



AAM Multistate Collaborative and FIX-MVI Update

13 Feb 2024



AAM Multistate Collaborative



AAM is the next generation of aviation and encompasses the full scope, from sUAS to the modernization of ATM. It includes everything from small UAS to eVTOLs to electric and hybrid general and commercial aviation platforms through to providing improved services and safety for general and commercial aviation. Our role is to focus on those policies and services that are within the scope of state government – state and local policy regarding commercial operations, land use, licensing and permitting, and ground based infrastructure – to support this transformation and modernization of aviation.

Goals include:

- Work towards harmonizing state efforts so that industry can expect consistency across states.
- Take working plans to the FAA and industry for input to ensure that harmonization and common infrastructure are consistent with standards and FAA policy.

Participants: VA, OH, AK, PA, OK, OR, UT, TX, NC, MA, NH, CA, AL, ME, IL, TN, WA, MD, GA, ID, MN, MT



AAM Collaborative Topics



- Scope of AAM and Role of the States
- Lessons Learned from the States
- Basic Principles of AAM at the State Level
- Identified Areas of Discussion, physical and digital infrastructure minimum service levels
- Extending / Expanding from Current Aviation, especially GA
- Economic and Workforce Development
- Positions with Respect to, and for, long-term system funding



Scope of AAM and Role of the States

Topic Area: Scope of AAM and Role of the States

Summary Scope of Topic Area: Identify those areas that are the responsibility of state and local government in complement to the mission of the FAA, and identify grey areas for collaboration between the states and FAA

Problem Statement: As aviation evolves and changes, established norms are changing, aggravating anomalies in the interface between federal management of the airspace and state and local management of infrastructure and planning

Key Questions:

- What is the scope of AAM?
- What is clearly within the scope of the states relative to the mandate of the FAA?
- Where can the states complement and support the goals of the FAA?
- How do we identify “grey” areas for collaboration and joint process development with the FAA?
- How do we prepare for potentially new and different regulatory frameworks?



Lessons Learned from the States

Topic Area: Exchange of activities and experiences to help guide other states and reduce wasted effort

Summary Scope of Topic Area: Exchange experiences, legislative and policy models, working and technical data to help toward harmonization and reduce the effort of any one state – encourage open sharing

Problem Statement: With limited resources and tremendous pressure to prepare, states need to operate very efficiently to prepare for AAM without “overshooting” the mark – without sharing and regional collaboration we will waste time and money and reduce overall safety

Initial discussions – all levels of immaturity:

- Advisory, Working, and Rulemaking panels
- Development of economic, planning, and technical studies
- Funding and funding models
- Pilot programs and research / testing
- Building collaborations and coalitions
- Local government support



Physical and Digital Infrastructure (Minimum Service Level Targets)

Topic Area: Describe needed Infrastructure and Minimum Service Level Targets

Summary Scope of Topic Area: Identify basic needs, equipage and ownership for the deployment of digital and physical infrastructure in support of AAM activities

Problem Statement: The National Airspace System may need further infrastructure, data and additional funding to deal with new disruptive technologies and tempo that AAM is envisioning. To prepare for this new revolution of travel, a cost-effective starting point needs to be developed to support governments, operators and OEM.

Key Questions:

- What are we trying to achieve? Single operator or multiple operator BVLOS?
- Are VFR solutions sufficient now? To what degree may vertiports be constrained for IFR applications?
- What are some of the basic components? What is the cost of those components?
- How do you ensure the infrastructure is operating properly and standardized?
- What is the scope of potential State decisions with regards to defining ground infrastructure?
- Where and to what extent is your area of coverage?

