feerick, Vice President Corporate Strategy, The Aerospace Corporation – The situation concerning the aerospace industry in the state is critical. He suggested that the committees should be domain focused and noted that Maryland can be the convener of the region for the aerospace industry.

Rob Quigley, Chief Engineer, Intuitive Machines – Mr. Quigley seconded the idea of making Maryland the hub for cislunar technology and research. He also suggested that instead of working to find companies who would like to move their entire organization to Maryland, it may be more worthwhile to identify our specific strengths in the workforce and try to attract branches of companies here who are looking for those specific employee capabilities.

Closing Remarks and Next Steps

Deputy Secretary Benn provided a recap of the discussion, noted that an MATC chair and vice chair would either be determined before the next meeting or at the next meeting and reviewed the advisory committees that had been determined. He also thanked those from the public for their comments and mentioned that it was good public discourse.

Adjournment

The meeting adjourned at 5:40 p.m.

Tuesday, April 22nd, 2025

2:00 pm - 4:00 pm

World Trade Center Baltimore

17th floor, Rm. 1746

401 East Pratt St., Baltimore, MD 21202

Commission Members in Attendance

- | | |
|--------------------------------|---|
| 1. Dale Moore, EdD [Chair] | Southern Maryland Navy Alliance |
| 2. Georgie Brophy [Vice Chair] | Maryland Space Business Roundtable |
| 3. Willie Brown, PhD | University of Maryland Eastern Shore |
| 4. Harry Coker, Jr. | Secretary, Maryland Department of Commerce |
| 5. Ryan Gerard | Goddard Contractors Association |
| 6. Charles Ichoku, PhD | University of Maryland Baltimore County |
| 7. Barbara Lam | Association of Universities for Research in Astronomy |
| 8. Makenzie Lystrup | NASA Goddard Space Flight Center |
| 9. Robert Rashford | President and CEO of Genesis Engineering |
| 10. Janeen Tracy Uzell | CEO, National Society of Black Engineers |
| 11. Alonzo Washington | Senator, Prince George's County |

Department of Commerce Attendees

- | | |
|--------------------------|---|
| 1. Ricardo Benn | Deputy Secretary, Innovation and Growth |
| 2. Charlotte Bradsher | Sr. Program Manager, Office of the Secretary |
| 3. Ulyana Desiderio, PhD | Sr. Director, Office of Strategic Industries and Entrepreneurship |
| 4. Amy Duray | Program Manager, Federal Business Relations |
| 5. John Gilstrap | Assistant Secretary, Innovation and Growth |
| 6. Benjamin McGlaughlin | Manufacturing Program Manager |

General Public Attendees

- | | |
|------------------------------|---|
| 1. Michael Barton | Maryland Aerospace Alliance |
| 2. John Collins | Actalent |
| 3. Cedric Jacob | Rocket Lab |
| 4. Travis Langster | Tora Consulting |
| 5. J. Vanderlei Martins, PhD | University of Maryland Baltimore County |

Welcome and Introductions

Dr. Moore introduced himself and called the meeting to order. He reminded the Commission of its charge: to promote innovation in the fields of space exploration and commercial aerospace opportunities including the integration of space, aeronautics, and aviation industries into the

economy of the State. He introduced Secretary of Commerce Harry Coker, Jr. as well as Deputy Secretary Ricardo Benn and Assistant Secretary John Gilstrap.

Department of Commerce Updates

Secretary Coker welcomed everyone and shared his overview of aerospace as one of Maryland's most important industry sectors, and a major component of the state's developing strategy for making its economy more robust, equitable and competitive. He acknowledged the industry undergoing a great deal of uncertainty and shared the department's vision outlined in the "Winning the Decade" report. This report identifies three "Lighthouse" sectors in which the state should invest to harness its existing strengths and produce transformative economic growth: 1) information technology, with a specific focus on quantum and artificial intelligence; 2) life sciences, with a specific focus on computational health; and 3) aviation & aerospace, with a specific focus on position, navigation, and timing. Secretary Coker reviewed all the important private, public, academic and federal assets that position Maryland well to continue to support the aerospace industry. He thanked the Commission for the important work it is doing for this important sector for Maryland. There was a suggestion from members of the Commission to consider widening the scope of the aerospace "lighthouse" sector beyond position, navigation and timing.

