

Challenges of Aviation Network Expansion

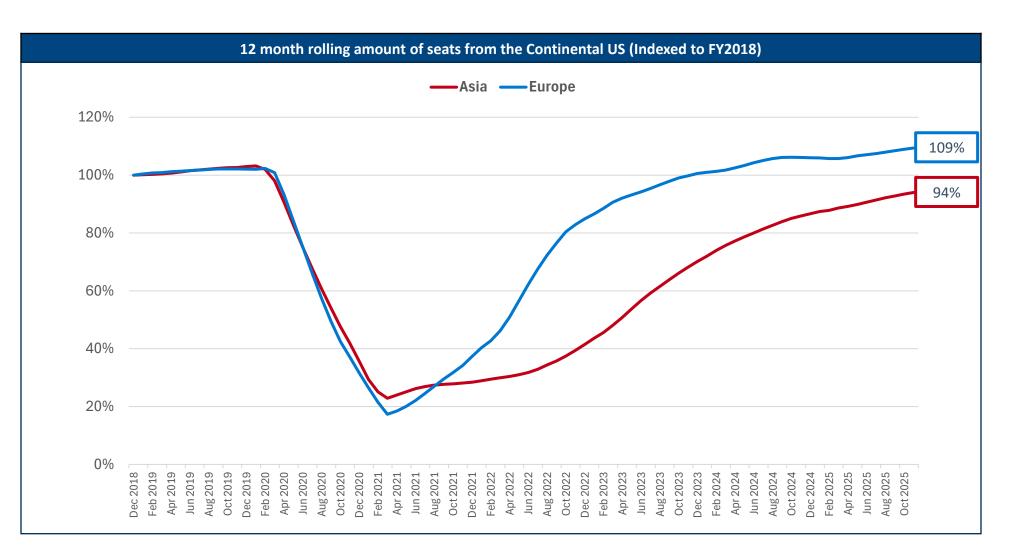
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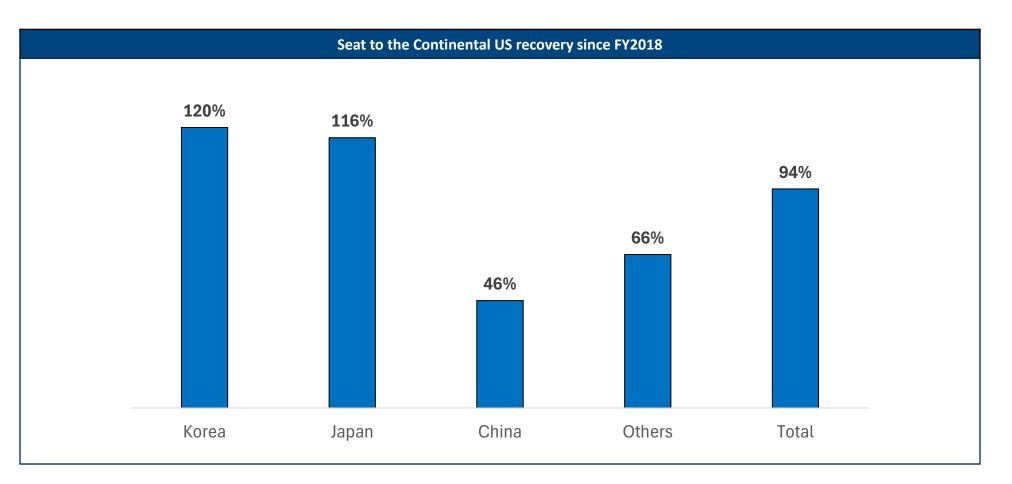
Capacity from the U.S. to Asia hasn't fully recovered 2019 levels, while other regions are surpassing pre-pandemic levels



Source: Cirium as of 03.20.2025

Capacity recovery in Asia is not homogeneous

• Korea and Japan show growth of ~20% compared to pre-pandemic levels, while other countries still haven't fully recovered



Source: Cirium as of 03.20.2025

Opportunity cost is high and rising as supply chain issues continue

Opportunity Cost

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Strong post-pandemic Trans-Atlantic performance can create a steep opportunity cost to allocate aircraft away from Europe and towards Asia-Pacific, compounded by European markets requiring less aircraft investment

Aircraft Delivery Delays Aircraft delivery delays and uncertainty from both Boeing and Airbus have caused challenges in expanding long-haul international networks, particularly for markets requiring significant aircraft investment (such as Asia-Pacific)



Geopolitics puts pressure on demand and on costs

Trade Relations

• Relationship between US and China remains complex, particularly in the commercial/trade industry, creating uncertainty in the business travel demand between the two countries

