



บริษัท วิทยุการบินแห่งประเทศไทย จำกัด
Aeronautical Radio of Thailand Ltd.

ICAO ATM/SG/14 – IP/11 BOBCAT ATFM Operational Update



- Refresher: What is BOBCAT?
- Current Afghanistan Airspace Arrangements
- Post-Operations Analysis:
4 Sep 2025 – 30 June 2026



- **Refresher: What is BOBCAT?**
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Refresher: How BOBCAT Works



Menu	Flight Allocation (All member) Refresh in 165 second(s)...
Flight Allocation All Allocation	Organization: AEROTHAI Departure Date: Sun, 05 Oct 2025 View
Waypoint Allocation	Departure Airport: ▶
View Free Slots	Flights With Slot Allocation
Allocation History	
ATFM Delay	

▶	Callsign ▲	Aircraft	Dep	Dest	Date	EOBT	CTOT	Delay
1 ▶	AFR225	B772	VIDP	LFPG	05Oct25	1934	1954	0
2 ▶	AUA26	B772	VTBS	LOWW	05Oct25	1640	1700	0
3 ▶	BAW142	B788	VIDP	EGLL	05Oct25	2005	2033	0
4 ▶	CAL061	A359	RCTP	EDDF	05Oct25	1425	1448	0
5 ▶	CAL063	B77W	RCTP	LOWW	05Oct25	1520	1558	15
6 ▶	CAL073	A359	RCTP	EHAM	05Oct25	1450	1513	0
7 ▶	DLH761	A343	VIDP	EDDF	05Oct25	2125	2155	0
8 ▶	DLH763	A388	VIDP	EDDM	05Oct25	2004	2025	1
9 ▶	DLH773	A359	VTBS	EDDM	05Oct25	1820	1840	0
10 ▶	EVA065	B787	RCTP	LOWW	05Oct25	1545	1605	0
11 ▶	EVA071	B789	RCTP	EDDM	05Oct25	1525	1545	0
12 ▶	EVA087	B77W	RCTP	LFPG	05Oct25	1530	1550	0
13 ▶	HVN19	A359	VVNB	LFPG	05Oct25	1620	1641	6
14 ▶	HVN31	B789	VVTS	EDDF	05Oct25	1605	1627	7
15 ▶	HVN35	B789	VVNB	EDDM	05Oct25	1715	1730	0
16 ▶	HVN37	B789	VVNB	EDDF	05Oct25	1555	1610	0
17 ▶	KLM872	B78X	VIDP	EHAM	05Oct25	2225	2245	0
18 ▶	SIA312	A359	WSSS	EGKK	05Oct25	1655	1715	0
19 ▶	SIA322	A388	WSSS	EGLL	05Oct25	1500	1520	0

<https://www.bobcat.aero>

0000 – 1159 UTC

- Airlines submit slot request via BOBCAT system
- Bangkok ATFMU provides support as needed

1200 – 1210 UTC

- BOBCAT system allocates BOBCAT ATFM slots comprising:
 - CTOT at ADEP
 - Entry Waypoint for Kabul FIR
 - CTO at Kabul FIR Entry Waypoint
 - Flight Level at Kabul FIR Entry Waypoint

1210 – 2359 UTC

- Airlines submit FPL in accordance with BOBCAT slots
- Airlines adjust BOBCAT slots as needed through the BOBCAT system
- Airlines & DEP ATC manage departures in compliance with CTOT

BOBCAT Timeline: Aug 2021 – Sep 2025

G0145/22 NOTAMR G0062/22
Q) OAKX/QAFXX/IV/NBO/E/000/999
A) OAKX
B) 2206080730 C) 2208312359 EST
E) ATS NOT AVAILABLE IN THE KABUL FIR.

Cessation of Enroute ATC in Kabul FIR
Kabul FIR Contingency Plan activated



Avoidance of
Kabul FIR by
airspace users



Increasing tensions
in the MID region

Typical S/SE Asia – Europe Routing
Lanzhou – Urumqi ...
Delhi – Lahore – Kabul – ...
Mumbai – Muscat – Tehran – ...
Mumbai – Muscat – ... – Baghdad – ...
Mumbai – Muscat – Jeddah – Cairo – ...

Aug/Sep
2021

April
2024

April
2025

4 Sep 2025

BOBCAT Service suspended

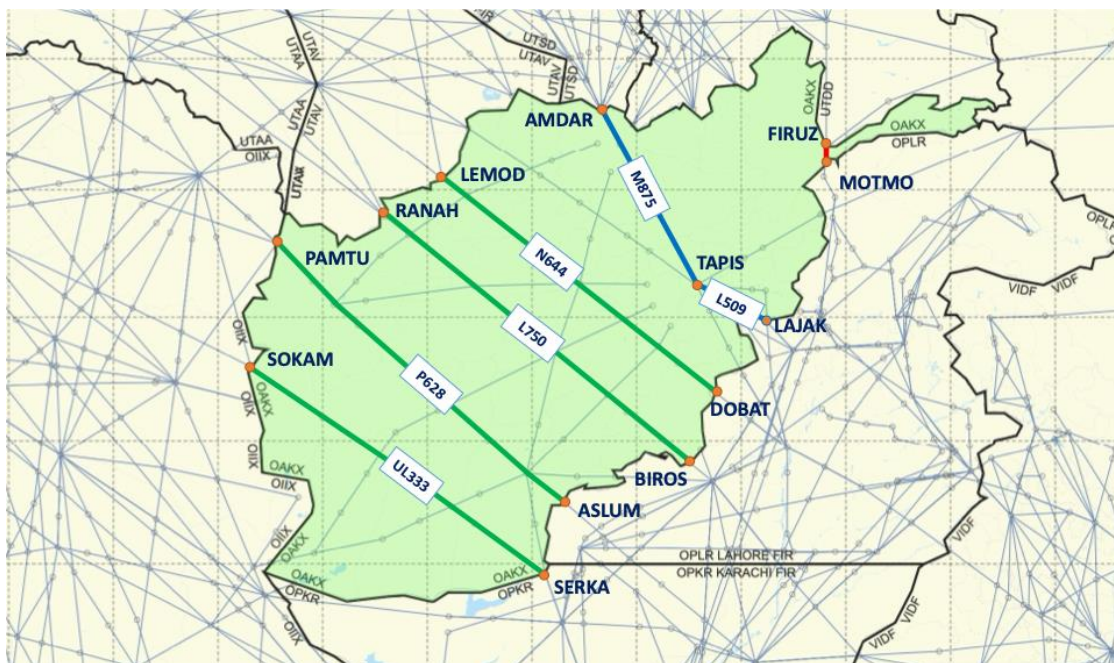
Prep for BOBCAT
resumption

BOBCAT
resumed

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**BOBCAT service resumed
4 Sep 2025**



<https://www.afgaais.com/oakx-oakb-kabul-kabul-fir>

Kabul FIR Current Situation

- No enroute ATC service
- Overflight allowed on **5 contingency routes with 15-min longitudinal spacing at FIR boundary, with contingency procedure in effect (e.g., TIBA)**

