



WP/xx

BOBCAT Operational Updates

BOBCAT



ATFM/SG/11
2 – 6 Aug 2021



**Introduction & Benefits of
BOBCAT Operations**

**BOBCAT Slot Request Volume
Analysis**

**Slot Allocation Release
Performance**

**Traffic Sample Data
for Post-Operational Analysis**

**Flight Movement Message
Analysis**

Flight Level Performance

CTOT & CTO Compliance

ATFM Delay

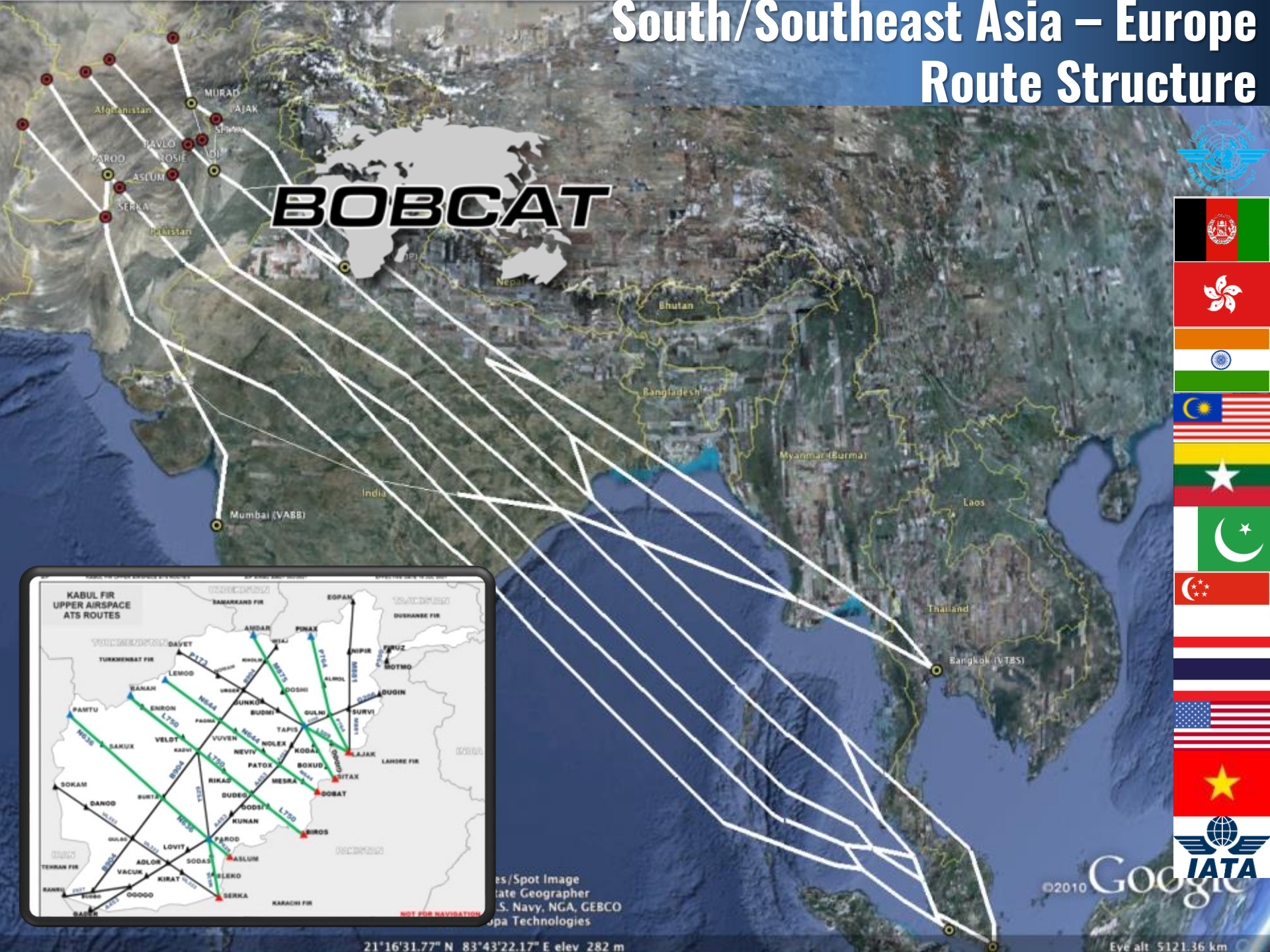
**COVID-19 Impact on Bangkok
ATFMU Operations**

