

**ICAO***International Civil Aviation Organization***THE ELEVENTH MEETING OF SYSTEM WIDE  
INFORMATION MANAGEMENT TASK FORCE  
(SWIM TF/11)***Bangkok, Thailand, 25 – 29 May 2026***Agenda Item 6: State, regional and global SWIM updates****APPLICATION OF SWIM CONCEPT FOR MET INFORMATION PROVISION IN LOW-  
ALTITUDE ECONOMY**

(Presented by Hong Kong, China)

**SUMMARY**

This paper presents extending the SWIM concept to weather support for low-altitude economy (LAE) development in Hong Kong, China, providing guiding principles for meteorological information provision for safer and more efficient operations in low-altitude airspace, although LAE possesses characteristics distinct from the traditional aviation industry.

**1. INTRODUCTION**

1.1 Since 2024, Hong Kong, China has been developing ‘Low-Altitude Economy’ (LAE) enabled by Advanced Air Mobility (AAM), to unlock the low-altitude airspace as a new driver for economic growth. Among the various fronts for LAE development, the study and planning of low-altitude infrastructure remain a key priority, alongside the exploration of low-altitude flying application scenarios.

1.2 To manage low-altitude airspace with 'safety, security and efficiency' in mind, it is essential to establish a highly effective, intelligent, and digitalised infrastructure system for real-time oversight of low-altitude activities. This vision is fully aligned with the System Wide Information Management (SWIM) concept, which provides the necessary standards, infrastructure, and governance frameworks to facilitate the management and secure exchange of various types of information among qualified parties through interoperable services.

1.3 The ICAO Secretariat established the Advanced Air Mobility Study Group in response to rapid technological advancements and their potential impact on the aviation ecosystem. Discussions within this group have yielded valuable insights, particularly regarding Unmanned Aircraft Systems Traffic Management (UTM) Guidance and Remotely Piloted Aircraft System, which could be referenced for LAE development in Hong Kong's urban environment.

**2. DISCUSSION**

2.1 To foster innovation and facilitate the testing of potential application scenarios for low-altitude flying activities, the Government launched the Low-altitude Economy Regulatory Sandbox (Sandbox) in March 2025 and Sandbox X in November 2025. Expanding the scope of low-altitude flying applications and demonstrating UTM systems are two of the key objectives.

2.2 Through ongoing engagement with LAE operators on weather support, valuable insights have been gathered regarding use cases, detailed user requirements, and data specifications for developing effective weather solutions. However, data exchange processes remain highly time-consuming, lacking the agility required to keep pace with LAE development. Standardised data formats and repositories are still in their early stages of development.

2.3 LAE operators span diverse applications across a wide range of drone manufacturers, models, and requirements—unlike traditional commercial aircraft and/or helicopters. MET service providers must understand and tailor their weather services to meet these diverse and evolving needs. Different weather data formats are used by different in-house systems of LAE operators to manage drone operations. An interoperable environment is therefore essential to address the thousands of unique demands from the LAE sector, in order to reduce the development effort.

2.4 ATM/UTM integration is a critical issue that will become increasingly necessary alongside the expected rapid development of LAE in the coming years. As a MET service provider committed to serving the aviation industry using SWIM concepts, the Hong Kong Observatory intends to apply the SWIM principles as guiding frameworks for developing standards, infrastructure, and governance relating to meteorological information for LAE. Although standardisation may not be achievable immediately, the progress made in SWIM concepts over recent years will drive LAE development and reduce fragmented efforts, ensuring all stakeholders operate on the same page.

2.5 Similar discussions were raised at ICAO APAC MET/R WG/15, and these discussions gained considerable attention from participants in various countries and territories who encounter similar challenges regarding the lack of a common 'language' for meteorological information in LAE. Given LAE's distributed, diversified, and highly flexible nature, adopting SWIM principles will likely help spur local development and contribute to broader regional progress in the near future.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matter as appropriate

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