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ICAO MID Safety Summit

2026



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From Certification to Commercial Operations (eVTOL Economy Framing)



Omphile Mononga

Senior Expert, Aviation Regulatory Economist, GCAA

Sixth MID Region Safety Summit
11 November 2026
Dubai

Concept illustration

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2017

UAE



A flight

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2017

UAE



A flight

2019

EU



A rulebook

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2017
UAE



A flight

2019
EU



A rulebook

2025
CHINA



A service

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2017
UAE



A flight

2019
EU



A rulebook

2025
CHINA



A service

A flight. A rulebook. A service.

What do these things have in common?

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They are each a part of the same service.

Each part became ready in a different place, at a different time.

A service needs all of its parts in one place, at one time.
There is no gap in any part. The gap is between the parts.

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The Economics of Scaling Advanced Air Mobility Safely



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A service is only as ready as its least ready part.

The fastest part makes the headlines.
The slowest part sets the pace, and carries the pressure.

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The aircraft can be ready…







Certified, built and flown. One part of the service.

Concept illustration

The system around the aircraft



Vertiports and power





Continuing airworthiness and trained people





Concept illustration

The system around the aircraft



Vertiports and power



Cities and communities





Airspace and supporting systems



Continuing airworthiness and trained people



Oversight and response





Concept illustration

The system around the aircraft



Airspace and supporting systems



Vertiports and power





Continuing airworthiness and trained people



Cities and communities



Oversight and response



What happens when they are ready at different times?

Each part belongs to a different organisation, on a different schedule.



It has already happened



Paris, 2024

Vertiport built

Aircraft not yet certified

The vertiport was ready.
The aircraft was not.
The deadline did not move the certificate.





It has already happened



Paris, 2024

Vertiport built

Aircraft not yet certified

The vertiport was ready.
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The deadline did not move the certificate.



Guangzhou, 2023 to 2025

Type certificate, October 2023

Passengers permitted, March 2025

Seventeen months to the first passengers.
A service needs more than a certified aircraft.





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What limits the service?

One corridor, four parts, illustrative trips per day



Aircraft — 100



Charging — 40





Workforce — 80



Potential demand — 70

Service ceiling

40

trips / day

Fictional example. Other safety and operating conditions assumed satisfied.

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More aircraft. The same service ceiling

One corridor, four parts, illustrative trips per day



Aircraft



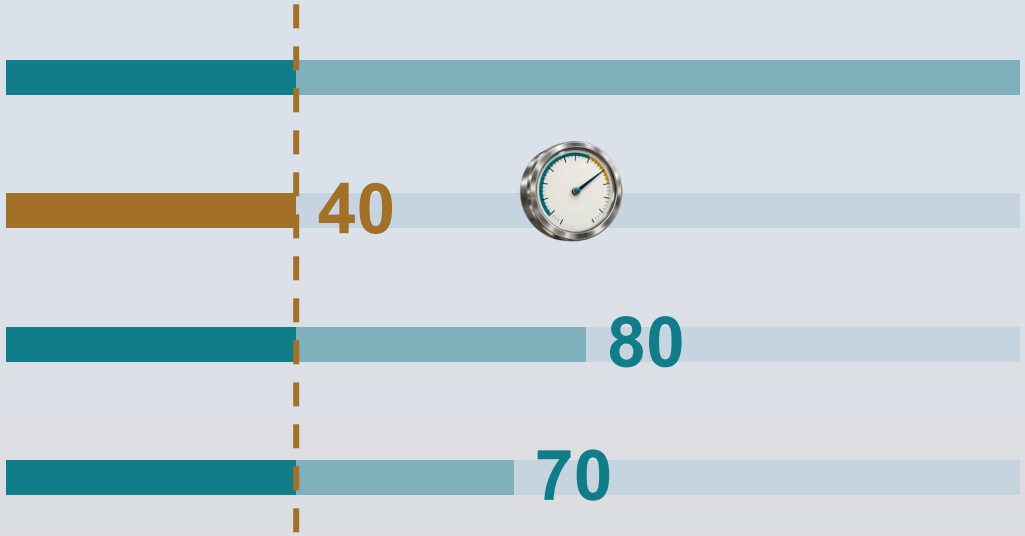
Charging



Workforce



Potential demand



Service ceiling

40

trips / day





Extra aircraft cannot lift a charging constraint.

Fictional example. Other safety and operating conditions assumed satisfied.

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Charging expands. The constraint moves

One corridor, four parts, illustrative trips per day



Aircraft — 100



Charging — 80



Workforce — 80



Potential demand — 70



Service ceiling

70

trips / day



The constraint has moved to demand. So has the pressure.

Fictional example. Other safety and operating conditions assumed satisfied.



What Economics does for safety



The binding constraint is where the pressure to cut corners appears.

Economics finds that constraint before it binds, so that nobody is pushed against it.





Illustrative principle. No actual operation is represented.

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Safety is the Objective.

It is set first. It is not traded against any timeline.
Inside it, the regulator has three decisions to make well.

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Three decisions inside the Objective

Decision 1
What to require

Decision 2
When it applies

Decision 3
When growth proceeds

Write the requirement for the risk that is actually there.

A requirement borrowed from another aircraft may address a risk this one does not have, and miss one that it does.

Which risk does this requirement reduce?



A requirement that cannot answer the question is examined again.



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Three decisions inside the Objective

Decision 1
What to require

Write the requirement for the risk that is actually there.

Decision 2
When it applies

Requirements grow with the scale of operations.

Decision 3
When growth proceeds

Begin limited. Add requirements as the scope widens, and say in advance what the next stage will ask.

Stage 1
Limited operations

Stage 2
Wider operations

Stage 3
Network scale

Each bar is a requirement in force at that stage.





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Three decisions inside the Objective

Decision 1
What to require

Write the requirement for the risk that is actually there.

Decision 2
When it applies

Requirements grow with the scale of operations.

Decision 3
When growth proceeds

The calendar does not open the next stage. The evidence does.



A — B — C

Authorised and supported

Charging not ready: the extension waits

Evidence that opens the next stage: hours flown, occurrences reported and analysed, reliability shown in service.





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What economic evidence changes

Four choices inside the safety objective, each improved when the evidence enters early

Which requirement

The risk it reduces, against the burden it imposes.

Which scope first

The smallest scope that is fully supported.

Which commitments wait

Those that depend on evidence not yet gathered.

Which capability is resourced

Including the authority's own oversight.



Technical and legal reasoning set the objective.
Economics improves the choices inside it.



One shared method that each State applies within its own Mandate

For Emerging Technologies

1. The safety objective is set first, before any timeline.
2. Requirements match the actual risk and the scale of operations.
3. Each stage of growth is opened by evidence, agreed in advance.
4. The safety data is shared across the Region.





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2017
UAE



A flight

2019
EU



A rulebook

2025
CHINA



A service

The decisions between them decide what that progress can sustain

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2017	2019	2025	2026
UAE	EU	CHINA	UAE
			
A flight	A rulebook	A service	Every part, at once

Vertiport rules in force. The vertiport certified. The aircraft in certification. Every part, prepared at the same time.

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Safe scale depends on a ready system

Regulatory economics finds the constraint before it binds, and connects growth to evidence.



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Thank you



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