Overflight	FL320 – FL510	FL300 – FL510
Arrivals & Departures	FL290 or below	FL290 or below
	UL333, P628, L750, N644	M875/L509, P500

BOBCAT System Configuration: Aircraft Spacing

BOBCAT Spacing
Parameter (2021)



Kabul FIR
Contingency Plan



BOBCAT Spacing
Parameter (2025)

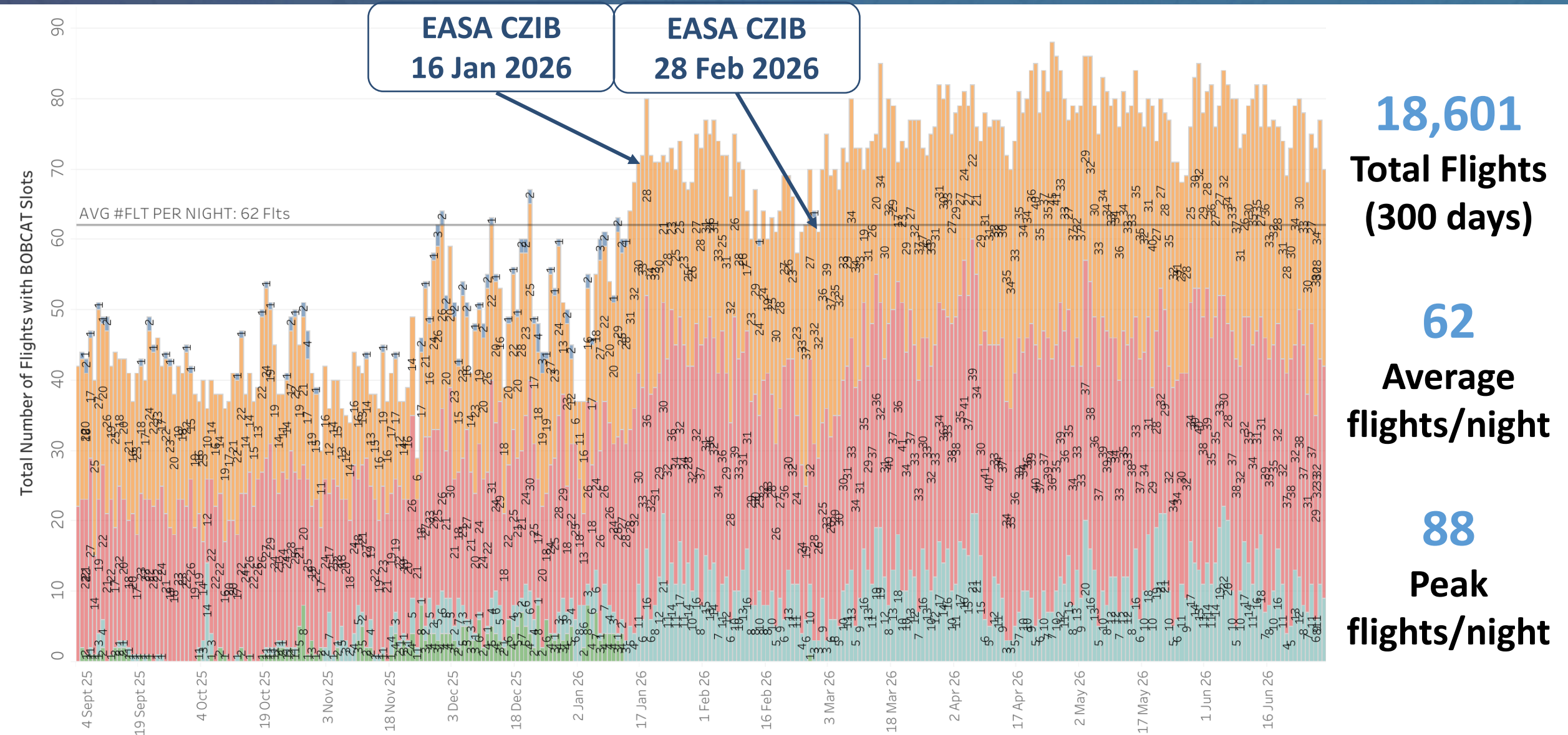


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- Current Afghanistan Airspace Arrangements
- **Post-Operations Analysis:
4 Sep 2025 – 30 June 2026**



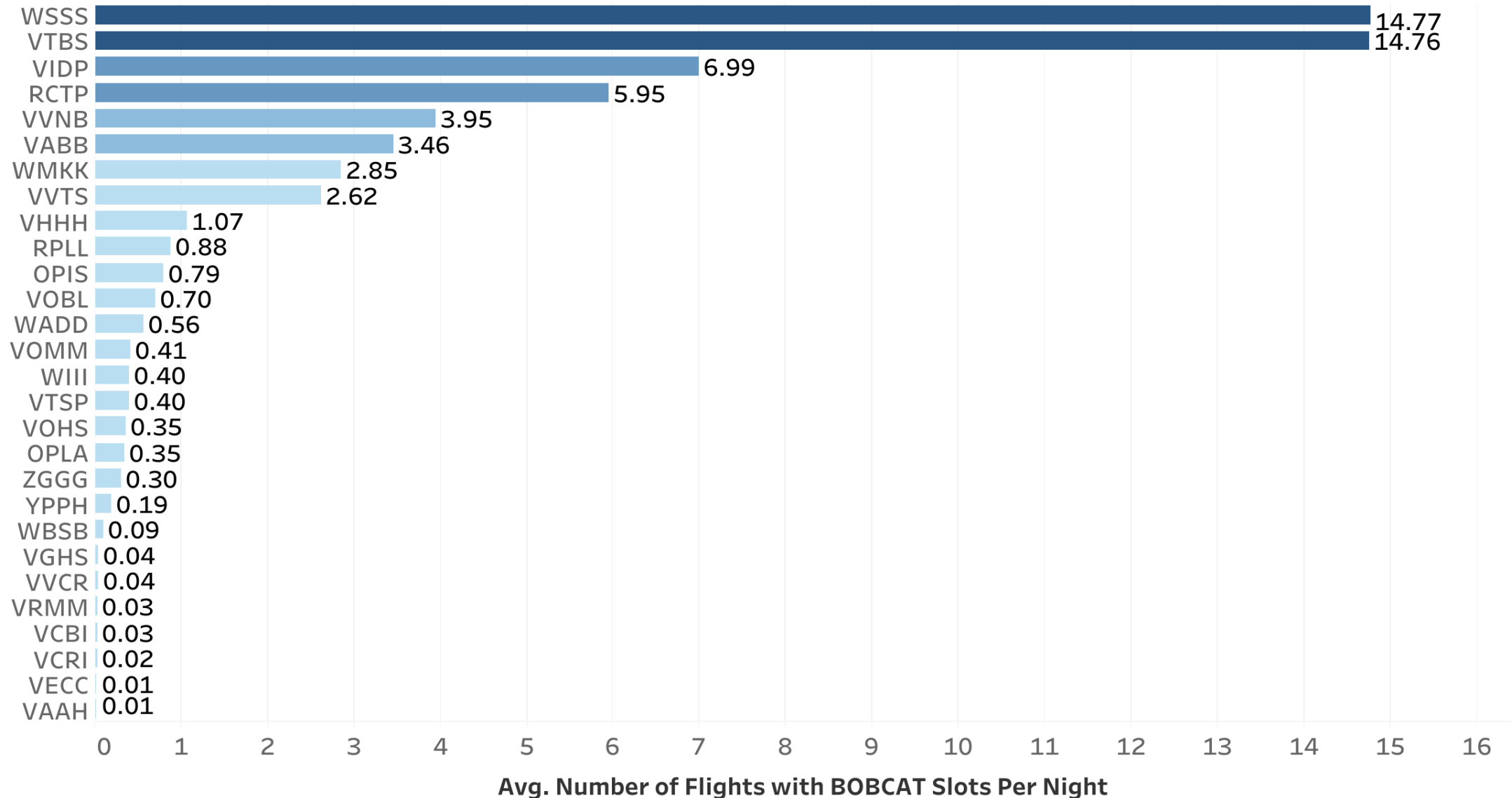
- **Analysis Period:** 300-day period (4 Sep 2025 – 30 Jun 2026)
- **Data Sources:**
 - BOBCAT Slot Allocation
 - ATS Movement Messages