**Improved Afghanistan
Airspace Access**

COVID-19 Impact

**Yangon ACC Contingency
Situation**

South/Southeast Asia – Europe Route Structure



BOBCAT



es/Spot Image
ate Geographer
.S. Navy, NGA, GEBCO
pa Technologies

21°16'31.77" N 83°43'22.17" E elev 282 m

©2010 Google
IATA

Eye alt 5121.36 km

Benefit of BOBCAT Operations

Thailand Air Navigation Authority
CNS/ATM SYSTEM



\$166
million

**Estimated
Airline Cost
Savings**



166
Million kg

**Estimated
Fuel
Savings**



680
Million kg

**Estimated
CO₂ Emissions
Savings**

BOBCAT Traffic Demand from Slot Request



Jul 19 - Mar 20

52

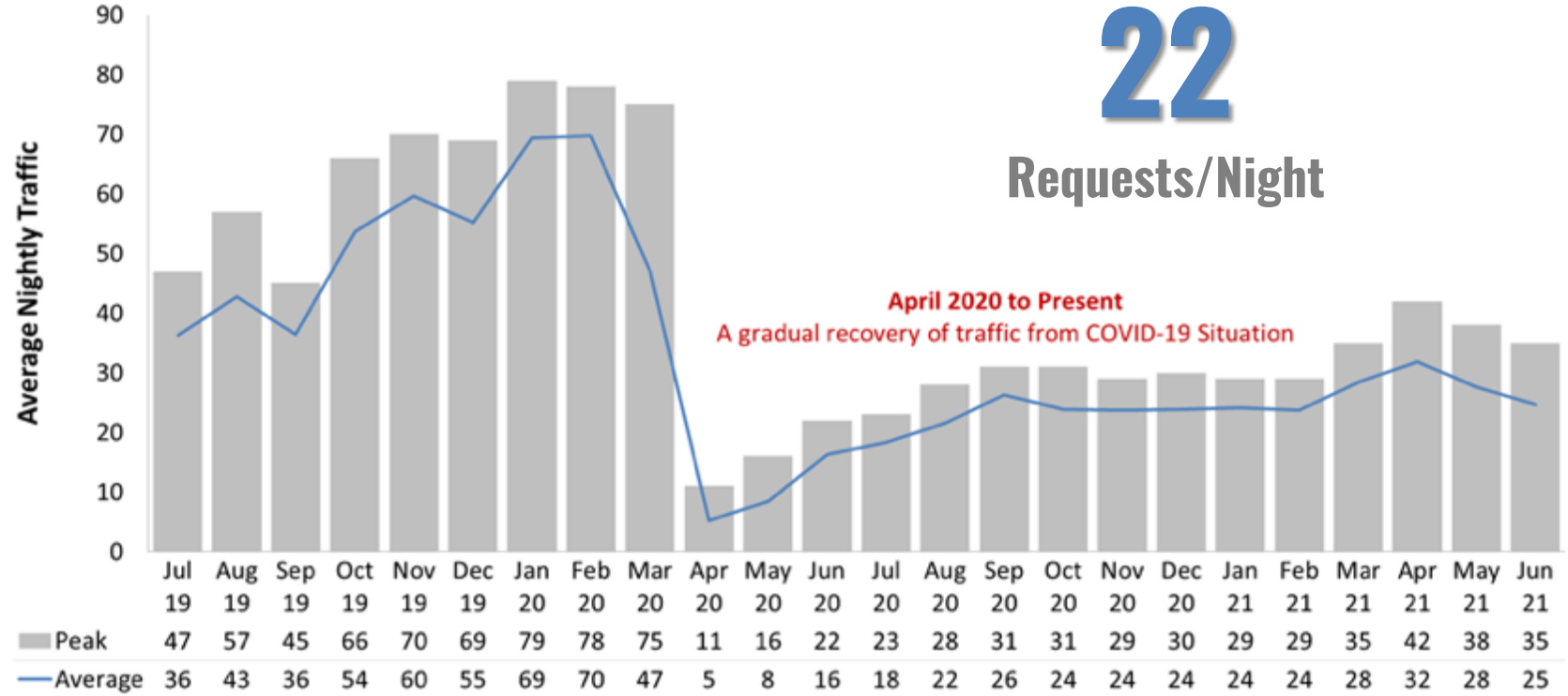
Requests/Night

Average of Slot Request

Apr 20 - Jun 21

22

Requests/Night

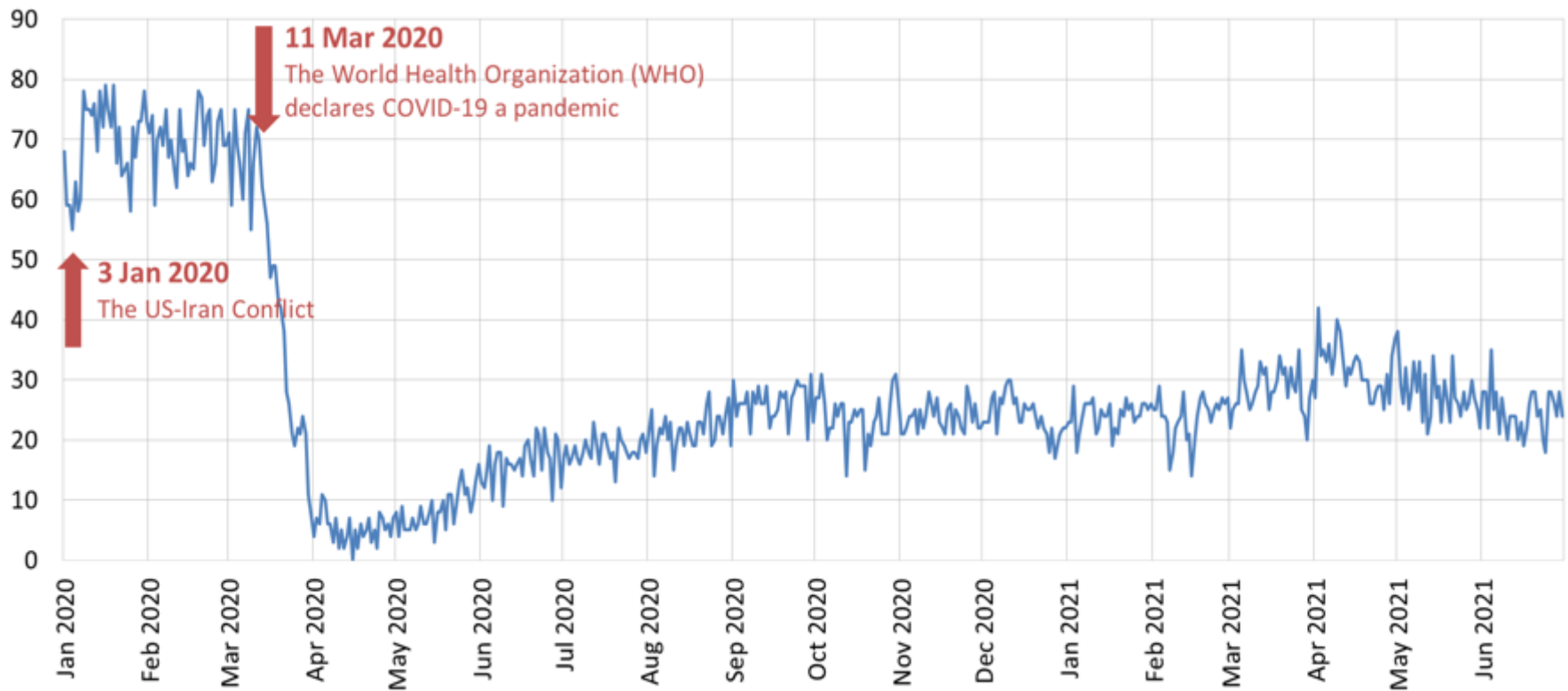


*Jul 2019 - Jun 2021

BOBCAT Traffic Demand from Slot Request



Overview of BOBCAT Traffic Demand from Slot Request between Jan 2020 - Jun 2021



Jan 2020 - Jun 2021

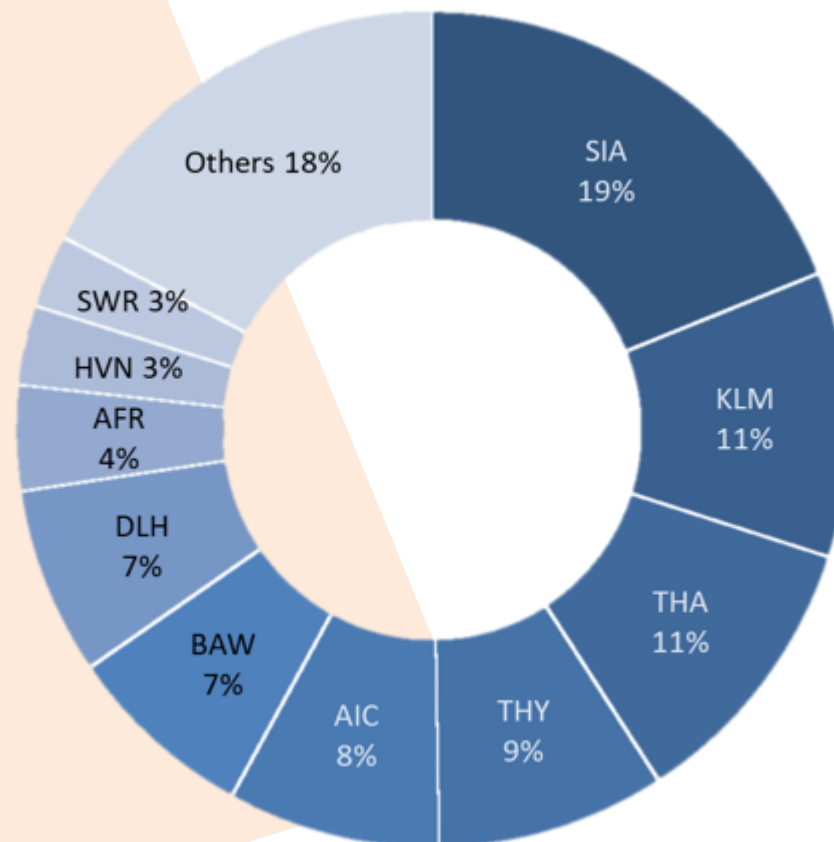
BOBCAT Slot Request by Airlines

Thailand's First and Best
CNS/ATM SYSTEM



38

**Airlines
Participation**



