

DIRECTORS GENERAL OF CIVIL AVIATION-MIDDLE EAST REGION

Eighth Meeting (DGCA-MID/8) (Doha, Qatar, 26 – 28 October 2026)

Agenda Item 7: Aviation Security, Cybersecurity and Facilitation

CHALLENGES IN ADDRESSING DRONE AND LANDSIDE THREATS TO AIRPORTS

(Presented by Airports Council International and co-sponsored by Qatar and CASP-MID)

SUMMARY

Malicious drone activities and landside attacks are among the major security threats faced by airports. This paper provides an overview of how these two security threats have raised growing concerns for civil aviation and examines the key challenges airports face in effectively addressing these rapidly changing risks.

1. INTRODUCTION

1.1 The civil aviation threat landscape today differs significantly from that of the past, when acts of unlawful interference were predominantly limited to aircraft hijackings or sabotage using explosives and firearms. Over time, perpetrators have continuously altered their tactics to exploit vulnerabilities and target the weakness link across the civil aviation system, resulting in a more complex risk environment.

1.2 In a regional context, recent surveys conducted by ACI indicate that certain emerging threats present particular challenges for airports to protect against and mitigate. Among these, unauthorized drone incursions and landside attacks have been consistently identified by airports as two of the most challenging threats to manage¹.

Drones as a threat

1.3 The global drone market is expanding rapidly, with an estimated compound annual growth rate of almost 14% between 2024 and 2034². Parallel to the volume growth, drone capabilities are also advancing significantly. While these advancements offer considerable benefits for legitimate applications, they may also pose increasing security risks to airports if leveraged for malicious purposes.

1.4 The threat of non-cooperative and malicious drone activity is no longer hypothetical. This concern has been underscored by the recent developments in the Middle East that caused significant damages to airport infrastructure and impacts on air connectivity. Beyond the Middle East,

¹ A survey conducted by ACI in 2026 includes a sample size of 46 airport operators

² [EUSPA EU Space Market Report 2026](#)

a growing number of major international hubs, notably across Europe, have reported similar incidents³. In addition, the Leipzig Airport incident in August 2026, where an explosives-carrying drone was found near a cargo aircraft, serves as an alarming example of how drones can be weaponised for acts of unlawful interference against civil aviation. Moreover, unmanned aircraft systems incorporating military-grade capabilities may further heighten the operating complexity of civil aviation.⁴

Landside attack as a threat

1.5 Similar to threats of drone, ground-based attacks on landside areas have also posed significant concerns to airports. This year marks the 10th anniversary of the major landside terror attacks at Brussels and Istanbul airports in 2016⁵, which prompted increasing focus on landside protection since then. Nevertheless, civil aviation has continued to be targeted over the past decade through various landside attacks, ranging from active shooting to hostage taking events⁶.

1.6 With the evolving landside threats, results from the ICAO Universal Security Audit Programme Continuous Monitoring Approach (USAP-CMA) regularly point to landside security as one of the priority areas for improvement for airports from the global and regional perspective. To assist the industry in addressing gaps in this domain, the ICAO Middle East (MID) Regional Office and ACI successfully hosted a joint Regional Landside Security Webinar in February 2025 for stakeholders in the MID region to enhance knowledge exchange on landside security protection.

2. DISCUSSION

2.1 While drone and landside attacks differ in modality, they present some overlapping challenges for airports. The subsequent paragraphs will highlight these shared challenges accordingly.

Extensive area to cover

2.2 A fundamental challenge arises from the extensive spatial scale and open nature of airports. Unlike traditional unlawful acts which commonly involve the introduction of a weapon or hazardous device into the security restricted area, drone incursion and landside attack are often not confined to a specific area. In practice, drones can approach an airport from off-site launch points, targeting various critical airside or landside zones such as terminal buildings, runways, passenger aprons, cargo facilities, fuel storage infrastructure. On the other hand, landside threats normally exploit high-traffic public areas, which could include terminal kerbsides, car parks, check-in halls, and ground transport hubs. As a results, this creates a major challenge for airports in proving a comprehensive physical protection.

Stakeholder coordination challenge

2.3 Another challenge is aligning a diverse group of stakeholders for the effective management of drone and landside threats. While conventional security threats generally fall within the purview of the airport security department, the detection, deterrence, and mitigation of drone and landside threats could involve other departments within the airport organization. In some cases, routine operations may even necessitate the involvement of law enforcement, military units, and other

³ Examples include a drone incursion reported at Munich Airport in October 2025 causing disruption to more than 17 flights; a drone sighting at Heathrow Airport in January 2026 causing flight delays

⁴ At the 2026 World Overflight Risk Conference, it was informed by the ICAO Secretary General that, emerging military technologies—including long-range weapons systems, unmanned aircraft systems (UAS), global navigation satellite system radio frequency interference, and advanced air defence systems—pose risks to civilian aviation

⁵ The suicide bomb attack at Brussels Airport in March 2016 with 16 deaths and the suicide bomb and active shooting at Atatürk International Airport in June 2016 with 45 deaths

⁶ Examples include an attempted active shooting at San Antonio International Airport in April 2021; a suicide landside bombing at Kabul's Hamid Karzai International Airport in August 2021

government agencies. As a result, managing these risks depends heavily on a robust and effective collaboration among all parties.

Racing with evolving threat tactics

2.4 Another challenge lies in the gap between the evolution of threat tactics and the deployment of countermeasures. To protect large and diverse areas from drone and landside threats, many airports have trialled and deployed technological solutions, which typically include counter-drone systems and landside surveillance systems⁷. However, perpetrators often adapt quickly to exploit gaps in these defences, causing countermeasures to lag behind the pace of evolving tactics. In response, ACI has also developed additional guidance documents over recent years to assist airports in leveraging technologies to minimise these threats.

3. ACTION BY THE MEETING

3.1 The meeting is invited to

- a) note the increasing challenges faced by airports in the region in addressing evolving security threats, particularly regarding malicious drone activities and landside attacks;
- b) encourage States to work more closely with airport operators and relevant stakeholders to enhance airports' capacity in addressing drone and landside threats, alongside other emerging threats; and
- c) deepen engagement with ACI to provide assistance on emerging threat mitigation and risk assessment to States in the MID region, potentially through joint workshops/webinars in 2027 in collaboration with MID-RASFG and CASP-MID.

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⁷ Many counter-drone systems, however, may have their effectiveness significantly affected in areas prone to intensive GNSS spoofing and radio-frequency jamming, which can limit their capability to detect, track, and respond to drone threats