Russian Overfly

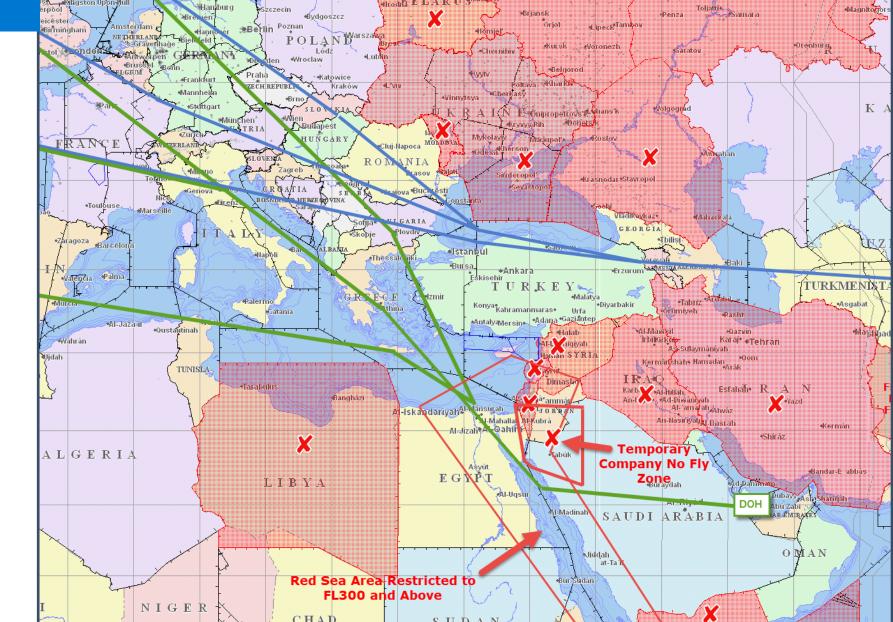
- Overflight restrictions increase operational costs due to longer routings:
 - Fuel Cost (~25% of operating expense)
 - Crew Cost (~30% of operating expense)



Overflight Restrictions

Europe & W. Asia

A snapshot of global restrictions most impacting AA routing.



SUDAN

Umm Durmân Al-Khartum

LATVIA

Kaliningrad Kaunas

CHAD

DENMARK

GROM

- Kinaston U

on Hull

øbenhavn

Alvanovo.

•Vladimir

Mazau

₩Viesk∨a

Karansk

Chebok Saty Mcazali

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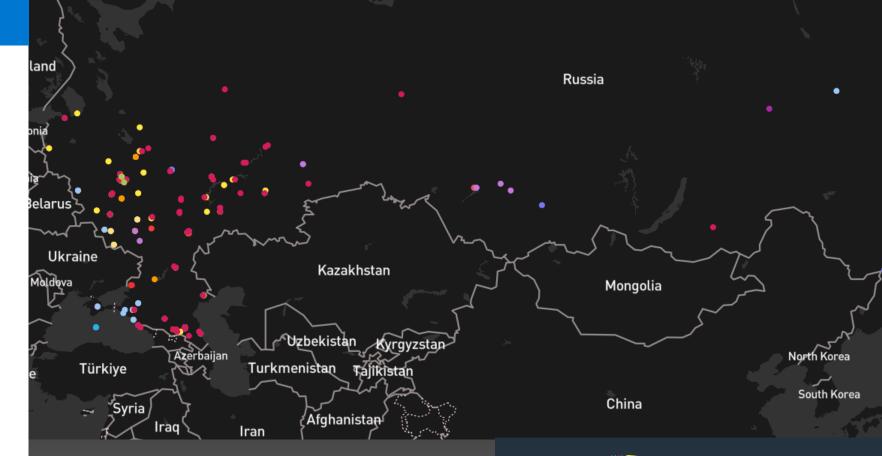
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Internal map created by FlightOps

Overflight Restrictions

Western Russia

 Map of incidents in Russian airspace since December 2024



Showcasing high volume of incidents in and around conflict zones, with limited incidents further east.



🔵 Air Patrol & Air Intercept

- 💛 Airstrikes
- Aviation Safety Event
- Aviation Security Event
- Oyber Event
- Diverts
- Inflight Attack Asset
- Missile Launch
- POL/MIL Activity

Map provided by Osprey

Overflight Restrictions

Asia Pacific

- Snapshot of a typical U.S. west coast Asia flight.
- Eastern Russian airspace is not exposed to the same military activity as western but is included in the current prohibitions for U.S. carriers.
- For AA routes, the Pyongyang FIR closure would be the biggest "restriction" for our ICN, HND, and NRT ops.