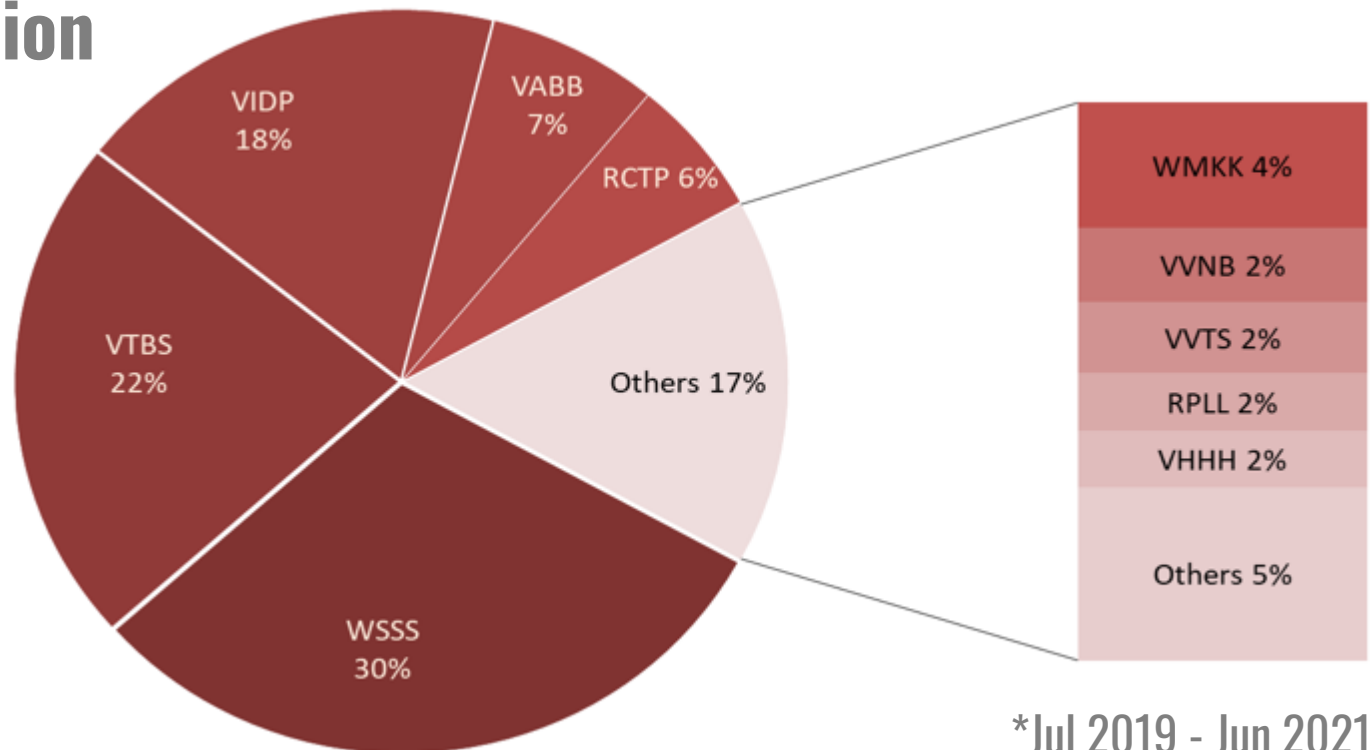
*Jul 2019 - Jun 2021

BOBCAT Slot Request by Departure Airports



47

Airports Participation



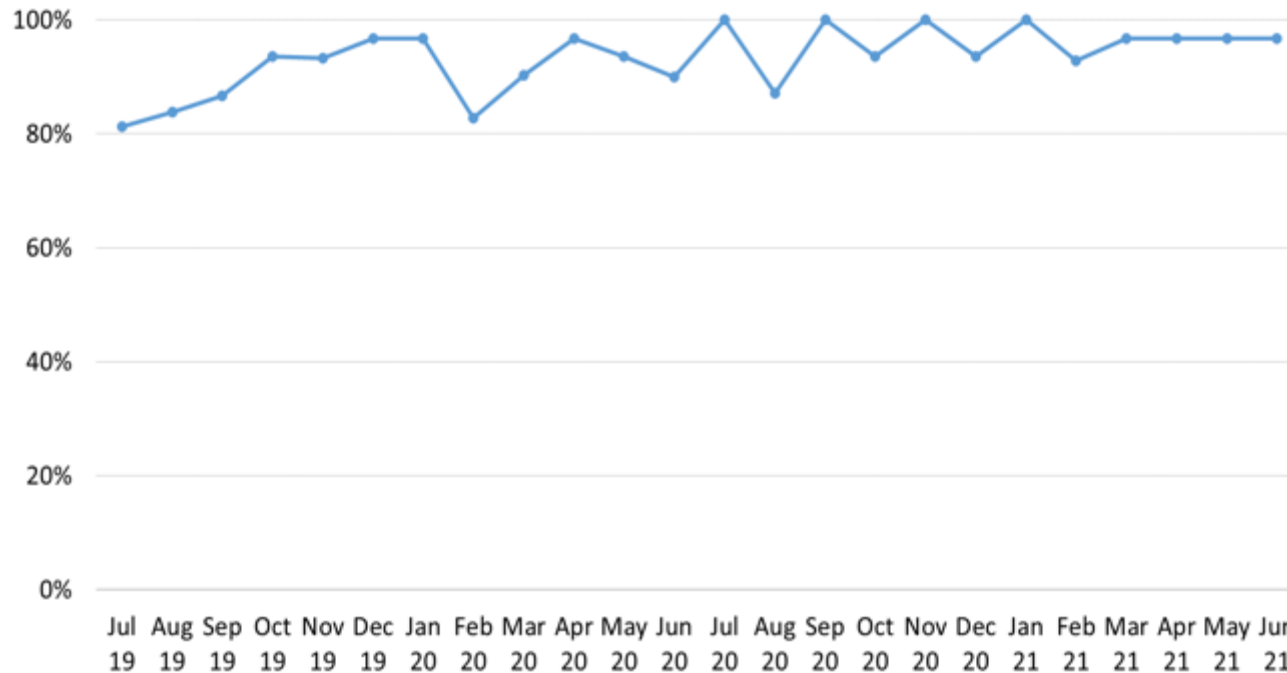
*Jul 2019 - Jun 2021

10-Minutes Cut-Off Time Slot Allocation Release Performance



93%

10-Minutes Cut-Off Time Slot Allocation Release Performance



*Jul 2019 - Jun 2021

Traffic Sample Data for Post-Operational Analysis



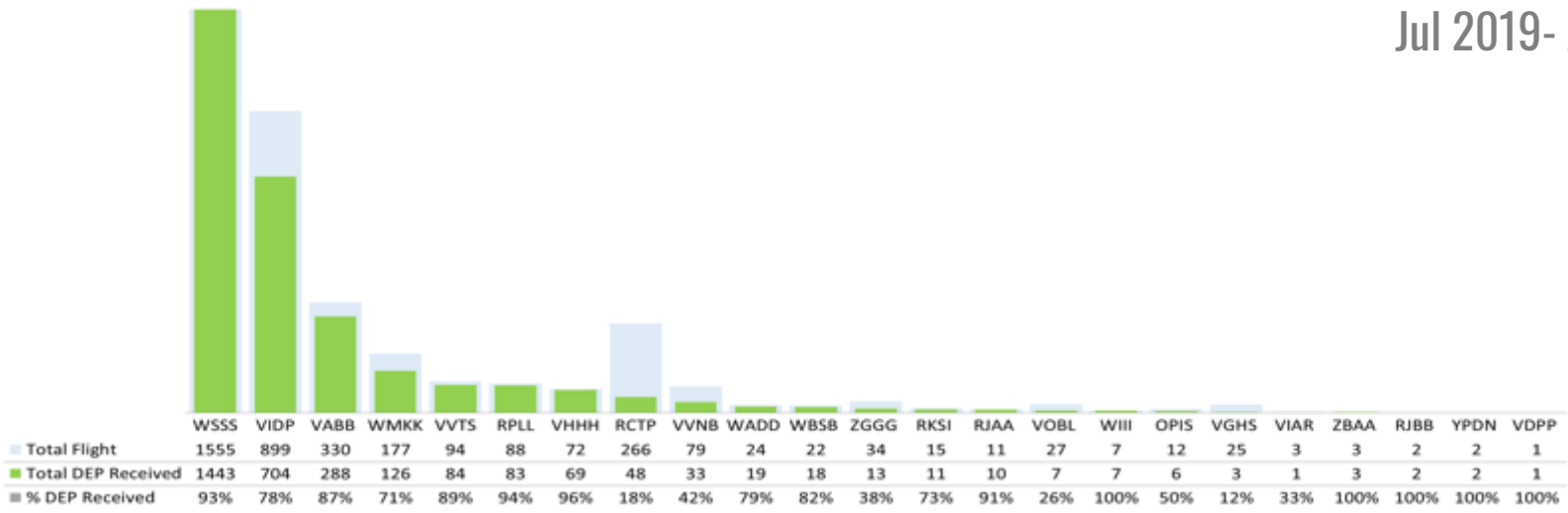
**1 Week Traffic Sample Data is collected
Starting with the 3rd Sunday of each month**