BOBCAT Traffic Demand



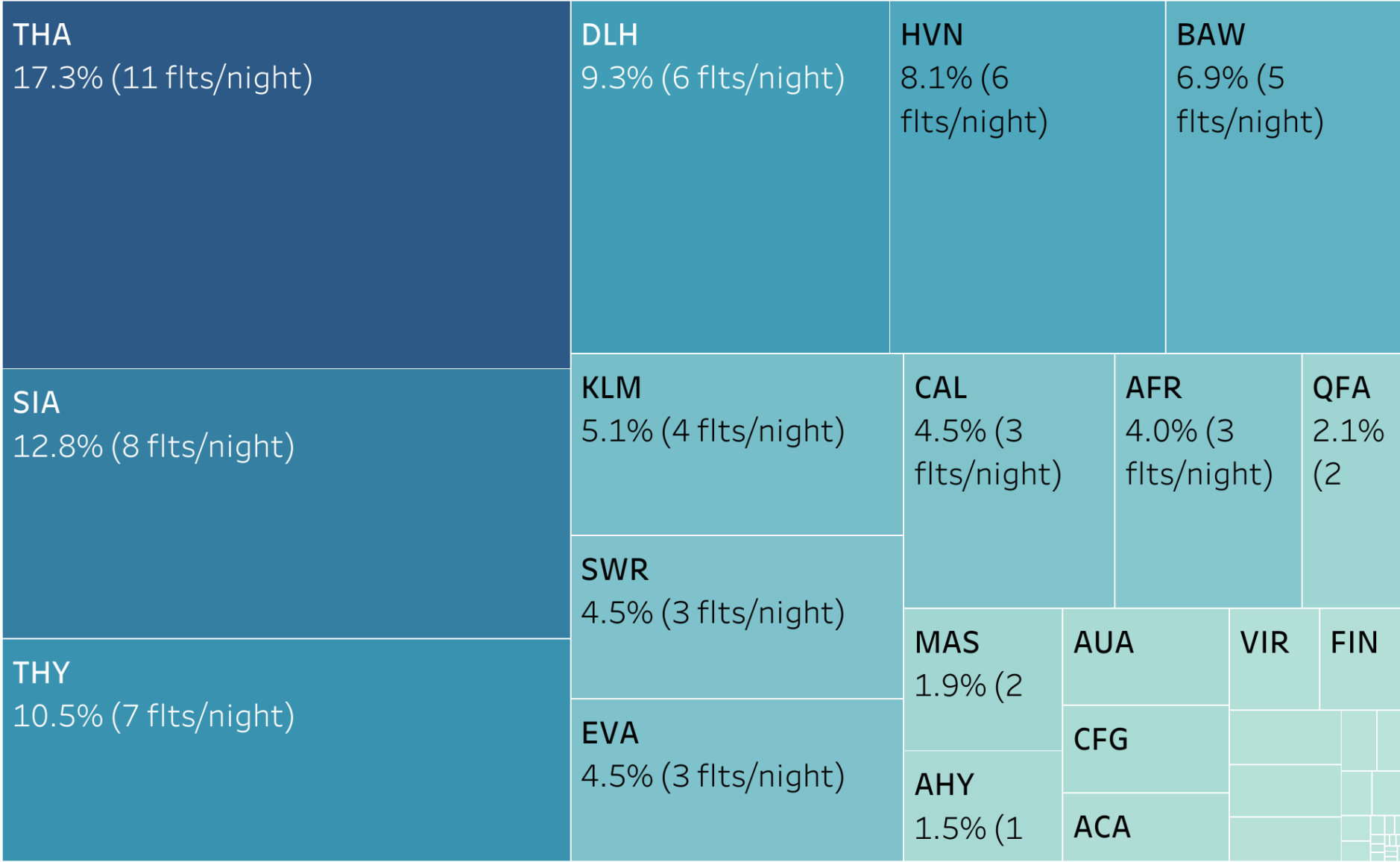
Data Source: Final BOBCAT Slot Allocation (4 Sep 2025 – 30 Jun 2026)

Average Daily BOBCAT Slots by ADEP



Data Source: Final BOBCAT Slot Allocation (4 Sep 2025 – 30 Jun 2026)

