

SUBCOMMITTEE ON NAS OPERATIONS

FINDINGS AND RECOMMENDATIONS

WINTER/SPRING 2016

Findings: UAS Integration in the NAS

Finding 1

The Subcommittee appreciated the opportunity to learn about the FAA's UAS plans at the recent session of the UAS Research Expo. It is clear that the FAA recognizes the need for a high level, cross-agency approach to the integration of UAS in the NAS and the Subcommittee strongly concurs and finds that integration of UAS in the NAS will require a strong system engineering approach with centralized leadership that is capable of making the significant technical and procedural decisions necessary to make progress. This system engineering approach must include all aspects of integration of UAS in the NAS, including UAS certification and safety, operational procedures, and supporting technologies.

Finding 2

The Subcommittee finds that FAA has performed significant work to develop a UAS concept of operations and a set of mid-term UAS operational scenarios. The FAA has decomposed these into a set of FAA requirements and operational shortfalls and an evolution strategy for air traffic operations. The FAA has developed a UAS Concept Maturation Plan that focuses on those activities that address existing FAA shortfalls associated with the provision of air traffic services to UAS airspace users in the mid-term and beyond. However, the FAA has not shared this work to any significant degree with the external stakeholder community. The result is that the external community cannot appreciate the specific problems that the FAA is addressing and is unaware of any substantial plan to move toward a solution. In addition, the FAA cannot benefit from the ability of the external stakeholder community to recommend innovative solutions to some of the problems (e.g., through UAS equipage or procedures). As the Subcommittee has already reported to the FAA: "Finding a common approach to addressing routine UAS access to the NAS requires that UAS community develop patience and understanding of the challenges of operating in the airspace and that the FAA develop a greater sense of urgency to allow safe and effective UAS business."

Finding 3

As previously noted by the Subcommittee, the level of effort, as reflected by the allocation of RE&D and F&E funding that the FAA has been given in FY'16 for UAS research and development, appears to be substantially focused on airframe safety and certification and not on the development of operational concepts and procedures that are necessary to close the operational and technical shortfalls identified in the UAS Concept Maturation Plan. This apparent mismatch will likely further delay the integration of UAS in the NAS.

Finding 4

The Subcommittee finds that the UAS technology space and user demand continues to grow at an extremely rapid pace and continues to significantly outstrip the FAA's ability to plan for and conduct the research and development necessary to address the operational and technology shortfalls.

Recommendation 1

The Subcommittee recommends that FAA immediately engage the broadest set of external stakeholders of the UAS community and share with them the FAA's UAS operational scenarios, requirements breakdown and UAS Concept Maturation Plan. The FAA should use this engagement to inform the user community of the technical and operational challenges it faces and revise that plan with input from the community.

Recommendation 2

The Subcommittee recommends that FAA establish and maintain high level system engineering leadership, as described above, focused on UAS integration in the NAS. This leadership should be charged with prioritizing research and development across all the FAA organizations to ensure that UAS integration progresses as rapidly as possible. This leadership must be able to make the significant operational and technical decisions necessary to make this happen. The Subcommittee recommends that this leadership develop an integrated research and development plan for UAS in the NAS and present a progress report on this plan at its August 2016 meeting.

FAA Response: N/A

Current Status Date: 3/10/2016

Current Status: Open – Pending official FAA response