Average Percentage of Flights with DEP Messages



*3rd week of every month
Jul 2019- Jun 2020



*Jul 2019 - Jun 2021

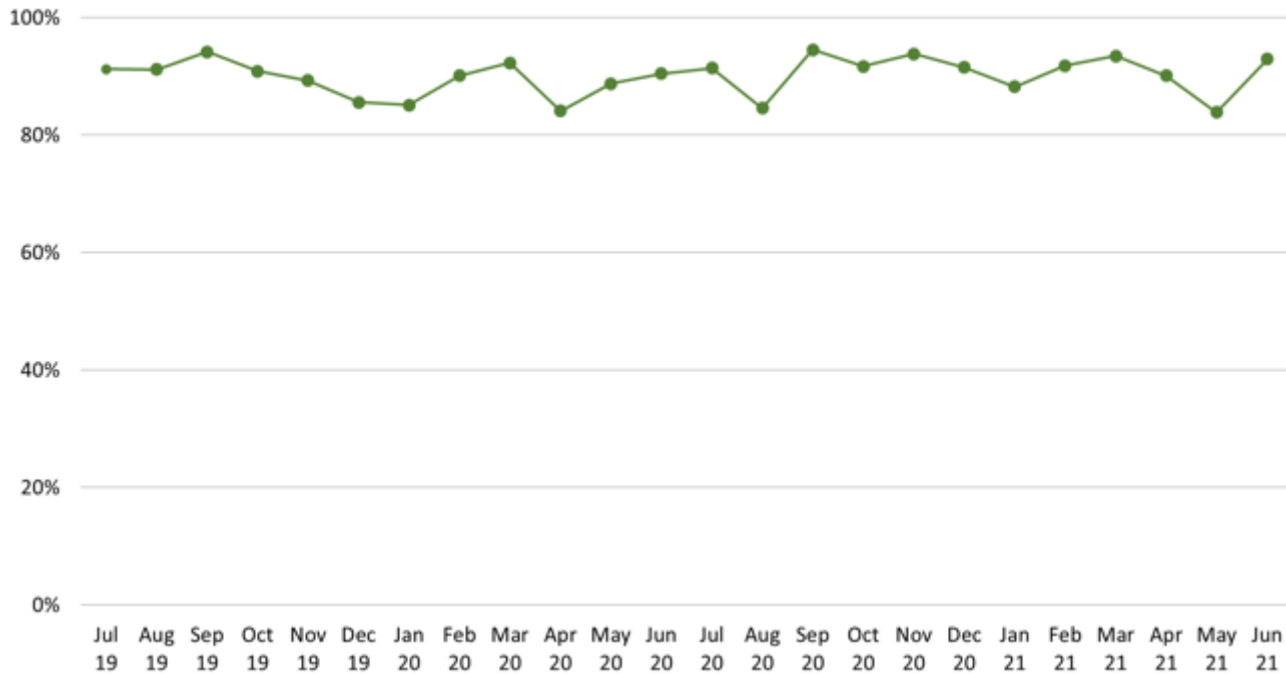
Percentage of Flights Achieving Same or Better FL

and Mission of
ATM SYSTEM



90%

Percentage of Flights Achieving Same or Better FL



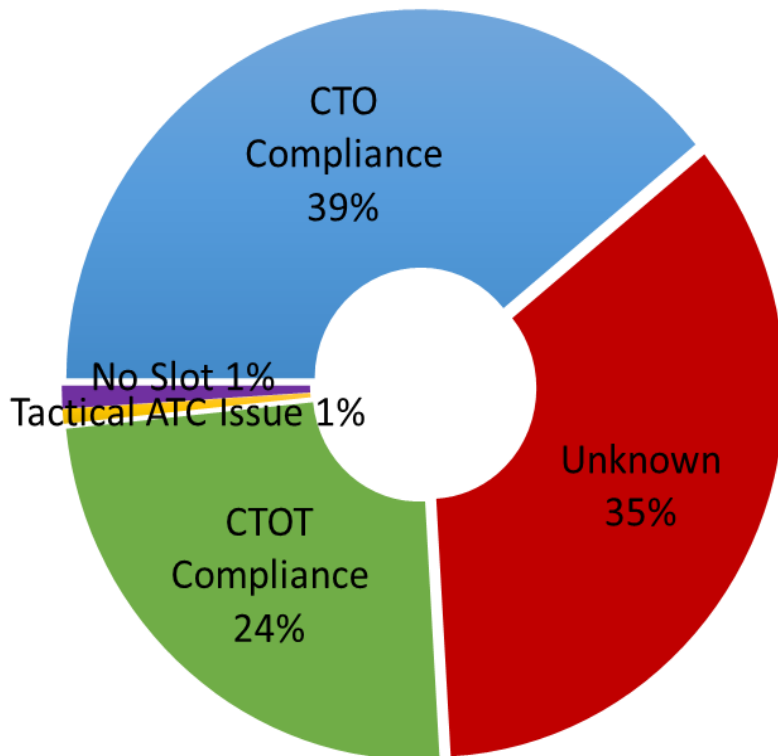
*3rd week of every month
Jul 2020 - Jun 2021