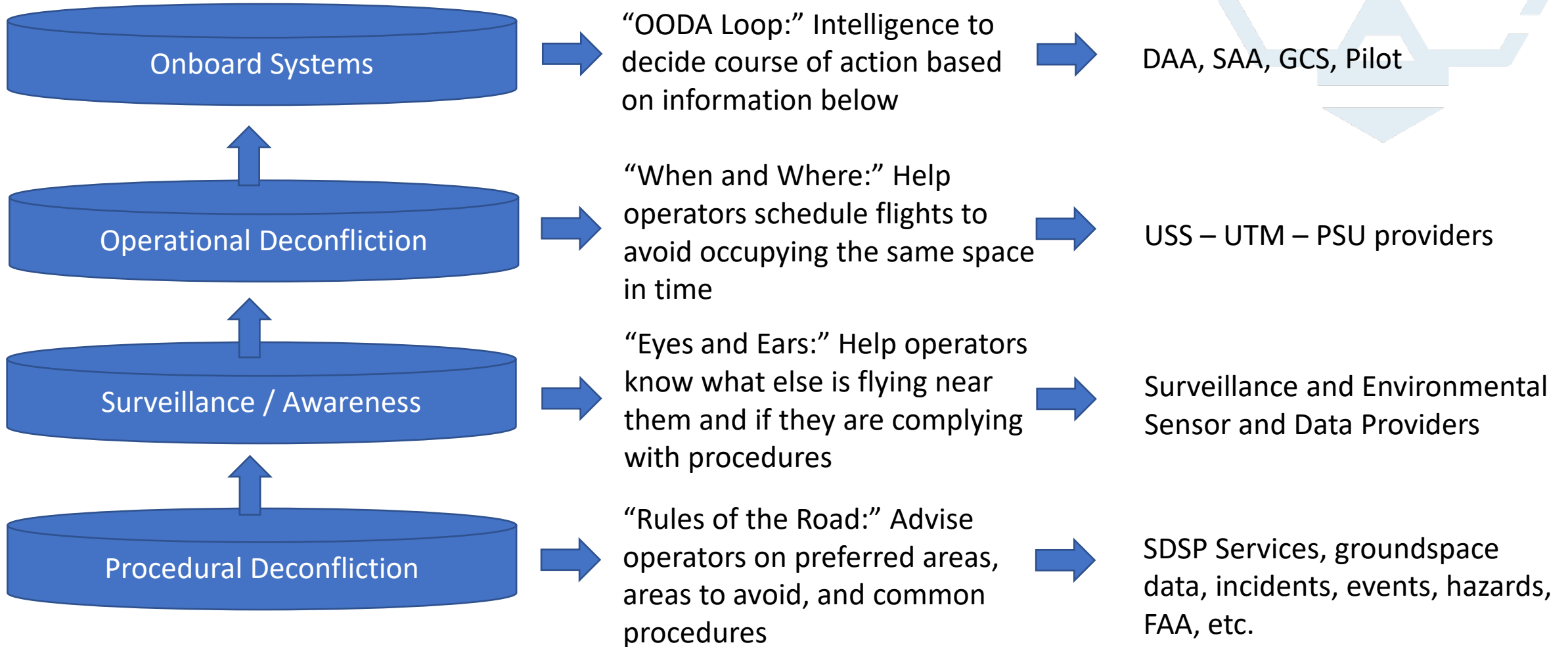


What is FIX-MVI?

- Enable near-term AAM services and return on investment
 - “Flight Information Exchange” (FIX)
 - “Minimum Viable Infrastructure” (MVI)
- FIX is focused on cost-effective, public, secure mechanisms for data sharing to support Federal Aviation Administration (FAA) requirements for safe AAM integration
- MVI is a risk-based approach to infrastructure resulting in cost-effective deployment of infrastructure enabling immediate next steps in AAM
- Support community integration and give industry a place where they can fly
- Return on investment and a path to financial sustainability within 2-3 years



FIX-MVI Safety Model





LIVE

JEBERHARDT@ATA-LLC.COM

Cleveland, OH, USA

MORE SEARCH

CREATE

SHOW ADVISORIES



Low altitude hazards

Live weather from municipal sensor

Restricted public safety facilities from County OES and Public Safety

Potential safety issues to account for in planning

Sensitive public facilities from county planning

Live drone tracks from RF sensor partner

Hazardous storage facilities from



Aerium EASSE - Costs

		Infrastructure					Cost/Sq Mi		Cost/Covered Life		UAS	
		Tier 1	Tier 2	Tier 3	Integration	Operating	Stand Up	Operating	Stand Up	Operating	Operations Subsidy	
Phase IA	Johnstown and Ebensburg	\$37,700	\$230,100	\$303,400	\$301,386	\$241,800	\$36,358	\$10,075	\$13	\$4	\$584,275	
Phase IB	Cambria County	\$441,558	\$331,520	\$0	\$100,000	\$300,000	\$1,242	\$427	\$13	\$5	\$100,000	
					\$1,745,664	\$541,800	\$2,401	\$745	\$13	\$4	\$684,275	
						31.04%						
Phase 2A	Somerset PA and Indiana PA	\$13,260	\$89,600	\$485,640	\$50,000	\$160,000	\$17,736	\$4,444	\$33	\$8	\$500,000	
Phase 2b	Somerset and Indiana Counties	\$1,239,810	\$448,000	\$0	\$50,000	\$593,500	\$905	\$309	\$11	\$4	\$100,000	
					\$2,376,310	\$753,500	\$1,215	\$385	\$14	\$4	\$600,000	
						31.71%						
Phase 3A	New Stanton, Greensburg, Latrobe	\$37,791	\$465,920	\$809,400	\$100,000	\$808,500	\$11,875	\$6,794	\$31	\$18	\$500,000	
Phase 3b	Westmoreland County	\$649,077	\$179,200	\$0	\$50,000	\$248,950	\$879	\$249	\$3	\$1	\$100,000	
					\$2,291,388	\$1,057,450	\$2,050	\$946	\$6	\$3	\$600,000	
						46.15%						
											UAS Ops	
					Infrastructure Costs	\$6,413,362	\$2,352,750	\$1,687	\$619	\$10	\$4	\$1,884,275

