NASA Advanced Air Mobility (AAM)
Urban Air Mobility (UAM) and Grand Challenge
Global Urban Air Summit, Farnborough UK
Aerial Reach – 30 Minute Journey

24 hr weighted average
60 minute driving commute
Washington, DC.

Any time of day
~30 minute (~75mi radius) Aerial Commute
Washington, DC.
Urban Air Mobility (UAM) Vision
Revolutionize mobility around metropolitan areas by enabling a safe, efficient, convenient, affordable, and accessible air transportation system for passengers and cargo.
UAM Maturity Levels (UML)

UAM Framework and Barriers (GC Series Focus)

**Vehicles**
- UML-1: Late-Stage Certification Testing and Operational Demonstrations in Limited Environments
- UML-2: Low Density and Complexity Commercial Operations with Assistive Automation
- UML-3: Low Density, Medium Complexity Operations with Comprehensive Safety Assurance Automation
- UML-4: Medium Density and Complexity Operations with Collaborative and Responsible Automated Systems
- UML-5: High Density and Complexity Operations with Highly-Integrated Automated Networks
- UML-6: Ubiquitous UAM Operations with System-Wide Automated Optimization

**Airspace**

**Community**

INITIAL STATE

INTERMEDIATE STATE

MATURE STATE
The Initial UAM “Grand Challenge”

**Goal**

Improve UAM safety and accelerate scalability through integrated demonstrations of candidate operational concepts and scenarios

**Objectives**

1. Accelerate Certification and Approval
2. Develop Flight Procedure Guidelines
3. Evaluate the CNS Trade-Space
4. Demonstrate an Airspace Operations Management (AOM) Architecture
5. Characterize Community Concerns