Causes of Flights Not Enter Kabul FIR at Allocated FL



39% Kabul FIR entry time (CTO compliance)

Flights are expected to cross waypoint within the window of 5 mins after CTO



35%
Unknown (more data required)

24%
Departures punctuality (CTOT Compliance)

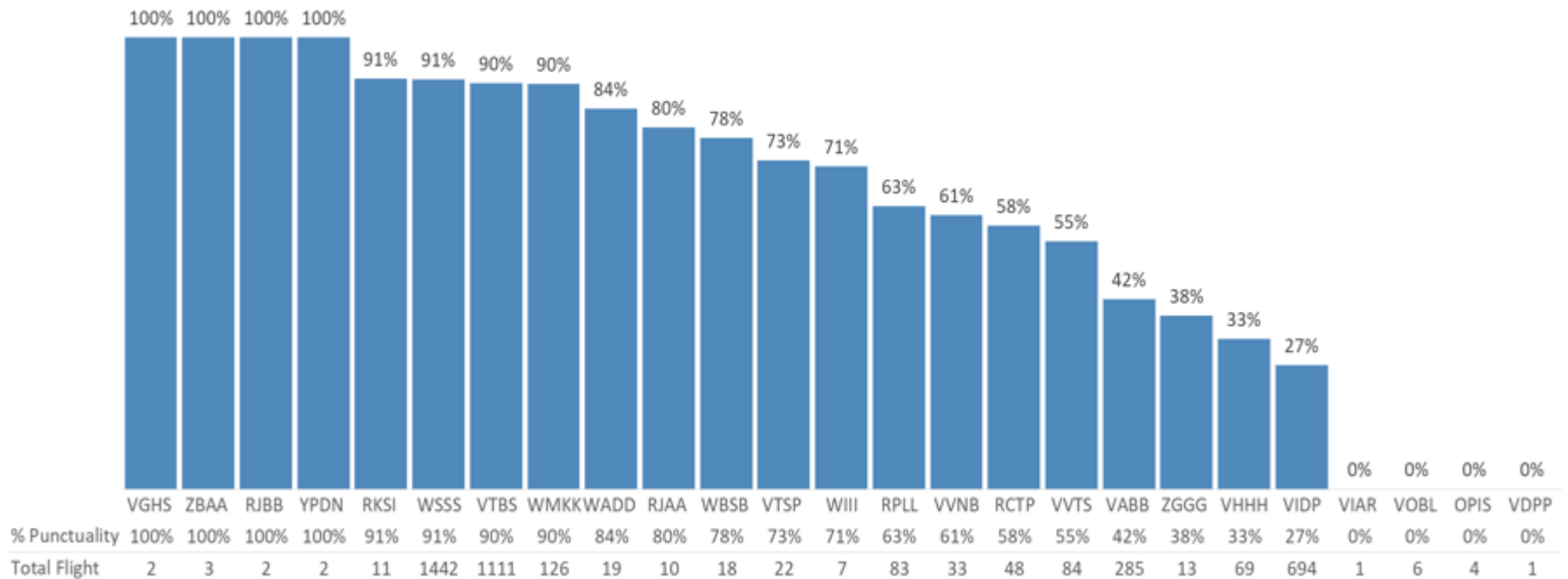
1%
Tactical ATC issues

1%
Departure without Slot Allocation

*3rd week of every month
Jul 2020 - Jun 2021

CTOT Compliance

Thailand and Myanmar CNS/ATM SYSTEM



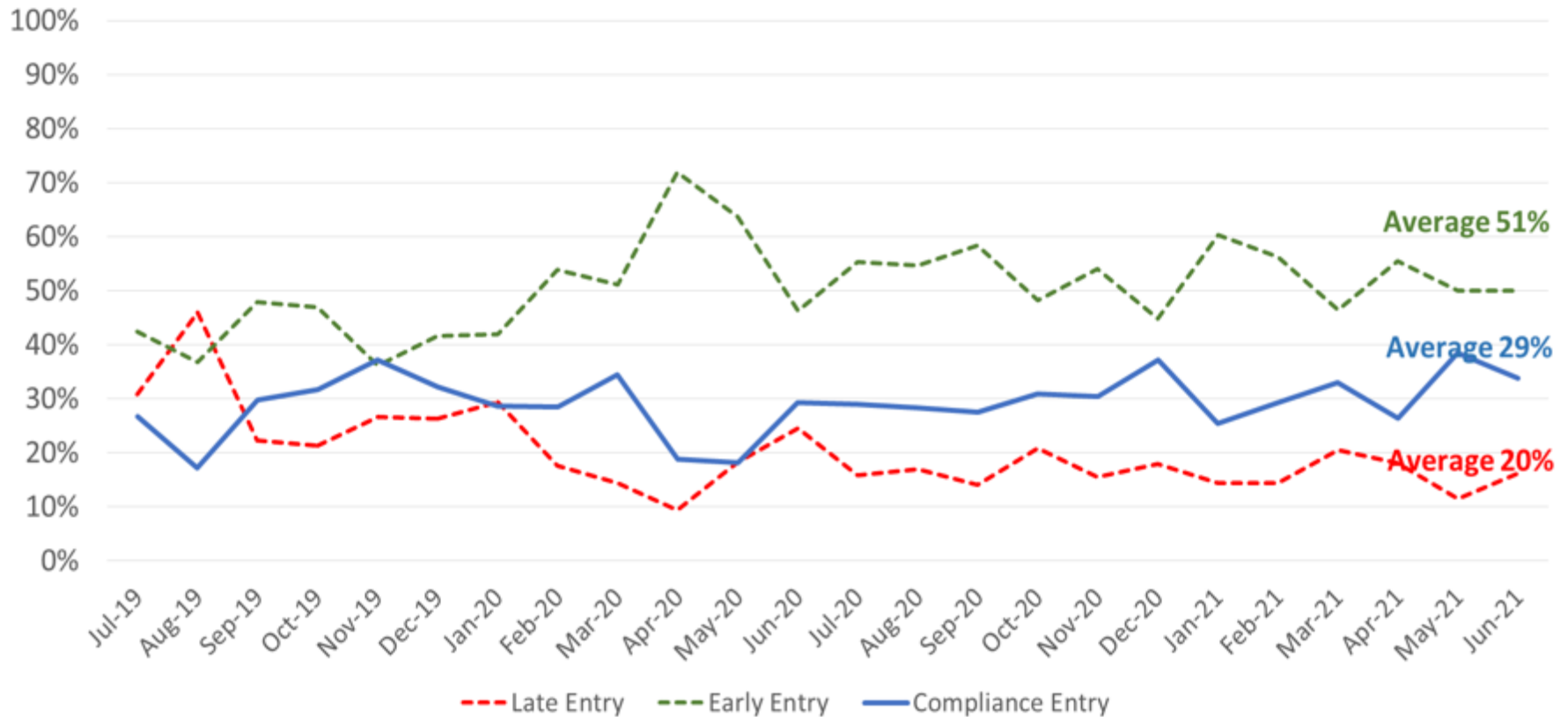
*3rd week of every month
Jul 2020 - Jun 2021