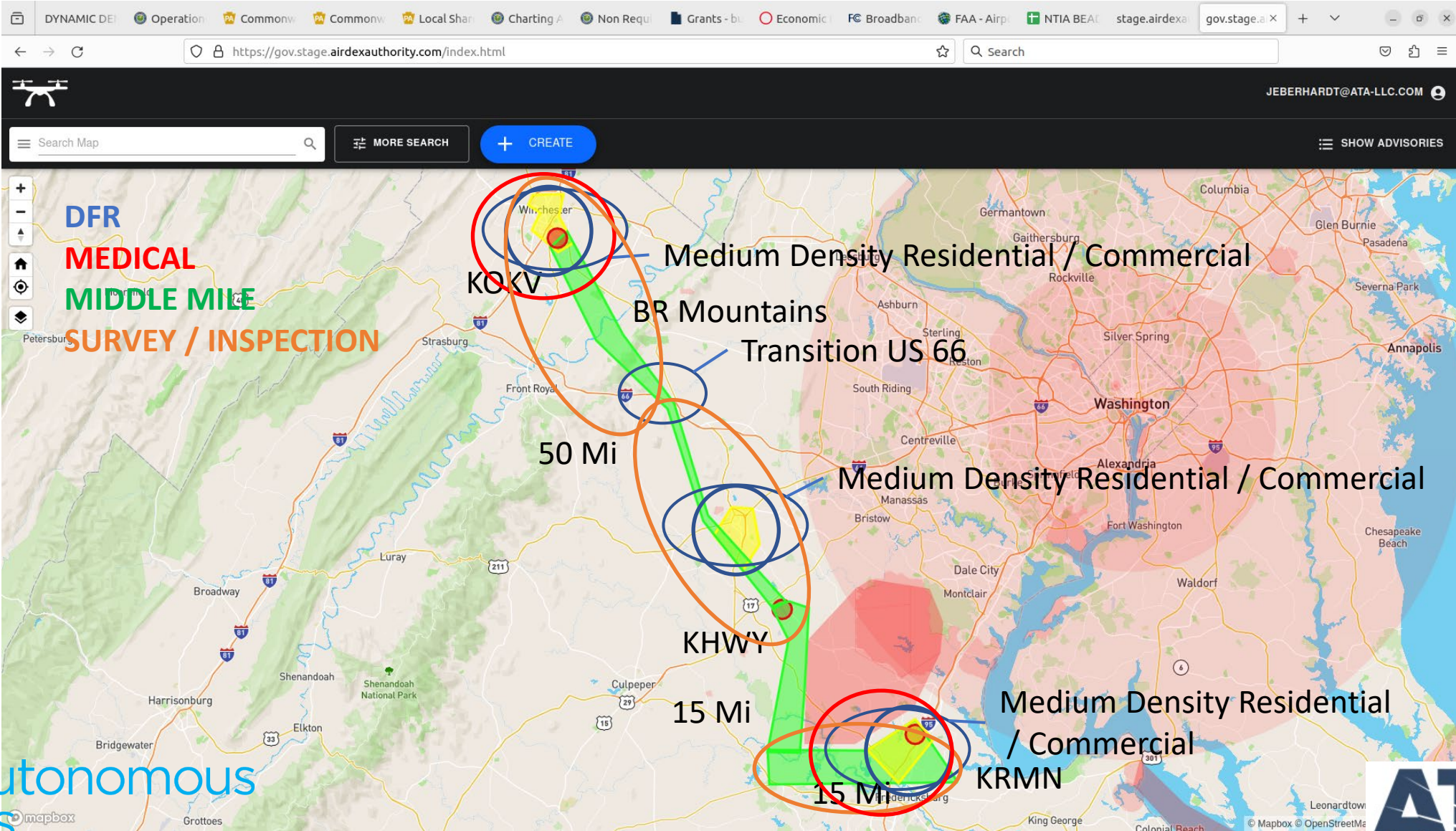


Aerium EASSE - Benefits

		<u>Harm Reduced</u>	<u>Dispatches Avoided</u>	<u>Consumer Deliveries</u>	<u>Public Safety Savings</u>	<u>Industry Fees</u>
Phase IA	Johnstown and Ebensburg	52	600	14,076	\$763,957	\$17,896
Phase IB	Cambria County	173	527	12,357	\$1,169,147	\$52,934
Phase 2A	Somerset PA and Indiana PA	55	166	3,898	\$368,832	\$16,699
Phase 2b	Somerset and Indiana Counties	438	1,334	31,303	\$2,961,573	\$134,087
Phase 3A	New Stanton, Greensburg, Latrobe	127	386	9,047	\$855,909	\$38,752
Phase 3b	Westmoreland County	<u>861</u>	<u>2,624</u>	<u>61,565</u>	<u>\$5,824,712</u>	<u>\$263,718</u>
		1,706	5,637	132,246	\$11,944,129	\$524,086
			Per Covered Life		\$18.06	\$0.79



SWW EASSE MVI Pilot



SWW EASSE Equipment - Stafford

Service	Volume 1 (Green)	Volume 2 (Yellow)	Volume 3 (Red)
GNSS RTK / Nav	1	2	Available
Weather Services	4	Available	Available
Surv. – ADS-B	1	Available	1
Surv. – RemoteID	6	4	Available
Surv. – RF	Available	2	Available
Surv. – Optical	Available	3	Available
Surv. – Radar	Available	0	1

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