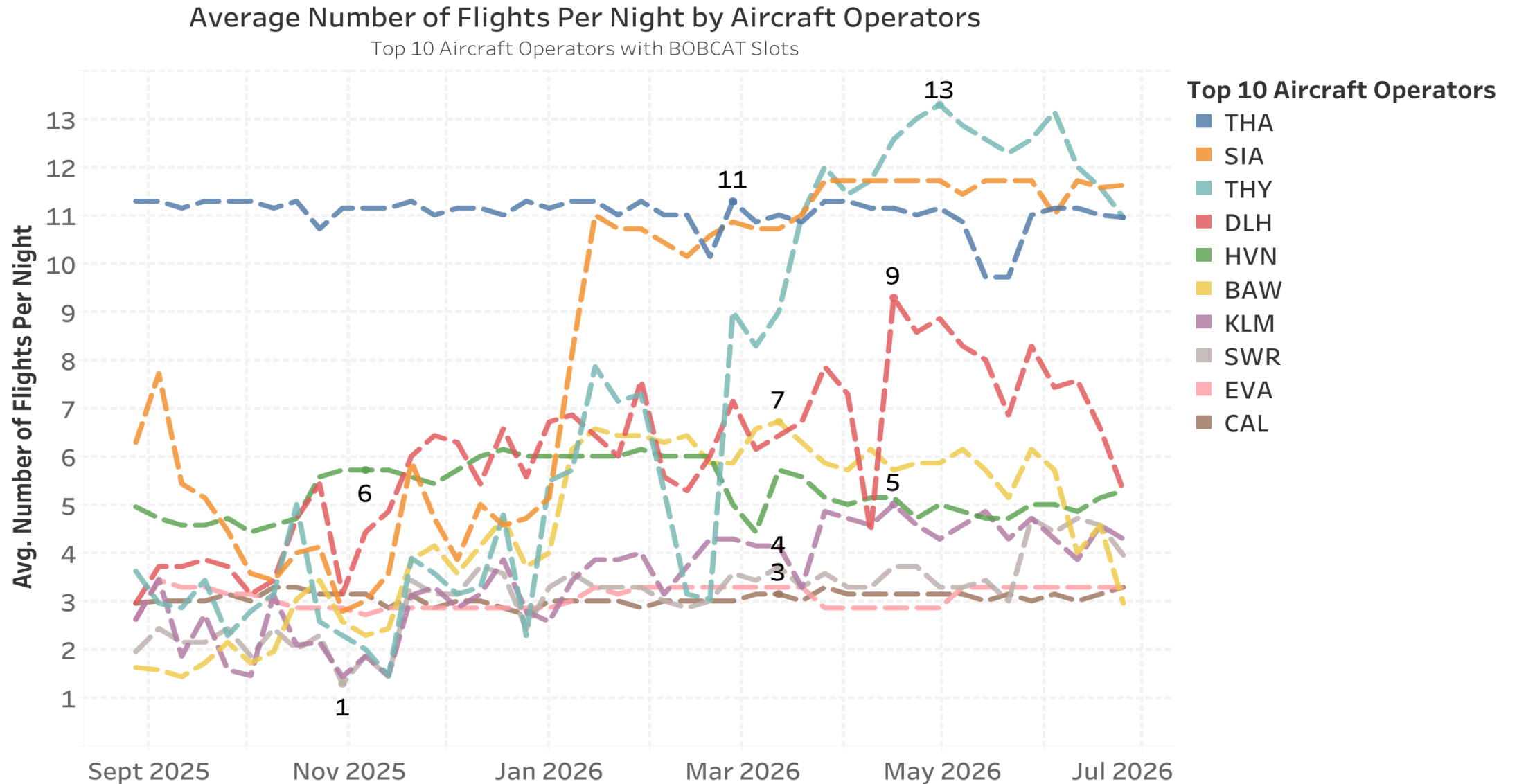
BOBCAT Slot Allocation by Airlines



29
Airlines

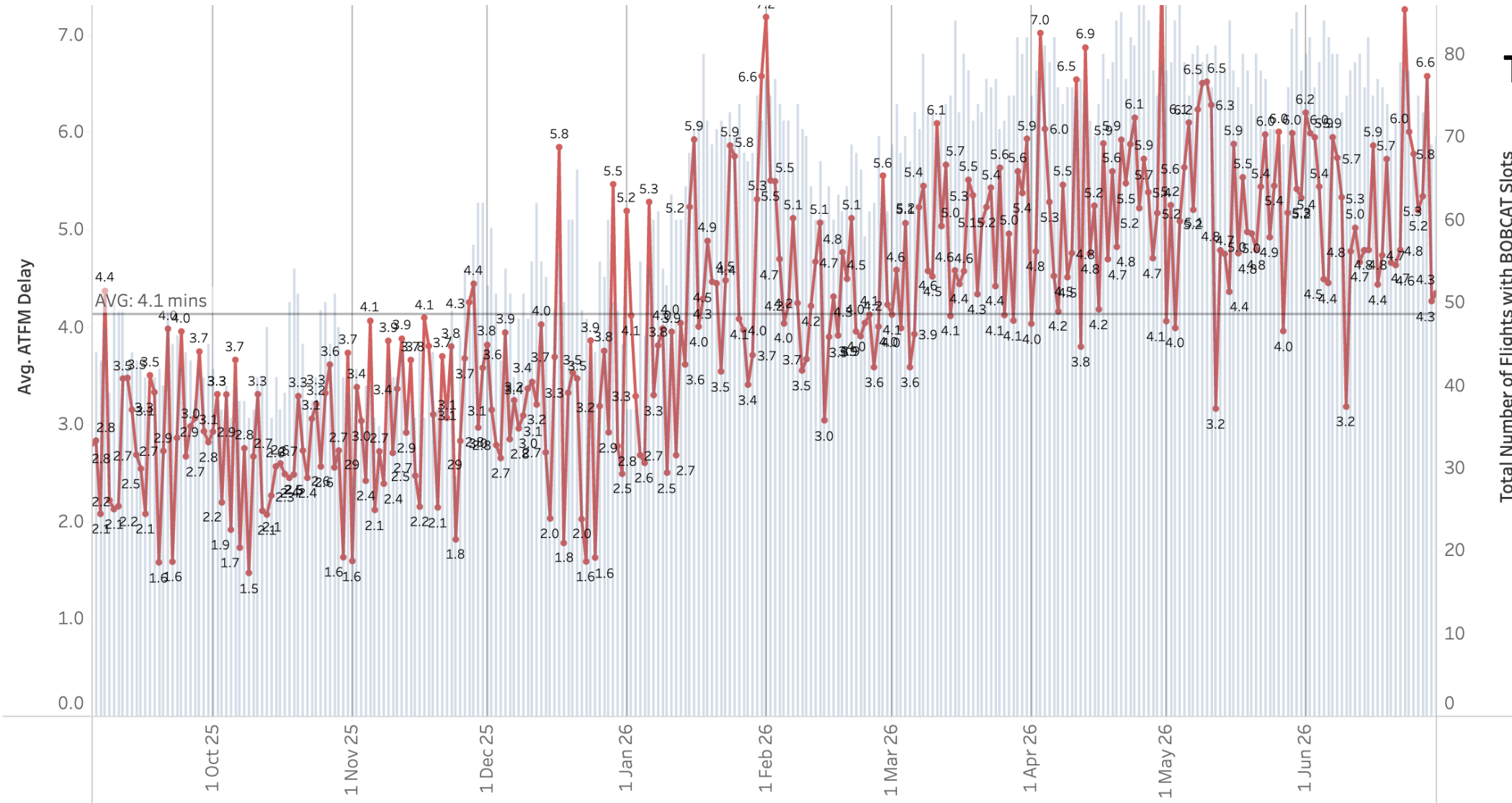
Data Source: Final BOBCAT Slot Allocation (4 Sep 2025 – 30 Jun 2026)

BOBCAT Slot Allocation : Top 10 Airlines



Data Source: Final BOBCAT Slot Allocation (4 Sep 2025 – 30 Jun 2026)

ATFM Delay & Environmental Benefits



73,268 mins
Total ATFM Delay
(300 days)

