



WORKING PAPER

**SEVENTH WORLDWIDE AIR TRANSPORT CONFERENCE
(ATCONF/7)**

Montréal, HQ, 16 to 20 November 2026

Agenda Item 4: Emerging technologies, new business models and other associated aspects

4.1: Economic regulatory frameworks on emerging technologies

**A SANDBOX-FIRST PATHWAY TO ADVANCED AIR MOBILITY:
OMAN'S NATIONAL ADVANCED AIR MOBILITY PROGRAMME
UNDER THE NATIONAL AVIATION STRATEGY 2040**

(Presented by Oman)

EXECUTIVE SUMMARY

Advanced Air Mobility (AAM) is increasingly approaching commercial maturity, yet most States still lack a structured national pathway for its safe and economically sound introduction. This paper presents Oman's approach, which establishes AAM as a dedicated national programme under the *National Aviation Strategy 2040*, comprising three sequenced initiatives: a regulatory framework, a national unmanned aircraft system traffic Management (UTM) platform, and a regulatory sandbox for controlled activation. These components are underpinned by a comprehensive national plan and a national multi-stakeholder forum held in June 2026.

The paper draws feasible lessons for Member States and proposes strengthening international guidance on the economic and policy dimensions of AAM introduction to markets.

Action: The conference is invited to consider the recommendations in section 6.

Strategic Goal:	This working paper relates to Strategic Goal: <i>The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All.</i>
Financial implications:	This paper does not entail a significant direct financial burden for States. The model presented envisions pilot projects as public-private partnerships, with trials financed by the private sector. This aligns incentives for innovation with public-interest safeguards and limits State financial exposure, while subsequent infrastructure investment is calibrated in accordance with operational evidence generated by the sandbox.
References:	<i>Oman Vision 2040 – National Vision</i> , document, Sultanate of Oman; <i>National Aviation Strategy 2040</i> , Sultanate of Oman; <i>Comprehensive National Advanced Air Mobility Plan</i> , Sultanate of Oman; Civil Aviation Regulation - Advanced Air Mobility Sandbox (CAR-AAM.SB), Civil Aviation Authority (CAA); Outcomes of the Advanced Air Mobility (AAM) Forum, Sultanate of Oman (June 2026);

¹Arabic version provided by Oman

	<i>Manual on Remotely Piloted Aircraft Systems</i> (Doc 10019); and Work Conducted by ICAO Advanced Air Mobility Study Group (AAM SG) and Remotely Piloted Aircraft Systems Panel (RPASP).
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1. INTRODUCTION

1.1 Advanced Air Mobility (AAM), encompassing unmanned aircraft systems (UAS), electric vertical take-off and landing (eVTOL) aircraft, drone cargo services and specialized aeronautical applications, is moving rapidly from the demo stage towards commercial operations. Its introduction raises economic and institutional questions that are no less important than technical ones, e.g.: market-entry regulations, investment in infrastructure and airspace integration, business model feasibility, and the division of responsibilities between public authorities and private operators.

1.2 Most States currently lack a structured national pathway for introducing AAM. In the absence of such a pathway, innovation may either be delayed by regulatory uncertainty or introduced in a fragmented manner that creates risks for safety, the economy and public confidence. Divergent national approaches also threaten to create an uneven and non-interoperable global landscape at a stage when harmonization remains more readily achievable.

2. THE OMANI MODEL: A NATIONAL AAM PROGRAMME

2.1 Rather than treating AAM as an isolated regulatory project, Oman has encapsulated it under the *National Aviation Strategy 2040*, as a dedicated national programme aligned with *Oman Vision 2040*. It comprises three intentionally sequenced initiatives: (a) development of the AAM regulatory framework; (b) establishment of a national UAS traffic management (UTM) platform, as a digital tool for traffic management and integration with conventional Air Traffic Management (ATM); and (c) controlled activation of AAM operations through a regulatory sandbox.

2.2 Embedding the programme in the national strategy subjects it to the same governance controls as other strategic initiatives: designated initiative owners, approved timelines, key performance indicators (KPIs) and regular reporting to a high-level committee chaired by Civil Aviation Authority (CAA) top management. That ensures sustained institutional attention beyond individual pilot projects.

2.3 Implementation hinges on a set of foundational instruments completed before activation: a comprehensive national AAM plan, a national stakeholder map, a dedicated internal governance structure within the CAA, and institutional coordination arrangements with the Ministry of Transport, Information and Communication Technology. These elements reflect the inherently cross-cutting nature of AAM, spanning the domains of aviation, communications, and digital economy policies.

3. DISCUSSION AND ANALYSIS: THE SANDBOX-FIRST APPROACH

3.1 At the heart of Oman's approach is a sandbox-first pathway: a dedicated regulatory framework for a controlled testing environment in which AAM technologies are tested under real-world conditions and are subject to proportionate oversight, before acquiring broader authorization for market entry. Pilot projects within the sandbox are structured as public-private partnerships (PPPs).

3.2 This approach allows the regulator to learn alongside the industry, generating the operational evidence needed to calibrate permanent regulations, infrastructure requirements and economic policies. Oman considers this approach particularly valuable for States that adopt rather than produce the relevant technologies, as it replaces assumptions imported from different markets with structured local learning.

3.3 In June 2026, the CAA organized a national AAM forum that brought together government entities, regulators, industry, operators and consultants. The forum established a shared national understanding of the programme and its alignment with the *National Aviation Strategy 2040* and *Oman Vision 2040*; clarified institutional roles of stakeholders; examined the sandbox regulatory framework and the UTM/ATM integration approach; obtained input from the industry and operators to inform the programme concept and implementation roadmap; and agreed on the next steps and follow-up mechanisms.

3.4 The forum demonstrated the value of early, structured, multi-stakeholder dialogue in building the legitimacy and coherence of emerging-technology programmes. Engaging the industry before, rather than after, the regulatory framework was finalized substantially improved the quality and practicality of its design.

4. INTERNATIONAL IMPLICATIONS AND COMPARISONS

4.1 International efforts on AAM have made the greatest progress in the areas of technical development and safety. The economic and policy dimensions—market-entry frameworks, sandbox design, the economics of infrastructure and vertiports, cost-recovery models for UTM platforms, and the sequencing of liberalization—remain relatively less developed. This leaves States to devise impromptu individual solutions and risks fragmentation of the global landscape.

5. CONCLUSION

5.1 This paper underlines the fact that AAM is best introduced through an established and sequenced national programme—in terms of regulations, followed by a digital UTM infrastructure, then activation through a sandbox—governed by the same discipline as any other strategic initiative and given legitimacy through early multi-stakeholder dialogue. Shared guidance and structured exchange of experience at this early stage can limit fragmentation, reduce entry costs and support the safe and economically-sustainable global scaling of the sector.

6. ACTION REQUIRED

6.1 The ATConf/7 is invited to consider the following recommendations:

- a) note Oman’s experience in establishing a national AAM programme, under the National Aviation Strategy 2040, based on a sandbox-first pathway;
- b) recognize that successful AAM introduction requires economic and institutional readiness alongside technical and safety readiness;

- c) encourage Member States to accommodate AAM within their national aviation strategies through sequenced programmes covering regulation, UTM infrastructure and controlled activation, and developed through dialogue with the industry;
- d) invite ICAO to develop guidance on the economic and policy dimensions of AAM introduction, including market-entry frameworks, regulatory sandbox design, infrastructure economics and public-private partnership models; and
- e) invite ICAO to facilitate the exchange of experience among States on AAM implementation and to include this work, as appropriate, in the Seventh Worldwide Air Transport Conference (ATConf/7) follow-up programme.

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