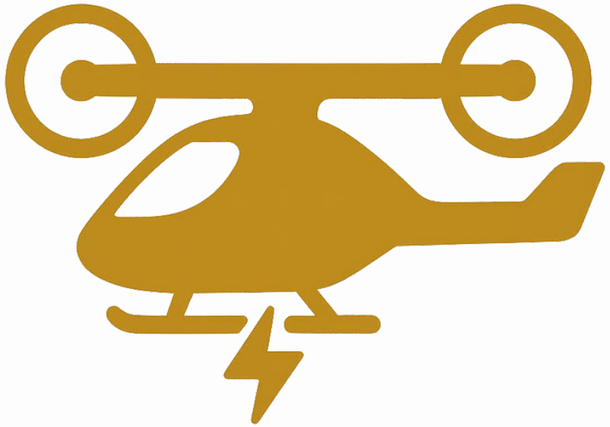
الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY

United Arab Emirates



Advancing Investigative Capabilities for eVTOL Operations

UAE's Readiness Strategy for Urban Air Mobility Safety

MENA ARCM – 29 June 2026

What This Presentation Is About

- UAE's proactive eVTOL investigation strategy
- Technical challenges in electric aircraft accidents
- Training and capacity building initiatives
- Roadmap for other aviation authorities

The eVTOL Revolution is Here

"As eVTOL aircraft prepare to transform our skies, are we ready to investigate when things go wrong?"

- Electric vertical flight combines helicopter capabilities with electric propulsion efficiency
- UAE deploying first commercial operations with Archer and Joby Aviation
- Traditional investigation methods insufficient for new technology
- Proactive preparation essential for effective safety oversight

UAE Leading the Way

- Develop specialized eVTOL accident investigation capabilities
- Address unique technical and operational challenges of electric vertical flight
- Establish UAE as global leader in eVTOL safety oversight
- Create replicable model for international aviation authorities
- Support safe integration of urban air mobility into transportation infrastructure

Why eVTOL Investigations Are Different

- Battery thermal runaway and energy storage hazards
- Autonomous flight systems and software complexity
- Non-traditional data recording architectures
- Advanced composite materials and structures
- Urban operational environment risks

Battery Safety: New Hazards, New Methods

High-capacity lithium-ion batteries present unique investigation challenges requiring specialized protocols

- Thermal runaway can lead to rapid temperature escalation and combustion
- Toxic gas emissions and electrolyte hazards require specialized containment
- Specialized tools and protective equipment needed for safe handling
- Manufacturer collaboration essential for data access and interpretation
- Damaged systems may remain electrically active after accidents

UAE's Comprehensive Readiness Strategy

- Dedicated Technology Investigation Unit established
- Specialized training programs aligned with ICAO Doc 10206
- International partnerships with manufacturers and authorities
- Advanced laboratory capabilities for battery and composite analysis
- Comprehensive documentation and knowledge management systems

Building Specialized Expertise

Technology Investigation Unit

- Central coordination for eVTOL investigations
- Technical assistance to investigation teams
- Manufacturer liaison and support coordination
- Continuous technology monitoring and updates

Lessons for Global Implementation

- Establish specialized technical teams early in eVTOL deployment planning
- Integrate eVTOL-specific modules into investigator training programs
- Develop data access protocols with manufacturers before operations begin
- Harmonize investigation methodologies with international standards
- Engage local emergency responders in eVTOL-specific training

Key Takeaways

Specialized Capabilities

eVTOL requires unique investigation methodologies addressing electric propulsion, battery systems, and autonomous controls

Proactive Preparation

Authorities must develop capabilities before commercial operations begin to ensure effective safety oversight

International Cooperation

Harmonized standards and knowledge sharing are essential for consistent investigation capabilities across jurisdictions

UAE Model

The UAE AAIS Technology Investigation Unit provides a practical framework for other aviation authorities

Urban air mobility success depends on both technological innovation and robust safety oversight mechanisms

UAE AAIS Reachout Program to AAM industry

Yearly, UAE AAIS sets a plan to reach out to its stakeholders, this year AAM is included and a workshop will be conducted in July 2026.

The reachout will comprise of different topics and includes leading entities in AAM operations.

UAE AAIS extends its invitation to all MENA ARCM to attend the workshop virtually.

Dates and registration links will be shared.

Thank You

"Urban air mobility success depends on both technological innovation and robust safety oversight mechanisms effectively addressing unique electric vertical flight challenges."

Questions & Discussion

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