CTO Compliance

Thailand Air Navigation Authority
CNS/ATM SYSTEM



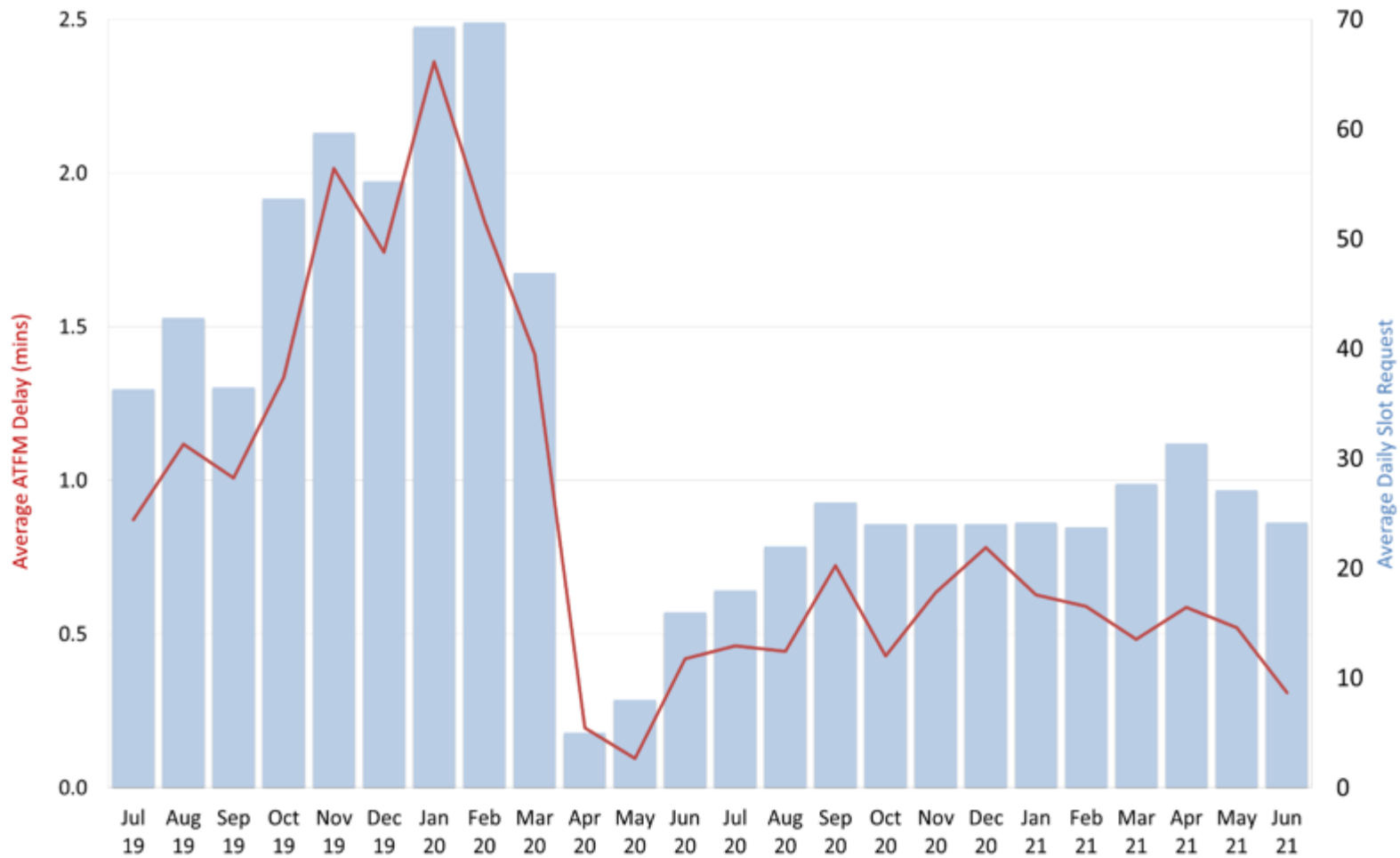
Only **29%** of flights can cross waypoint within the window of 5 mins after CTO