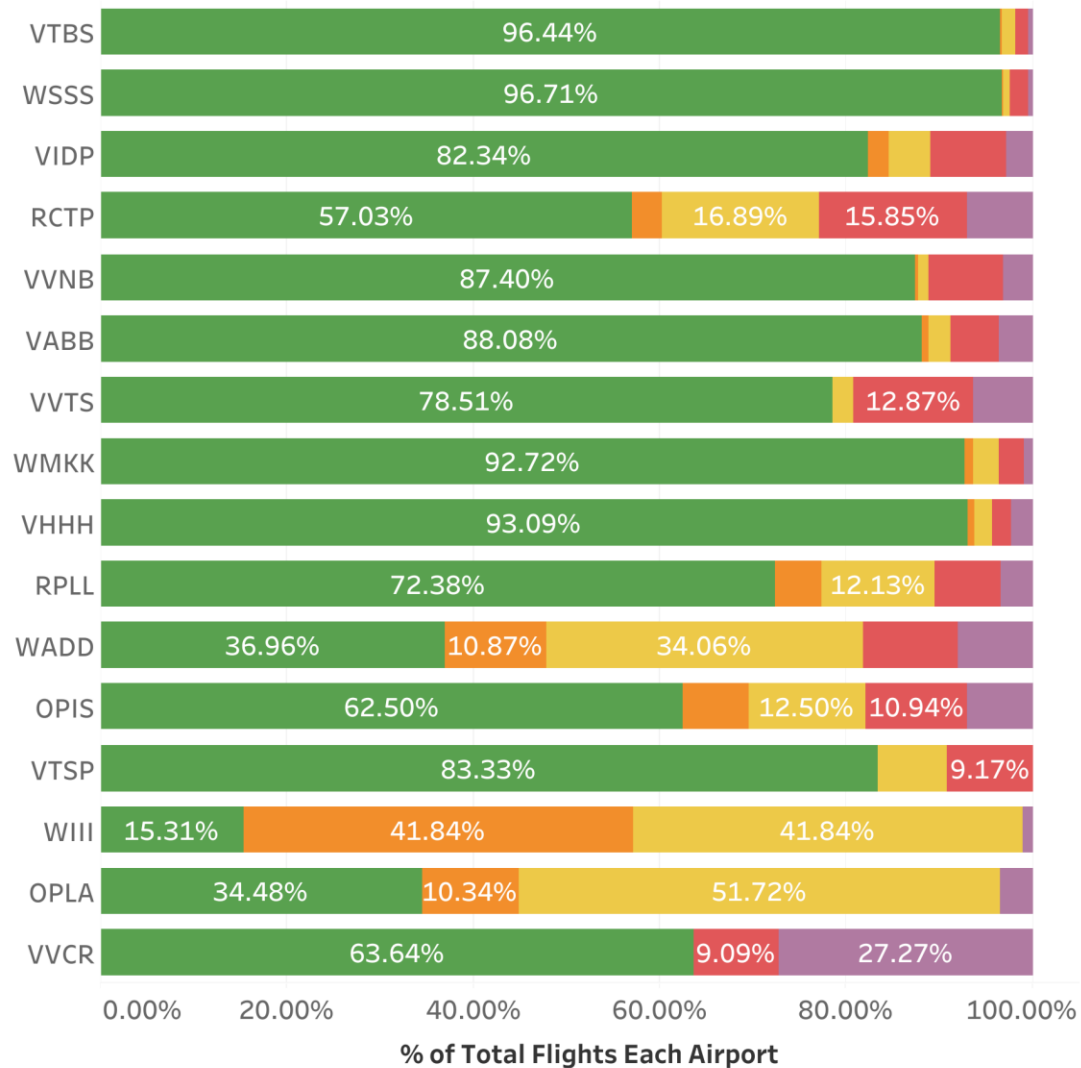
4.1 mins/ft
Average
ATFM Delay

~8,353 tons
Fuel Savings

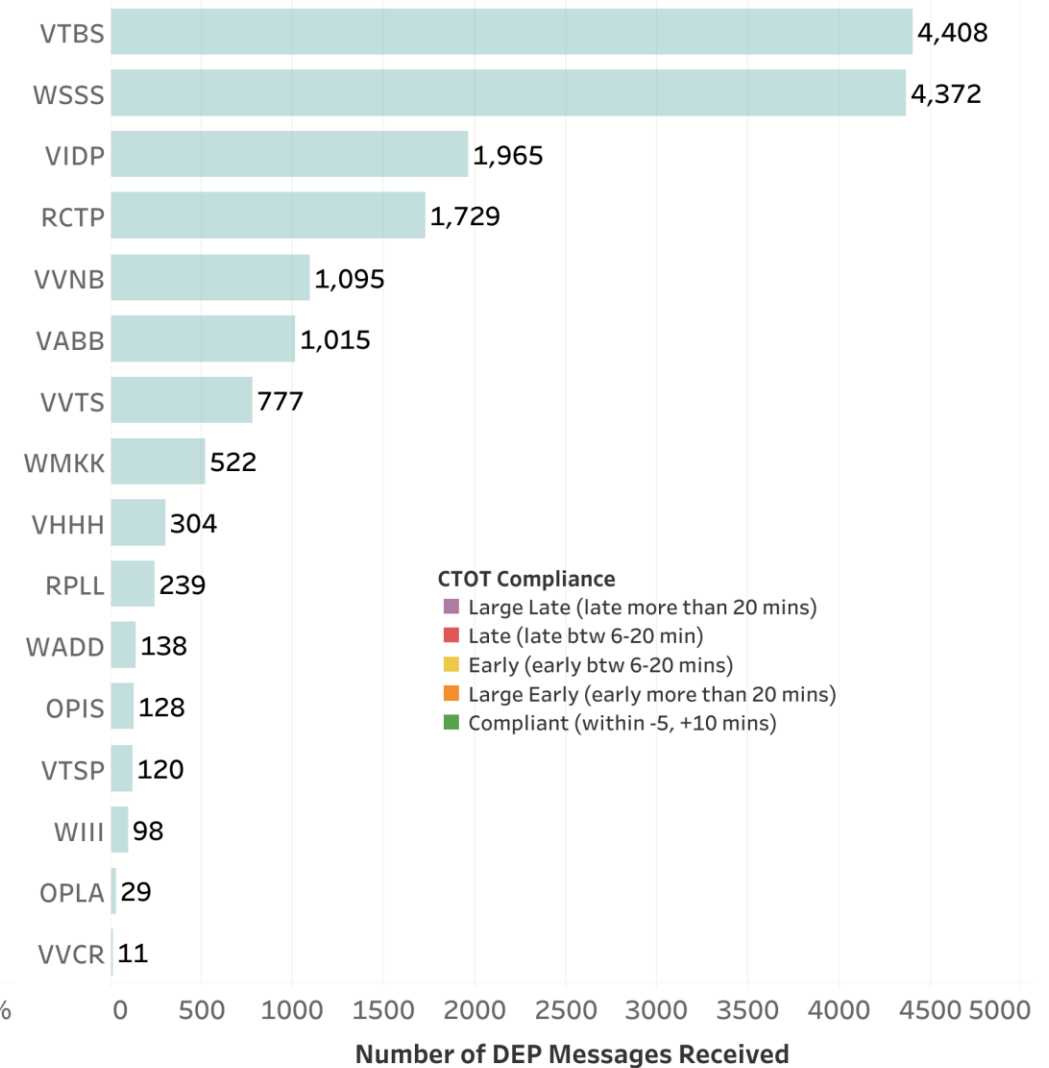
~26,394 tons
CO₂ emissions
reduced

CTOT Compliance

CTOT Compliance at Each Airport



Total Number of DEP Message Received



CTOT Compliance

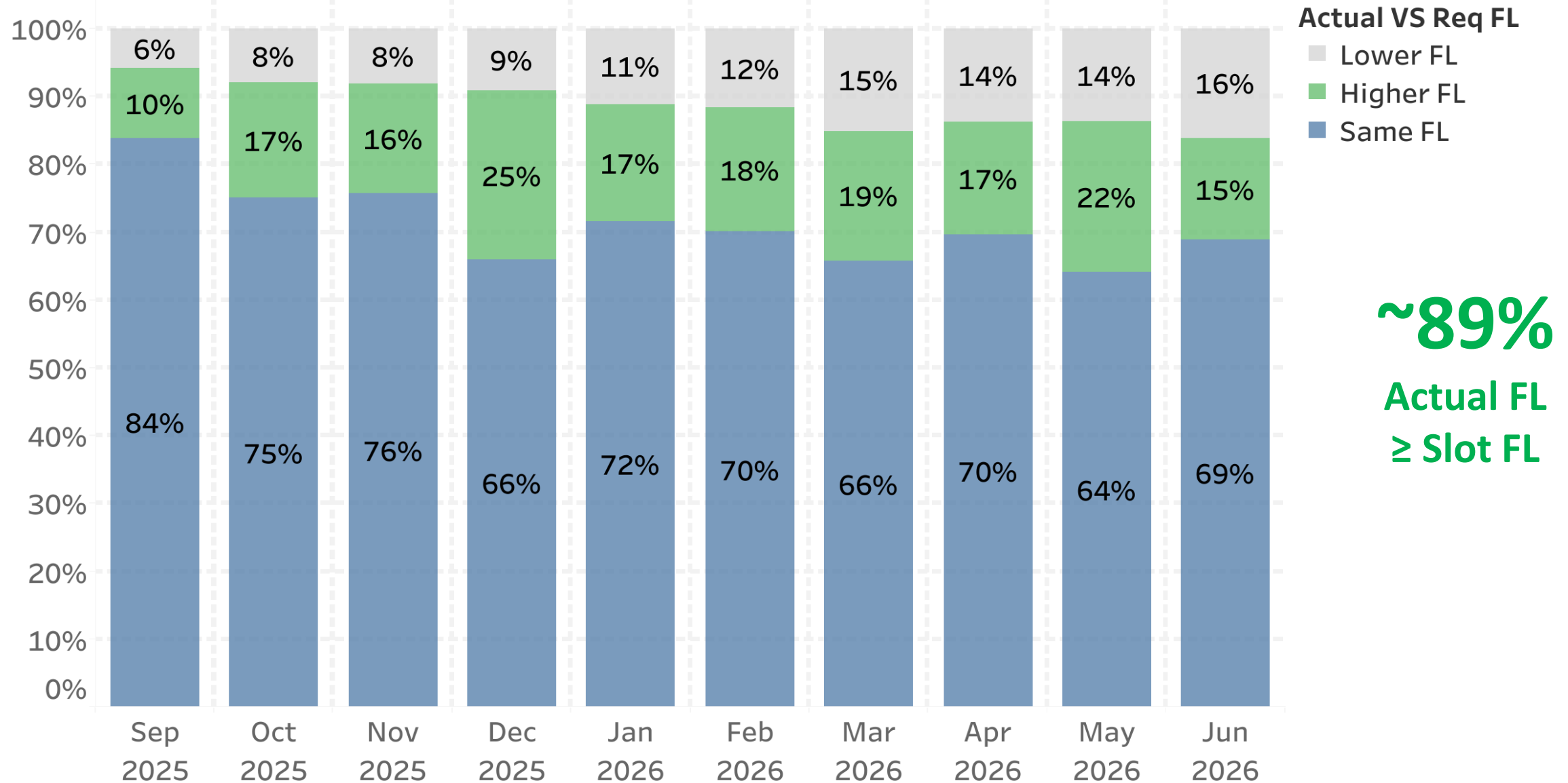
- Large Late (late more than 20 mins)
- Late (late btw 6-20 min)
- Early (early btw 6-20 mins)
- Large Early (early more than 20 mins)
- Compliant (within -5, +10 mins)

