

# FACTSHEET

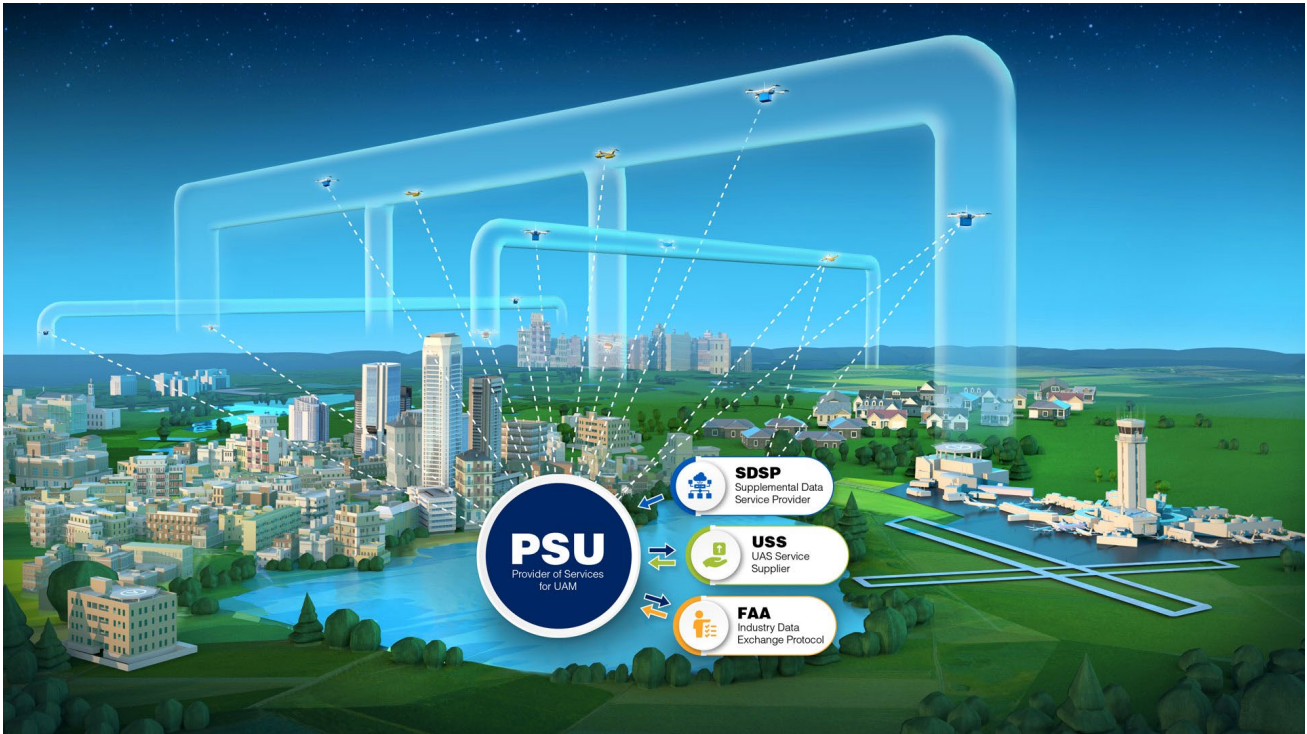
## Urban Air Mobility (UAM)



**ICN** INFO-CENTRIC  
NATIONAL AIRSPACE  
SYSTEM

### Background

Growing cities and increased population density offer the Federal Aviation Administration (FAA) an opportunity to revolutionize air transportation by making the dream of urban air mobility (UAM) a reality. Aviation is multifaceted, and the FAA’s Urban Air Mobility Program, in collaboration with NASA and stakeholders, is the next generation of airborne transportation. The UAM ecosystem will expand transportation networks to include crewed and uncrewed aircraft and explore solutions that use agile infrastructure and diverse operations, as envisioned by the Info-Centric National Airspace System (NAS). The initial concept, developed in 2020, included overarching airspace management principles and assumptions, and the expected evolution of UAM operations, airspace characteristics, and the operational environment. To mature the UAM concept, air traffic requirements, policies, and procedures must be researched, reviewed, and refined.



### Project Description

UAM Concept of Operations development will focus on the existing capabilities with industry partners today, along with the architecture for crewed and uncrewed aircraft traveling within urban and metropolitan environments at lower altitudes. The UAM Program will address interactions with existing Air Traffic Control (ATC), as well as the role of cooperative traffic management concepts explored in Unmanned Aircraft System (UAS) Traffic Management (UTM). Concept development will consider the introduction of new aircraft types (e.g., electric Vertical Takeoff and Landing (eVTOL)) with the increasing level of autonomy and the data exchanges they require. Through collaboration with NASA and industry partners, the UAM Program will identify and validate critical paths to determine minimally viable operations for the near future.

Engineering and analysis for the UAM Program will focus on the unique traffic management requirements, procedures, airspace design, and policies for the operational environment. It will also identify services and information exchanges needed to enable collaborative, safe, and efficient incorporation of these operations in urban airspaces. The operational environment and needs from industry are expected to include the transitional period where crewed UAM aircraft will operate under existing Visual and Instrument Flight Rules (VFR/IFR) and use existing ATC services for fixed-wing aircraft or existing helicopter infrastructure (e.g., routes, helipads, rules and regulations, and ATC services). Engineering and analysis will also explore the future need for more tailored flight rules to provide the necessary flexibility to meet business objectives safely.

The UAM Airspace Management Demonstration (UAMD) will collaborate with industry partners and stakeholders to showcase and validate the concepts described in the UAM Concept of Operations version 1.0 document. UAMD will also exhibit the creation and management of UAM corridors and architecture components that support information exchanges in the ecosystem. This project will validate and inform the conceptual elements and engineering analysis performed.

UAMD will take an iterative approach to demonstrate operations and Airspace Transportation Management elements with increasing complexity in measured and controlled steps. Coordination will occur between the FAA, UAM operators, Provider of Services for UAM (PSU), and public entities.



## Drivers

- Density of operations
- Enabling businesses to operate
- Providing access to busy airspace under ATC command
- Providing predictability and flexibility in flight planning

## Outcomes

- Validate the concepts and engineering work through the demonstration
- Examine the engineering required to bridge the gap between concepts and practice
- Perform a detailed analysis of specific areas regarding the overall concept
- Use the outputs of parallel and predecessor efforts to analyze the performance and metrics of the envisioned UAM environment
- Demonstrate the establishment, characteristics, and use of cooperative control environment corridors by UAM operators
- Identify FAA and industry data exchanges to ensure safe operations