Deputy Secretary Benn gave an update on Governor Moore's recent trade mission to Asia, visiting South Korea and Japan. He described the public-private partnerships in the area of aerospace in South Korea that effectively leverage assets to grow the industry. Assistant Secretary Gilstrap gave an update on Commerce delegations to the Avalon show in Victoria, Australia and as well as Xponential 2025 trade show in Houston, TX.

The following discussion focused on the uncertainty surrounding the aerospace industry in Maryland, especially with regard to potential budget cuts to NASA Goddard that may affect this important Maryland asset as well as its contractor community. Additional concerns were raised about budgetary restraints/cuts to space science and telescope missions.

Review and Approval of February 20, 2025 MATC Meeting Minutes

Dr. Moore asked for feedback on the minutes of the February 20, 2025 MATC meeting. Hearing none, Dr. Moore asked for a motion to approve the minutes, which was made by Ms. Brophy and seconded by Director Lystrup. The meeting minutes were approved unanimously.

Maryland I-NEST Concept: an Incubator for Nurturing Emerging Satellite Technologies

Dr. J. Vanderlei Martins, Director of the Earth and Space Institute at the University of Maryland Baltimore County presented a concept for an incubator for end-to-end satellite technologies that leverage public and private assets across Maryland. He mentioned Utah State University's Space Dynamics Laboratory as a possible model to follow.

The resulting discussion supported the critical need of greater coordination of government, private and academic players across Maryland, with I-NEST and/or another stand-alone organization similar to Space Florida that would bring all the players together to benefit from the opportunities of commercialization of aerospace and space industries. Specifically, it was pointed out that Maryland has the end-to-end value propositions that other states do not have.

Update on Aerospace Summit

Ms. Brophy and Assistant Secretary Gilstrap gave an update on the proposed Aerospace Summit focused on highlighting the rich asset base and activity occurring in Maryland's aerospace industry.

The summit would offer the opportunity to merge the investor community, academia, start-ups, and established firms in one location to discuss and chart the future growth of the aerospace sector. The program would include pitch competitions by start-ups, exhibitors, reverse pitches from the industry as well as panel discussions.

The resulting discussion focused on the appropriate timing and venue for this event to avoid major conferences already planned for later in the fall. Mr. Gerard suggested focusing the event on providing networking/partnering opportunities for the attendees rather than just presentations. Mr. Barton mentioned March 2026 to coincide with the Goddard Space Science Symposium. The Commissioners also brought up the annual Space Symposium that takes place in Colorado Springs in April as an event to plan around. There was a great interest in promoting and marketing Maryland as an aerospace state.

Strategic Plan Discussion

Dr. Moore gave a presentation on setting up the strategic planning process. The following discussion reflected the Commission's plan to try to address most of the suggested activities in its statute but reserved the right to be flexible and address greatest needs first. The following working groups and leads were suggested (to be finalized later):

- Public Private Partnerships (lead: Georgie Brophy)
- Education and Workforce (lead: Willie Brown)
- R&D Funding (lead: Charles Ichoku)
- Aerospace Zones (lead: Dale Moore)
- Marketing (lead: Commerce staff)

The Commission agreed that the working groups may include external experts and that Commerce staff can provide administrative support as well as any available data Commerce has on the industry. Commission members requested Commerce staff to determine whether the MATC membership composition can include more commercial perspectives.

Public Comments

Mr. Jacob urged the Commission to support the industry by removing regulatory obstacles and red tape. He shared an example of digging a hole on his company's property that had to be done at significant cost due to regulations. He encouraged the Commission to review existing rules and regulations - adding things may be expensive but subtracting or removing things may come at no additional cost but still benefit businesses. He also mentioned the importance of promoting aerospace careers to young people to retain the talent in Maryland.

Closing Remarks and Next Steps

Dr. Moore thanked the speakers, the Commissioners and members of the public for engaging in the discussion.

Adjournment: The meeting adjourned at 4:40 p.m.