Data Source: Final BOBCAT Slot Allocation & DEP Messages Received (4 Sep 2025 – 30 Jun 2026)

- **Monthly:** 1-week snapshot starting from 3rd Sunday of each month, provided by relevant States (e.g., India and Pakistan)
- **Data Source:** 1) BOBCAT Slot Allocation 2) ATS Movement Msg
3) Traffic Sample Data
- **Data Received:**

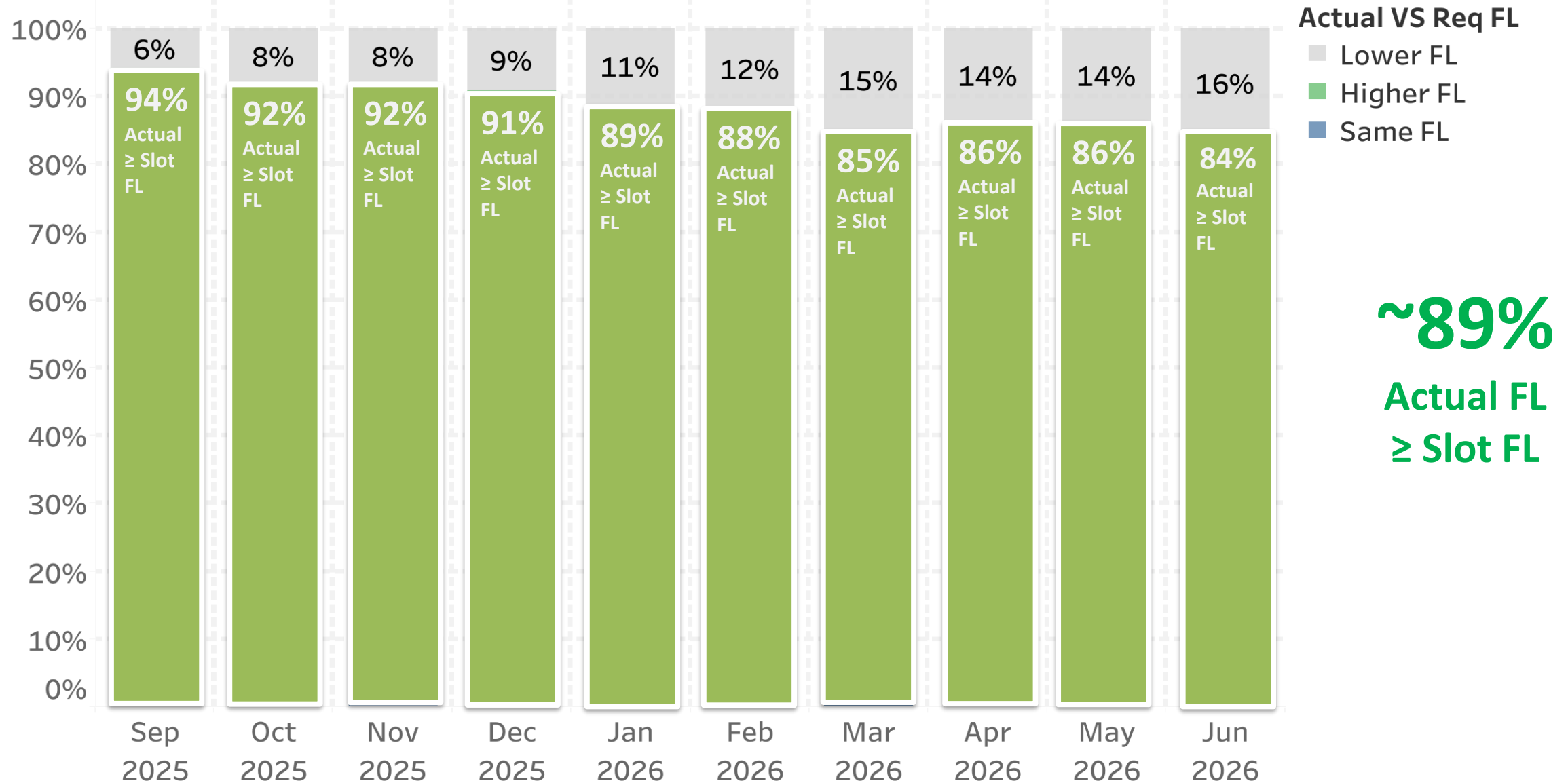
1) 4 - 27 Sep 2025	2) 21 - 27 Oct 2025
3) 16 - 22 Nov 2025	4) 14 - 20 Dec 2025
5) 11-17 Jan 2026	6) 15 - 21 Feb 2026
7) 15 - 21 March 2026	8) 15 - 21 April 2026
9) 15 - 21 May 2026	10) 21 - 28 June 2026

