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UNMANNED AIRCRAFT SYSTEM (UAS) TRAFFIC MANAGEMENT (UTM) ACTIVITIES IN THE UNITED STATES

(Presented by the United States)

EXECUTIVE SUMMARY

This paper presents an update on the United States Federal Aviation Administration's (FAA or Agency) unmanned aircraft systems (UAS) traffic management (UTM) initiatives and implementation strategy. UTM will not replace the Air Traffic Management (ATM)/air traffic control (ATC) system covering controlled airspace in the National Airspace System. UTM is separate from and complementary to ATC services by managing and reducing risks for drone operations. The FAA has been working to implement and evolve the UTM ecosystem to support UAS beyond visual line of sight operations in low-altitude airspace.

<i>Strategic Goals:</i>	This working paper relates to the Strategic Goal <i>Every Flight is Safe and Secure</i> .
<i>Financial implications:</i>	This paper contains no significant financial implications.
<i>References:</i>	

1. INTRODUCTION

1.1 The United States (U.S.) Federal Aviation Administration (FAA or Agency) believes in the integration, not segregation, of drones into the National Airspace System (NAS). The Agency views unmanned aircraft system (UAS) traffic management (UTM) as a collaborative ecosystem for safely managing drone operations at and below 400 feet above ground level. This ecosystem is built on a framework of regulatory requirements, technical capabilities, and interoperable services to manage and mitigate risks associated with drone operations. Separate from, but complementary to air traffic services, UTM enables functions such as, inter alia, flight planning, surveillance, and conflict management to mitigate risks and ensure safe, efficient operations, especially beyond visual line-of-sight (BVLOS).

1.2 This paper will discuss the priorities and principles of the FAA’s UTM implementation strategy. It highlights near-term objectives, including the establishment of a standardized process for UTM service approval and the maturation of the FAA-managed cloud services that will interact with the future UAS Service Supplier (USS) networks. UTM development will ultimately identify the services, roles and responsibilities, information architecture, data exchange protocols, software functions, infrastructure, and performance requirements for enabling the management of low-altitude drone operations within the NAS.

2. DISCUSSION

2.1 The FAA’s vision for UTM is a community-based, cooperative traffic management system in which operators and operational support service providers are responsible for the coordination, execution, and management of UAS operations with FAA oversight. UTM includes a set of federated services and a robust ecosystem that enables the management of multiple UAS operations. Operators can choose from available third-party or automated data service providers, including USS or Supplemental Data Service Providers (SDSPs), to support their operations. Alternatively, operators may provision their own set of services. UTM services are designed based on industry consensus standards and must meet performance-based safety requirements set by the regulator. Each UTM service is expected to mitigate operational safety risk, and the types of services needed will vary based on the specific operational environment and conditions.

2.2 To enable routine and scalable BVLOS drone operations, the FAA structured its UTM architecture based on a federated data-sharing system that is interoperable. It includes UTM services that will support BVLOS drone operations and mitigate operational safety risks. Utilization of both industry consensus standards and ensuring maximum interoperability are important for scalability and global harmonization. As the drone industry continues to grow across the globe, standardization will support safe operations and allow the industry to thrive.

2.3 The FAA facilitates and collaborates in global harmonization by sharing UAS integration and UTM best practices to promote alignment of policies and standards that support mutual recognition and interoperability. The FAA collaborates with UTM, remotely piloted aircraft systems (RPAS) traffic management (RTM, Canada’s UTM concept), and U-Space (Europe’s UTM concept) partners around the globe to share best practices, lessons learned, and proven concepts, building upon the ongoing activities in the U.S. and other countries. The FAA also works closely with the Joint Authorities for Rulemaking on Unmanned Systems (JARUS) to harmonize UTM safety services and supports ICAO’s evolving UTM framework through engagement in the ICAO Advanced Air Mobility Study Group.

2.4 Additionally, in collaboration with the Global UTM Association (GUTMA), the FAA hosted “Harmonized Skies 2024” in North Texas. This event included the opportunity to observe the FAA’s UTM Operational Evaluation (OE), the first real-world deployment of its kind globally, featuring live demonstrations of BVLOS operations deconflicted through seamless coordination among industry stakeholders. Increasing collaborative engagement between government and industry will strengthen the local, regional, and global alignment of regulations.

2.5 In 2023, the UAS industry requested that the FAA take steps to operationalize UTM in the United States. The Agency initiated work with industry to launch the UTM OE, beginning with operations in North Texas. The UTM OE was designed to assess and implement UTM capabilities to enable routine BVLOS drone operations in low-altitude airspace where traditional air traffic services are not provided. The UTM OE focuses on UTM capabilities based on the [ASTM F3584-21](#) *Standard Specification for UAS*

Traffic Management (UTM) UAS Service Supplier (USS) Interoperability and is intended to implement, validate, and scale services.

2.6 To support the deployment of interoperable UTM USS and associated services, UTM service providers must share data collaboratively. To implement this requirement, industry, with the support of the FAA, used the agreement created by GUTMA and adapted it for the United States. The UTM OE industry consortium established a governance structure with an Operational Committee and Technical Committee to oversee data sharing and standards implementation, and to provide oversight of the ongoing cooperative work required to establish a UTM ecosystem. The committees are comprised of representatives from each service provider who has signed the governance agreement and observers from the FAA and the U.S. National Aeronautics and Space Administration. Operators who use these UTM services as safety mitigations for BVLOS flights can also be invited to participate.

2.7 After establishing the committees, industry created an onboarding process to ensure all service providers are implementing the standard consistently and that their services are interoperable. The committees have utilized the InterUSS testing suite for simulation and operational practicality testing. In parallel, the FAA is working with each of the service providers to review their UTM service and evaluate the safety mitigations for drone-to-drone collision risk through the UTM Near-Term Approvals Process (NTAP). The FAA ensures that each service provider is satisfactorily meeting the requirements of the standard and has all of the required documentation.

2.8 In July 2024, the FAA granted Letters of Acceptance (LOAs) to Zipline and Wing for the first UTM Strategic Conflict Detection services, authorizing the use of these services to mitigate drone-to-drone collision risk for BVLOS drone operations. In October 2024, DroneUp and ANRA Technologies were granted LOAs for UTM Strategic Conflict Deconfliction services. These new federated and interoperable services illustrate how UTM will continue to scale in response to growing operational demand.

2.9 As of June 2025, twelve service providers have joined the governance agreement and are in various stages of the NTAP review, working towards FAA LOAs. Additionally, the service providers who already possess LOAs have further deployed their services in new areas across the U.S., including Arkansas, New York, North Carolina, Texas, and Utah.

2.10 As UTM and technology continue to evolve, the FAA will work with industry to expand the scope and scale of UTM deployments across the NAS. This includes integrating additional services and capabilities such as Discovery and Synchronization Service pooling, prioritization, and conformance monitoring for situational awareness. By enabling these capabilities, the FAA aims to lay the foundation for a comprehensive UTM framework that ensures the safe integration of UAS operations.

3. CONCLUSION

3.1 The FAA remains committed to ongoing collaboration with industry to ensure the U.S. UTM ecosystem continues to evolve in support of increasingly complex operations. The FAA remains committed to advancing UTM capabilities domestically while also collaborating with international partners to support global harmonization and alignment in the development and deployment of UTM services.