

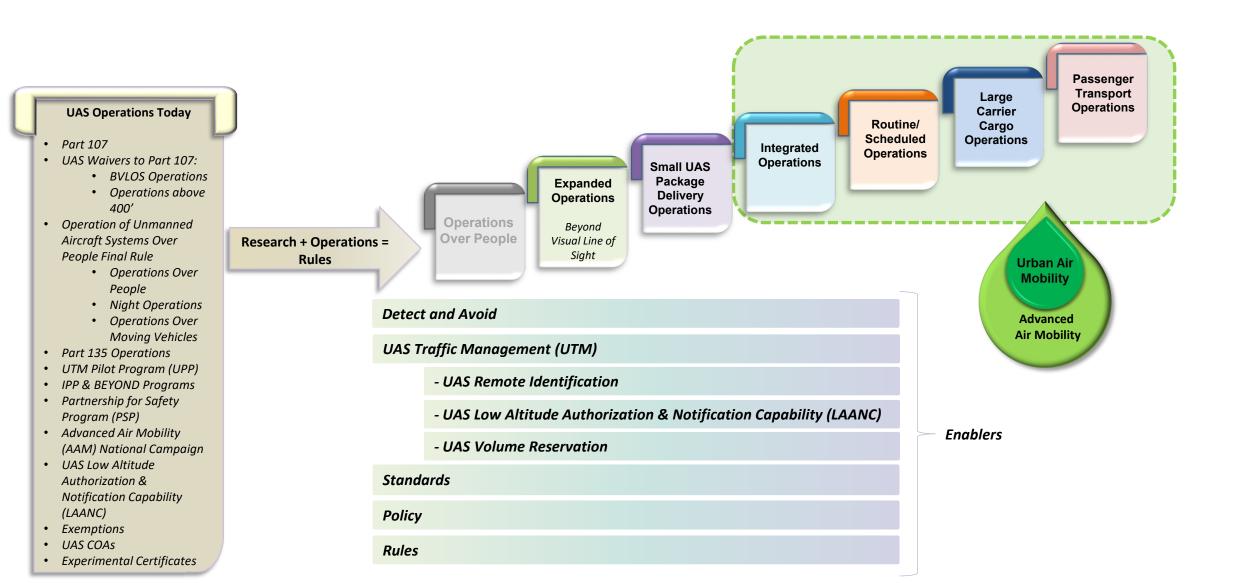


FAA Unmanned Aircraft Systems (UAS) & Advanced Air Mobility (AAM) Weather Research Planning

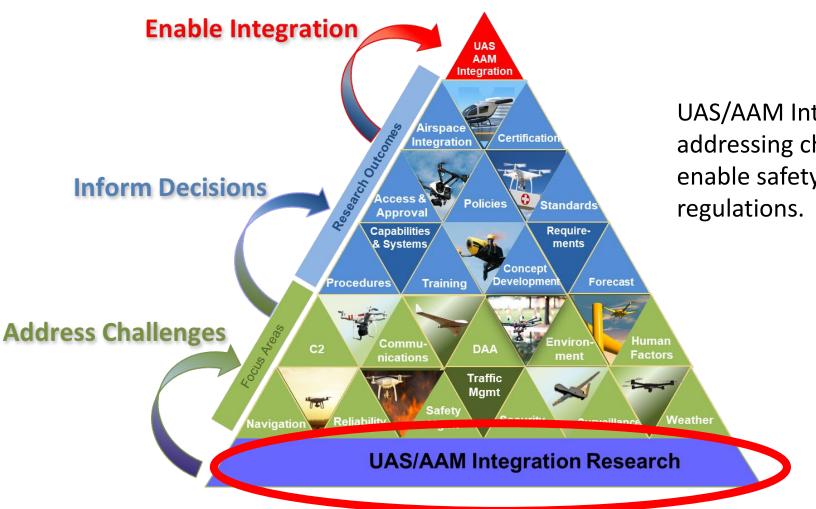
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Categorizing UAS/AAM Integration Research Research Informs Operational Capabilities



UAS/AAM Integration Research



UAS/AAM Integration Research is the foundation for addressing challenges and informing decisions to enable safety driven policies, procedures, and regulations

Collaboration and Partnerships

- ANSI: American National Standards Institute
- ASSURE: Alliance for System Safety of UAS through Research Excellence
- CANSO: Civil Air Navigation Services Organization
- CTA: Consumer Technology Association
- DOC: Department of Commerce
- DOT: Department of Transportation
- DOT Volpe: Volpe National Transportation Systems Center
- EASA: European Union Aviation Safety Agency
- EUROCAE: European Organisation for Civil Aviation Equipment
- EXCOM SARP: Executive Committee –Science And Research Panel
- FAA CAMI: Civil Aerospace Medical Institute
- FAA WJHTC: William J. Hughes Technical Center
- ICAO: International Civil Aviation Organization
- IEEE: Institute of Electrical and Electronics Engineers
- ITU: International Telecommunications Union
- JARUS: Joint Authorities for Rulemaking on Unmanned Systems
- MIT/LL: Massachusetts Institute of Technology Lincoln Laboratory
- MITRE CAASD: Center for Advanced Aviation System Development
- NASA: National Aeronautics and Space Administration
- NATO: North Atlantic Treaty Organization
- NIST: National Institute of Standards and Technology
- REDAC: Research, Engineering, and Development Advisory Committee



Weather Research Planning

Small UAS

Package

Delivery

Operations

What are viable

meteorological data

capabilities required

to effectively inform

performance based

standards for small

operations in the

NAS?

UAS package delivery

collection and analysis

Expanded Operations

Beyond Visual Line of Sight

Investigate feasibility of using Real Time Mesoscale Analysis to provide aviation weather observations

Identify UAS weather hazards

Develop icing, snow, and rain means of compliance for UAS

Investigate the tolerance for icing of UAS rotors/propellers

Identify UAS weather requirements for the boundary layer

What are viable meteorological data collection & analysis capabilities required to expanded operations in the NAS?

Evaluate operational safety and reliability for largescale UAM operations with a focus on communications, weather, and regulations

Integrated

Operations

Research the complexities of extreme air flows within the urban environment and provide guidance material on these air flows and associated flight response to UAS operators

Identify and track existing UAS standards, standards in progress and any gaps where standards need to be developed

What are viable meteorological data collection and analysis capabilities required to effectively inform performance based standards for UAS/AAM integrated operations in the NAS?

Routine/ Scheduled Operations

Evaluate operational safety and reliability for largescale UAM operations with a focus on communications, weather, and regulations

Research the complexities of extreme air flows within the urban environment and provide guidance material on these air flows and associated flight response to UAS operators

What are viable collection, management and reporting methods for operational and safety data to ensure secure routine/scheduled UAS/AAM operations?

Large Carrier Cargo Operations

Evaluate operational safety and reliability for large-scale UAM operations with a focus on communications, weather, and regulations

What are viable meteorological data collection and analysis capabilities required to effectively inform performance based standards for UAS/AAM large cargo carrier operations in the NAS?

Passenger Transport Operations

Evaluate operational safety and reliability for largescale UAM operations with a focus on communications, weather, and regulations

What are viable meteorological data collection and analysis capabilities required to effectively inform performance based standards for UAS/UAM passenger transport operations in the NAS?