Actual Entry Time and FL Analysis



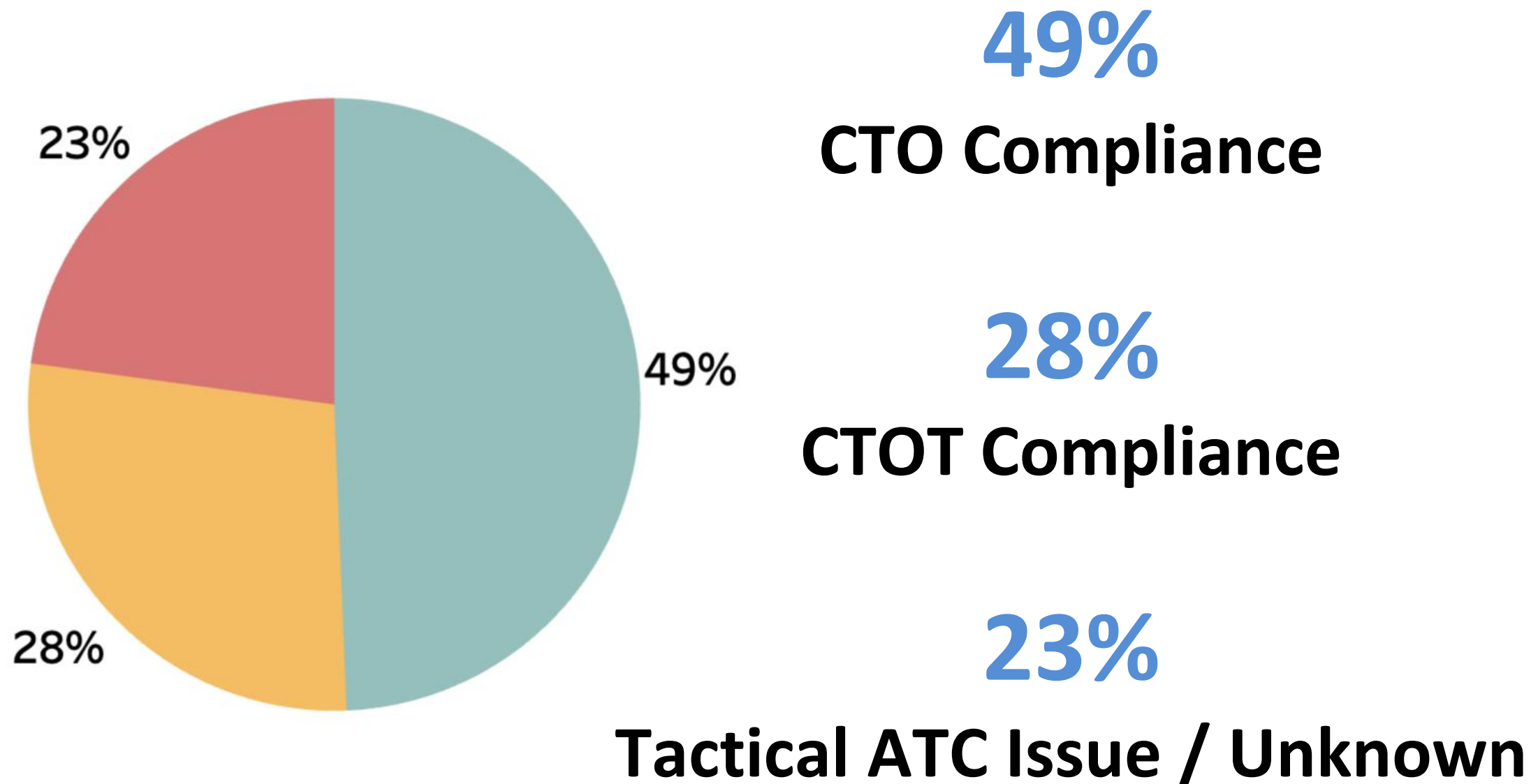
Data Source: Final BOBCAT Slot Allocation & ANSP Traffic Sample Data (4 Sep 2025 – 28 Jun 2026)

Actual Entry Time and FL Analysis



Data Source: Final BOBCAT Slot Allocation & ANSP Traffic Sample Data (4 Sep 2025 – 28 Jun 2026)

