

美國無人機管制規定仍懸而未決

美國聯邦政府監督機關指出，聯邦航空總署將無人機納入國家空域中管制上的努力，未如產業界所預期。

蕭光霽 譯



美國政府某監督機關之消息指出，美國聯邦航空總署 (Federal Aviation Administration, FAA) 為緩和無人機與「國家空域系統」(National Airspace System, NAS) 整合問題的許多專案，遭遇規劃上的挑戰與資料需求不斷而受挫，該機關建議採取嶄新、著重效益的作法，以追蹤未來進度。

無人機又稱為無人航空器系統 (unmanned aircraft system, UAS) 或其他多種稱呼，2017 年為加速無人機安全整合，成立為期 3 年的「整合先導專案」(Integration Pilot Program, IPP)，由美國聯邦航空總署與州、地方與部落層級政府，以及產業界相關單位共擬規定，俾用以核准無人機在「國家空域系統」中複雜運用。

「整合先導專案」於 2020 年底結案，另由名為「超越」(BEYOND) 的方案，解決前案未盡之挑戰。

美國運輸部 (Department of Transportation, DOT) 督察長室 (Office of Inspector General, OIG) 於 (2022 年) 4 月間公布之審查報告指出，「整合先導專案」的成果「並未全然達到產業界與參與單位的預期，整合挑戰依然存在。在無人機運用錯綜複雜的情況下，聯邦航空總署亦要面對兼顧飛航安全與無人航空器創意運用之挑戰。」

是項報告指稱，某些同樣挑戰延續到「超越」專案上，其中包括多種業界間的協調。

該報告亦指出「整合先導專案」許多成果，包括參與單位進行超過 21,000 次試飛與實作飛行，以及運送包裹與相關基礎設施之檢查。然而報告亦稱此專案「並未完全達到產業界或主要參與單位預期成果，尤其是該專案未能達到產業界主要目標，就是開放無人機運用於『視距外範圍』(beyond visual line of sight, BVLOS)」。

該報告另稱，「視距外範圍」運用是「超越」專案之重點，但是美國聯邦航空總署並未完成專案計畫或合格標準，且該總署亦「遭遇兼顧飛安與創新運用的挑戰。報告寫道：「因此，聯邦航空總署與產業界對於開放無人機在符合經濟效益的條件下，運用於『國家空域系統』中『視距外範圍』的時間，仍然懸而未決。」

報告中另對美聯邦航空總署署長提出數項建言，包括要為「超越」專案制定「全案

目標、階段目標與合格的性能衡量作法」，至少每年定期進行資料蒐整之評量，以瞭解專案是否產出必要資訊。

該報告總結稱：「在『國家空域系統』中推動『無人航空器系統』運用，仍是聯邦航空總署近年來所遭遇最複雜，挑戰迅速演變的項目之一。該總署達成『無人航空器系統』完整且安全的整合，仍需全署專注之協調與溝通，依據資料制定決策，並訂頒嶄新、健全的安全標準。」✈️

譯自 *Aero Safety World May 2022*

Unmet Challenges

FAA efforts to incorporate drones into the national airspace have not met industry's expectations, a federal oversight agency says.

FSF Editorial Staff



Planning challenges and data requirements hindered U.S. Federal Aviation Administration (FAA) programs intended to ease the integration of drones into the National Airspace System (NAS), according to a government oversight agency that recommends adopting new performance measures to track future progress.

The three-year Integration Pilot Program (IPP) to accelerate the safe integration of drones – also known as unmanned aircraft systems (UAS), uncrewed aircraft systems and several other terms – began in 2017, with the FAA working in cooperation with state, local and tribal governments and with industry stakeholders to develop rules to allow complex drone operations in the NAS.

The IPP ended in late 2020 and was succeeded by another initiative, known as BEYOND, to address remaining challenges.

Results of the IPP “did not fully meet industry and participant expectations, and integration challenges remain,” the U.S. Department of Transportation (DOT) Office of Inspector General (OIG) said in an audit report issued in late April. “FAA also faced challenges balancing the need to ensure aviation safety with UAS innovation, especially given the complexity of proposed operations.”


Some of the same challenges continued into the BEYOND program, including issues involving coordination among multiple lines of business, the report said.

The report cited several IPP accomplishments, including the more than 21,000 test flights and operational flights conducted by participants, including package deliveries and infrastructure inspections. Nevertheless, the report said, the program “did not fully meet industry or lead participant expectations” – especially because it failed to meet a primary industry goal of enabling beyond visual line of sight (BVLOS) operations.”

BVLOS is a focus of the BEYOND program, but the FAA has not finalized the program plan or success metrics, and the agency also “faces challenges balancing aviation safety with innovation,” the report

said. “As a result, it remains uncertain when FAA and industry will be positioned to enable operations beyond visual line of sight that are economically viable throughout the NAS.”

The report included several recommendations to the FAA administrator, among them establishing “goals, milestones and performance measures of success” for BEYOND and implementing periodic assessments of data collected at least annually to determine whether it is providing necessary information.

“Advancing UAS operations in the NAS continues to be one of the most complicated and fast-moving challenges FAA has faced in recent years,” the report concluded. “FAA’s ability to achieve full and safe integration of UAS will require focused coordination and communication across the Agency to make data-driven decisions and promulgate new, robust safety standards.” 

Form Aero Safety World May 2022