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Regional Harmonization of AAM Regulatory Frameworks
Qatar's Approach to Advanced Air Mobility



Nayif Nasser Al Jaber
Director of Air Safety Department
Qatar Civil Aviation Authority · Dubai, 11 November 2026

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01

Vision

Why Advanced Air Mobility matters to Qatar, and what the first Doha flights taught us



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STRATEGIC ALIGNMENT

AAM is anchored in a national strategy cascade

Qatar National Vision 2030
Human, social, economic and environmental development

Third National Development Strategy (2024–2030)
Advanced technology, sustainable development, economic diversification

Ministry of Transport Strategy 2025–2030
An integrated, secure, resilient and sustainable transport ecosystem

QCAA Strategy 2026–2031
Oversight & regulations enhancement, safety digitization, inspector capability

- AAM supports economic diversification, a knowledge-based economy and lower-emission mobility
- MoT linked its 2024 eVTOL trial plans directly to NDS3 and QNV 2030
- eVTOL positioned as a new mode within Qatar's multimodal network, 42 initiatives
- Dedicated projects for unmanned aircraft regulation and an AAM regulatory framework



Qatar's position: *Regulator-led and safety-first, enabling early, while protecting the safety and efficiency of a major global hub.*



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QATAR'S AAM JOURNEY

From intent to a legal framework in under three years

May 2024
MoT announces passenger and cargo eVTOL trials, linked to NDS3 and QNV 2030

Nov 2024
Qatar Investment Authority leads BETA Technologies funding round

Sep 2025
Prime Minister launches the MoT Strategy 2025–2030

Nov 2025
EHang EH216-S pilotless passenger flights in Doha, authorized by QCAA

Jul 2026
Law No. 10 of 2026 on Unmanned Aircraft gives QCAA powers over routes and airspace

2026 →
QCAA AAM framework, executive regulations

State-of-Design engagement





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CASE STUDY · NOVEMBER 2025

The Doha Demonstration: EHang EH216-S

Old Doha Port ⇄ Katara Cultural Village



30 → 8 min

car journey vs. flight time, per EHang

First	Urban, human-carrying pilotless eVTOL flights in a Middle East city center.
CAAC	EH216-S holds China's type, production and standard airworthiness certificates.
QCAA	Granted the operational authorization for the flight.
MoT	Strategic Support, evaluates results to set the strategic frameworks.



Next Phase: airport-to-city shuttles, tourism and high-traffic corridors, integration into the multimodal network.



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REGULATOR'S PERSPECTIVE

What the demonstration taught us

No ICAO AAM framework

Pilotless passenger eVTOL had to be authorized on a case-by-case safety risk assessment.

Terminal airspace

An urban route inside the Doha terminal environment needs bespoke procedures and close ANSP coordination.

Ground sites

Temporary take-off and landing sites need defined design, rescue & firefighting and battery-fire response criteria.

One coordination cell

MoT, QCAA, ANSP, security, municipality and emergency services must work through a single mechanism.

Data by design

Trials must generate safety data, reliability, C2 link, noise, energy reserves, to support the rules.

Trials don't scale

One-off authorizations must give way to a standing framework with clear, published requirements.





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Rules

Certification and Operational Approval:
How Qatar will Approve Aircraft, Operators & People



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CERTIFICATION

Leverage, Validate, Participate

Leverage

Qatar is a State of Registry and Operator, not of Design

- Accept type certificates from the State of Design: FAA, EASA.
- Use working arrangements and bilateral agreements to avoid duplicating work.

Validate

Focus QCAA's effort on what is specific to Qatar

- Hot, humid, dusty conditions: battery thermal performance, cooling, sand ingestion.
- Noise, C2 link and cybersecurity for uncrewed aircraft, special conditions where needed.

Participate

Engage early in certification programmes of strategic interest

- Technical engagement with the industry and State-of-Design authorities during certification.
- Build QCAA inspector competence ahead of first applications.



Continuing Airworthiness from Day One

Batteries & Propulsion System, CAMO and Maintenance arrangements, Software & Configuration Control and Continuing Airworthiness Information.



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03

State Implementation

Airspace, vertiports and the transition from trials to routine operations



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AIRSPACE INTEGRATION

A three-stage path into one of the region's busiest terminal areas

STAGE 1

Segregated

Reserved airspace for trials

ATC Coordination

NOTAM-based activation

STAGE 2

Structured corridors

Published AAM routes, building on helicopter routes

Defined procedures and contingency landing sites

STAGE 3

Integrated

Cooperative, digital traffic management services

Higher density and uncrewed operations

Enablers

Route Design
QCAA powers under Law No. 10/2026

CNS
C2 link, ADS-B, surveillance

GNSS resilience
Interference-tolerant navigation

Civil-military
Airspace coordination



Context: AAM routes must coexist with Hamad International hub traffic, Doha International operations and State aircraft activity.



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INFRASTRUCTURE

Planning and Regulating Vertiports

Where demand is

- Airport-to-city shuttles
- Tourism and high-traffic corridors
- Multimodal hubs: Metro, Bus, Taxi
- Rooftop, ground-level and heliport conversion

What the regulator must define

Design standards
Reference EASA and FAA vertiport guidance pending ICAO provisions

Certification
QCAA approval of vertiports and their operators

Protected surfaces
Approach, departure and obstacle limitation surfaces

Rescue & firefighting
Lithium battery thermal runaway response

Energy
High-power charging and grid capacity

Security
Passenger and baggage screening, access control



Land-use planning with MoT and the municipality

Vertiport sites, noise and safeguarding decided once, in the master plan.