Reasons for Entry at Lower Flight Levels



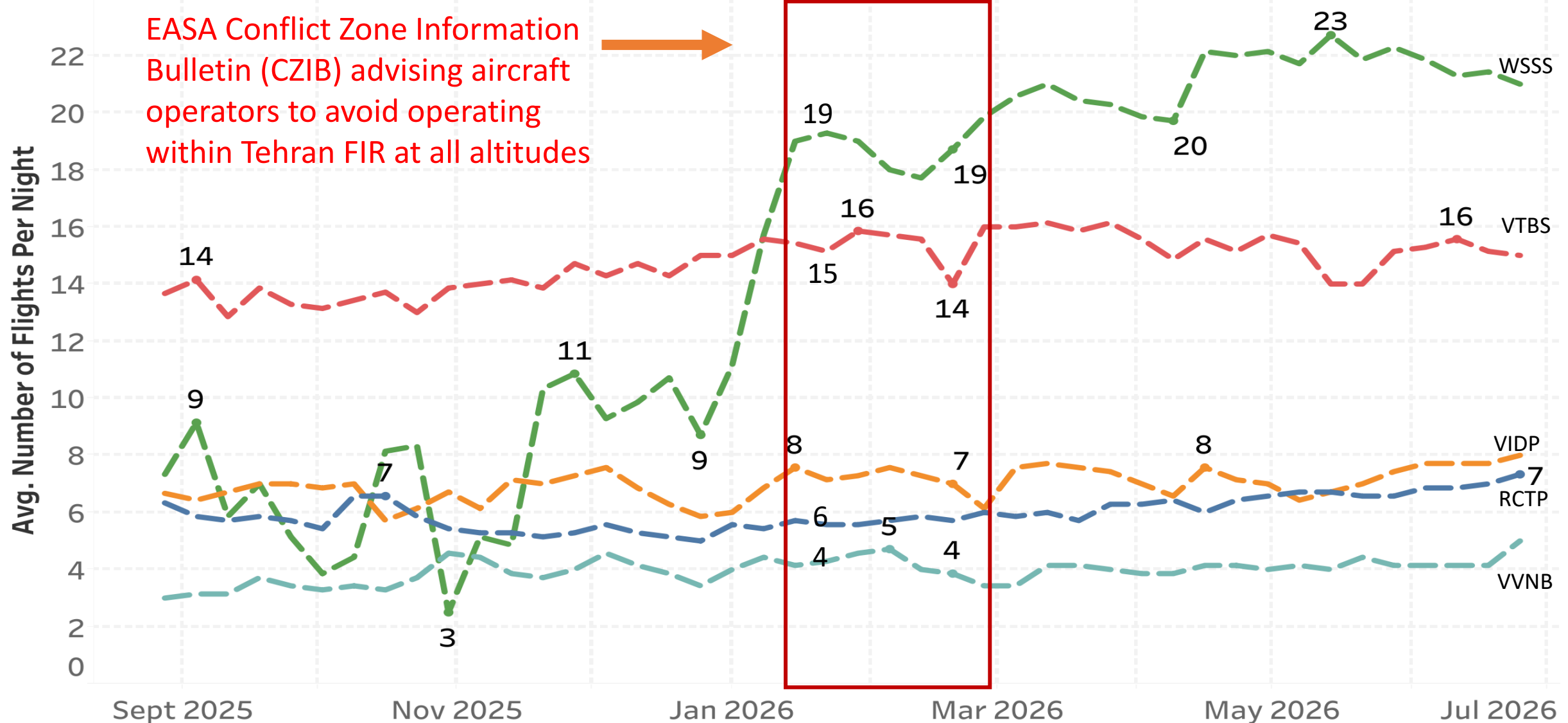
Data Source: Final BOBCAT Slot Allocation & ANSP Traffic Sample Data (4 Sep 2025 – 28 Jun 2026)



Impact of the Middle East Situation

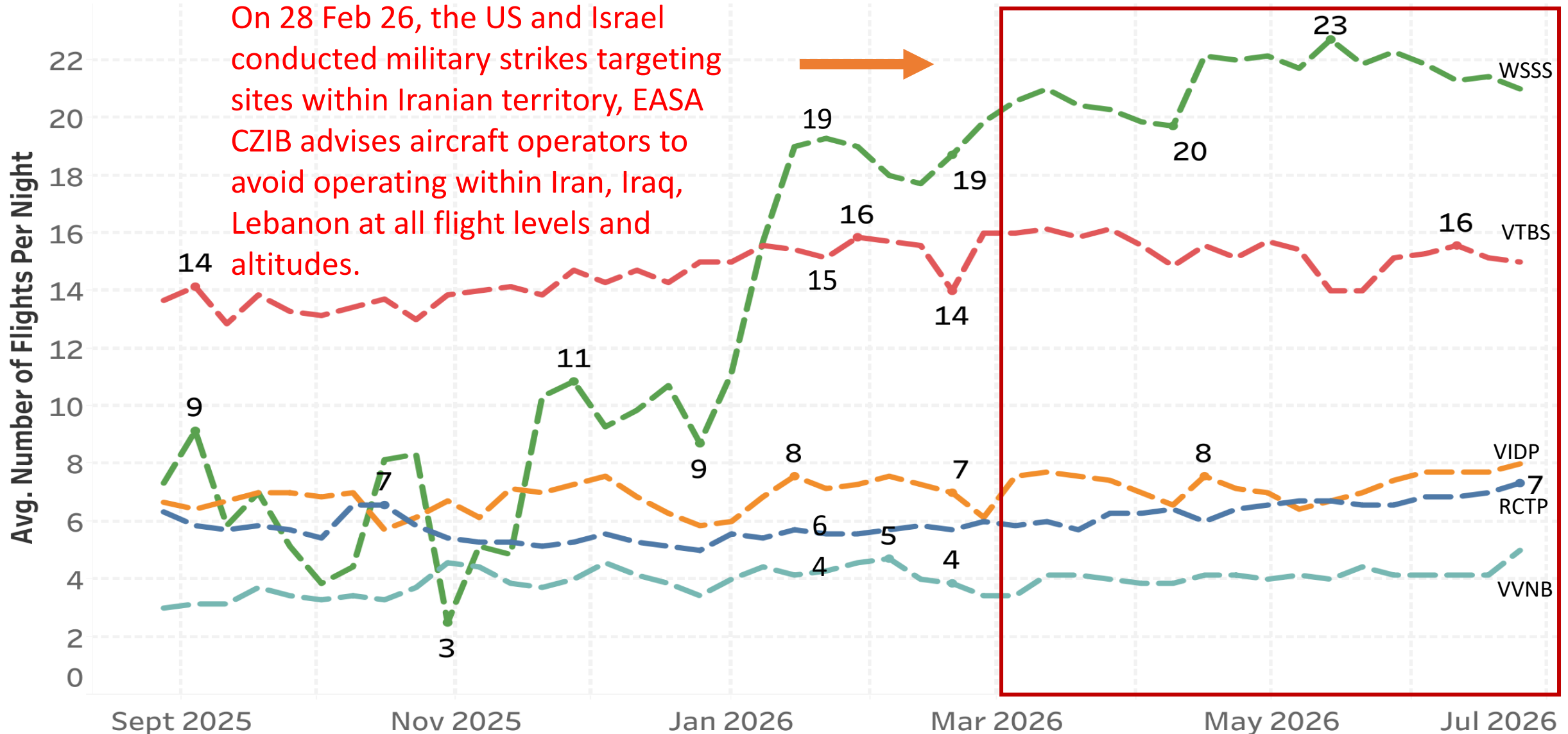


Average Daily BOBCAT Slots : Top 5 ADEP



Data Source: Final BOBCAT Slot Allocation (4 Sep 2025 – 30 Jun 2026)

Average Daily BOBCAT Slots : Top 5 ADEP



Data Source: Final BOBCAT Slot Allocation (4 Sep 2025 – 30 Jun 2026)

Impact of Middle East Situation

	Initial BOBCAT Reactivation (4 Sep 2025 – 15 Jan 2026)	Onset of Iranian Airspace Closure (16 Jan 2026 – 28 Feb 2026)	Middle East Situation (1 Mar 2026 – 30 Jun 2026)
Average number of flights with BOBCAT slots	46 (peak 67)	68 (peak 80)	77 (peak 88)
Average ATFM delay per flight (minutes)	3.1	4.5	5.1
Average percentage of flights transiting Afghanistan airspace at allocated or better FLs	92.2%	89.2%	85.4%

Discussion

