

FACTSHEET

UAM Unmanned Aircraft Systems (UAS) Traffic Management (UTM) Concepts and Engineering

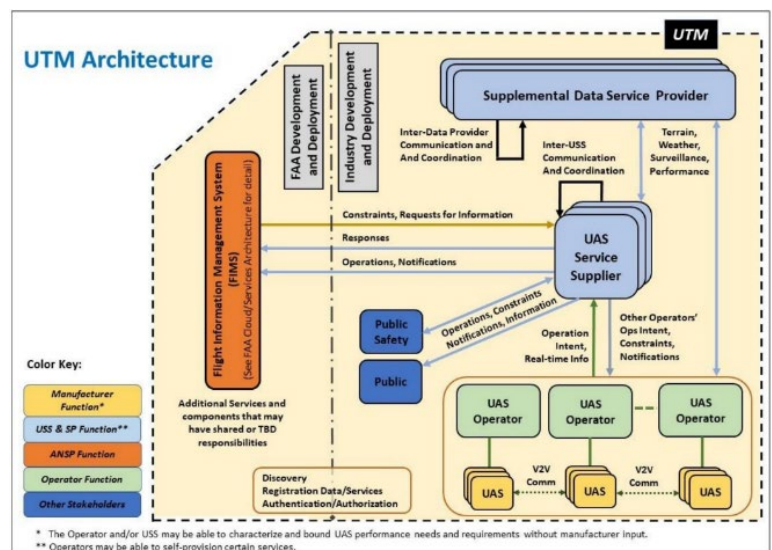


ICN INFO-CENTRIC
NATIONAL AIRSPACE
SYSTEM

Background

The FAA's info-centric National Airspace System (NAS) vision outlines a move toward an agile infrastructure that safely and seam-lessly integrates and supports diverse operations. The commercial applications and opportunities for Unmanned Aircraft System (UAS) operations, particularly at low altitudes, present incentives and business cases for an architecture that enables scalable automation of these operations within the regulatory, operational, and technical environment comprising the NAS. Given the number, type, and duration of envisioned UAS operations, the existing airspace design, and Air Traffic Management (ATM) system cannot cost-effectively scale to deliver services for UAS. Further, most of these operations do not require direct interaction with the ATM system. To enable safe management of diverse UAS operations in the NAS, solutions scaling beyond the current ATM infrastructure and air traffic control personnel resources are necessary.

The FAA's UAS Traffic Management (UTM) concept and accompanying engineering activities will provide those solutions. In collaboration with NASA, the FAA has established multiple public/private partnerships to develop operational concepts, systems engineering requirements and capabilities, and other activities necessary to enable the implementation of UTM. The FAA's info-centric vision for the NAS builds on the Next Generation Air Transportation System foundation in three key areas, or pillars: operations, supporting infrastructure, and integrated safety management. UTM concepts and engineering primarily supports the operations pillar through an integrated information regime with diverse collaborating services, including public private partnership with UAS Service Suppliers (USS) which are third party services and applications to support operations planning to the UTM community.



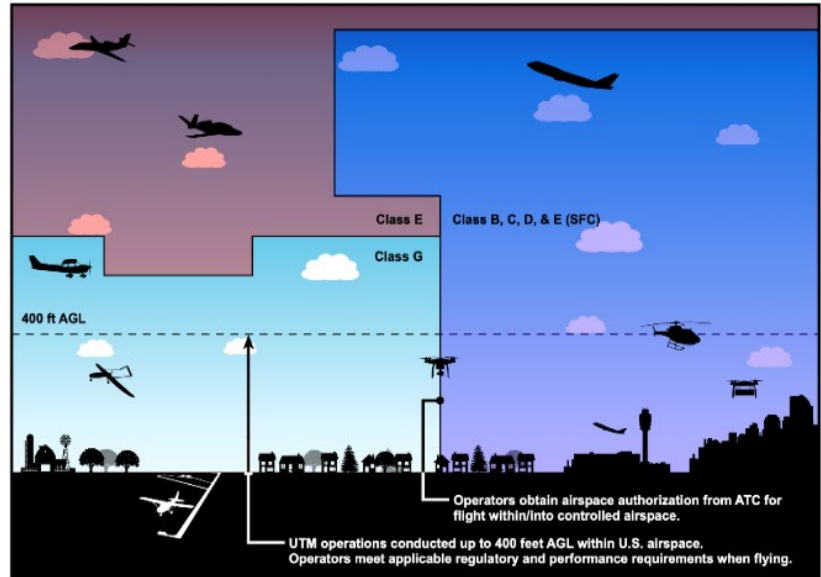
Project Description

UTM uses diverse services to deploy collaborative, agile systems where they currently do not exist. It is a community-based traffic management system in which UAS operators and entities providing operation support services are responsible for the coordination, execution, and management of operations within regulatory requirements established by the FAA. This is a federated set of services that enables the co-operative exchange of information that supports UAS operators, facilitated by commercial service suppliers in alignment

with performance-based standards. UTM is designed to support the demand for a broad spectrum of operations and services with ever-increasing complexity and risk through an innovative and competitive open market. Services are envisioned to be interoperable to support scalability of UTM operations.

The [UTM Concept of Operations](#) (ConOps) advances the vision for the management of small, low-altitude UAS operations, including those beyond visual line of sight (BVLOS). Updates to the UTM ConOps and associated artifacts will support and inform future policies, regulations, services, and infrastructure required to ensure safe and efficient operations.

Additionally, the UTM ConOps serves to inform the FAA's systems engineering development, assessment/evaluations, and demonstrations, including the [UTM Pilot Program](#).



Outcomes

- Enable diverse collaborating services that allow multiple UAS BVLOS operations
- Facilitate technical engagements and mature design documents for the deployment of FAA UTM enterprise systems in support of a fully integrated information environment
- Develop and maintain an enterprise systems engineering approach to define the strategic objectives across programs, service domains, and infrastructure

Drivers

- The expected influx of diverse UAS operations in the NAS, requiring solutions that scale beyond the current ATM infrastructure and ATC personnel resources
- The need for efficiency for UTM capabilities in an urban environment
- The need for an integrated information governance with internal and external stakeholders to enable routine UTM operations