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FROM TRIALS TO ROUTINE OPERATIONS

A gated roadmap: Progress is earned with evidence

Gate criteria between phases

- Safety case accepted by QCAA
- Trial data meets agreed thresholds
- Vertiports certified, emergency response exercised
- Airspace procedures published
- Public engagement and noise assessed

Phase 0

Demonstration

Done · 2025

flights in Doha demonstrated technical and operational feasibility within a controlled trial environment

Phase 1

Structured trials

Regulatory sandbox

Repeated flights, data collection, executive regulations and AAM framework

Phase 2

Early commercial

Limited network

Validated Type Certificate, AOC and certified vertiports on a few airport and tourism routes

Phase 3

Routine operations

Scaled network

Structured airspace, wider vertiport network, growing autonomy as SARPs mature



Each gate is a QCAA decision, informed by data

Not by calendar targets only.



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SAFETY ENABLERS

Bringing AAM into the State Safety Programme

SSP & NASP
AAM hazards, safety performance indicators and actions in the National Aviation Safety Plan.

Occurrence reporting
Proper taxonomy mapping/ customization with ICAO.,

Investigation readiness
Recorders and data access for autonomous systems, battery-fire scene safety, investigator training.

Cybersecurity
Security of C2 links, fleet management and charging networks.

Human factors
Remote supervision, human to machine interface and automation trust.

Environment
Noise, energy and lifecycle emissions in line with QNV 2030.





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Regional Harmonisation

Towards harmonized AAM regulatory frameworks in the MID Region



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REGIONAL HARMONISATION

Why harmonize now, while frameworks are still being written

What the MID Region has already said

MIDANPIRG/23 & RASG-MID/13 (Cairo, June 2026) identified AAM and new entrants, including UAS and eVTOL, as **emerging safety issues**

States are at **different levels of readiness**, the meeting encouraged periodic exchange of experience and best practice

RASG-MID Conclusion 12/6 encourages capacity building on AAM and emerging technologies

The cost of the division

Duplicated certification

Each State validating the same aircraft separately, from scratch.

Divergent standards

FAA powered-lift, EASA SC-VTOL and CAAC pilotless bases applied differently.

Cross-border barriers

Operators, licenses and routes that stop at national borders.

Thin safety data

Small fleets in each State: no one learns fast enough alone.



Harmonizing early is cheap

Retrofitting divergent national rules after services launch is not.



REGIONAL HARMONISATION

Global reference frameworks MID States can build on

Body	Key instruments	Relevance for MID States
ICAO	A42 (Sep, Oct 2025) agreed to expedite measures for RPAS, UAS and AAM. AAM Study Group developing a holistic vision and framework.	*The global baseline: regional positions should feed into it*
EASA / EU	Innovative Air Mobility package, Reg. (EU) 2024/1107–1111 (certified UAS airworthiness, VTOL-capable aircraft operations, licensing, SERA); SC-VTOL; AMC/GM for VCA operations.	*Most complete rule set for piloted VTOL-capable aircraft*
FAA	Powered-lift final rule and SFAR (22 Oct 2024); vertiport design Engineering Brief 105A; eVTOL Integration Pilot Program (eIPP).	*Reference for FAA-certified OEMs entering the region*
NAA Network	FAA, CASA, TCCA, UK CAA, NZ CAA: Declaration of Intent (Apr 2025) and AAM Aircraft Type Certification Roadmap.	*A working model of multi State convergence and validation*
JARUS	SORA 2.5: specific operations risk assessment.	*Common basis for trial and specific category approvals*



Harmonize on what already exists: the region does not need to write a new rulebook from scratch.



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REGIONAL HARMONISATION

What to harmonise: six building blocks

Certification & validation

Near term

Common reliance policy for State-of-Design type certificates; shared special conditions for heat and dust

Operations & operator

Near term

Common reference for VTOL-capable aircraft operations; trial approvals based on SORA 2.5

Vertiports

Near term

Common design, safeguarding and battery-fire RFFS guidance

Safety data & investigation

Near term

Common AAM occurrence taxonomy, shared lessons, mutual investigation support

Personnel licensing

Medium term

Recognition of powered-lift ratings and remote pilot competence

Traffic management

Medium term

Corridor design principles, UTM/U-space interoperability, cross-border coordination





REGIONAL HARMONISATION

A Roadmap for Regional Harmonization

Near Term

- Summit Recommendation
- MID AAM regulatory cooperation forum under RASG-MID the ICAO MID Office.
- Inventory and gap analysis of State frameworks.
- Share lessons learned.

Medium Term

- Regional reference provisions: reliance, operations, vertiports.
- Common AAM occurrence taxonomy.
- Joint inspector and investigator training.

Long Term

- Mutual recognition of approvals and licenses.
- Integrated traffic management services
- Cross-border AAM routes across the Region.



Indicative timeline for discussion:

Milestones to be set by RASG-MID and MIDANPIRG.



PROPOSAL TO THE SUMMIT

The Summit is Invited to Support

a) MID AAM Regulatory cooperation forum under RASG-MID in the ICAO MID Office.

b) Adopt a common, reliance-based approach to validating eVTOL type certificates issued by States of Design.

c) Harmonize guidance on vertiports, rescue and firefighting, and AAM occurrence reporting; and

d) Share trial data and lessons learned, in alignment with the work of the ICAO AAM Study Group.





Thank you



Nayif Nasser Al-Jaber
Director of Air Safety Department · Qatar Civil Aviation Authority