*3rd week of every month
Jul 2020 - Jun 2021

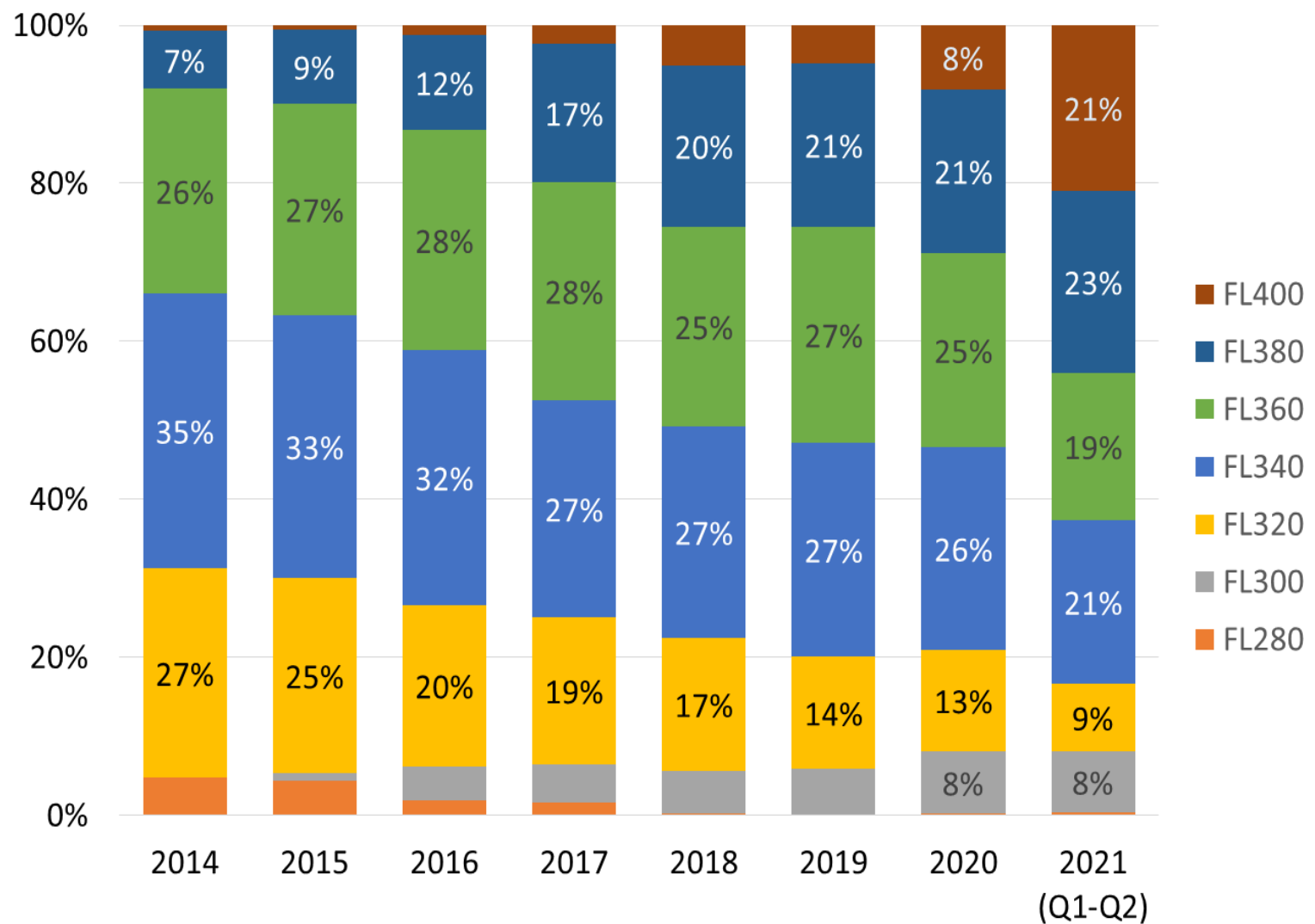
ATFM Delay

Thailand's Mission for
CNS/ATM SYSTEM



*Jul 2020 - Jun 2021

Distribution of Flight Level Operated in Afghanistan Airspace



*Jan 2014 - Jun 2021



March 2020 - April 2021

Bangkok ATFMU reduced the hours to 0100-1300 UTC

Airlines are able to lodge slot requests, receive slots,
and manage their slots round-the-clock

May 2021 to present

**Bangkok ATFMU operations hour
were further adjusted to 2330 – 1430 UTC**

About 98-99 percent of slot allocation changes
have been carried out by airline staff

During this period of significant traffic reduction,
online refresher trainings are provided to ensure staff
are kept up-to-date with current operating procedures

Improved Afghanistan Airspace Access (1)

A Thailand-led Project for a
CNS/ATM SYSTEM



Aug 2020

Increase in Flight Level Availability for LAJAK (L509) and SITAX (M875)

Entry Waypoint (Route)	Pre-August 2020	August 2020 onwards
LAJAK (L509)	FL280 (1 FL)	FL280 – FL400 (7 FLs)
SITAX (M875)	FL300 – FL400 (6 FLs)	FL280 – FL400 (7 FLs)

Mar 2021

Increase in Flight Level Availability for ASLUM (P628) and SERKA (N636-P628)

Entry Waypoint (Route)	Pre-25 March 2021	25 March 2021 onwards
ASLUM (P628)	FL320 – FL400 (5 FLs)	FL300 – FL400 (6 FLs)
SERKA (N636-P628)	FL280 – FL300 (2 FLs)	FL280 – FL400 (7 FLs)



The Situation

When: 8-16 February 2021

What:

- Yangon ACC U/S due to staff shortage
- Myanmar Contingency Plan in effect

A0038/21 NOTAMN

Q) VYYF/QAFAO/IV/NBO/E/000/999/1831N09558E999

A) VYYF B) 2102081228 C) 2102282359

E) DUE TO DISRUPTION OF ATS IN YANGON FIR ALL ACFT ARE ADVISED THAT THE MYANMAR INT'L CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THESE FIRS IS IN EFFECT. FLIGHT PLANING MUST BE IN ACCORDANCE WITH THE CONTINGENCY ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INT'L FLIGHTS ARE PERMITTED TO OVERFLY MYANMAR AIRSPACE. (RMK- YANGON INT'L AIRPORT APP AND TWR CONTROL SERVICE AVBL FOR ALL ARR/DEP TRAFFIC.

CREATED: 08 Feb 2021 13:04:00

SOURCE: VYYYYNYX

Yangon ACC Contingency Situation

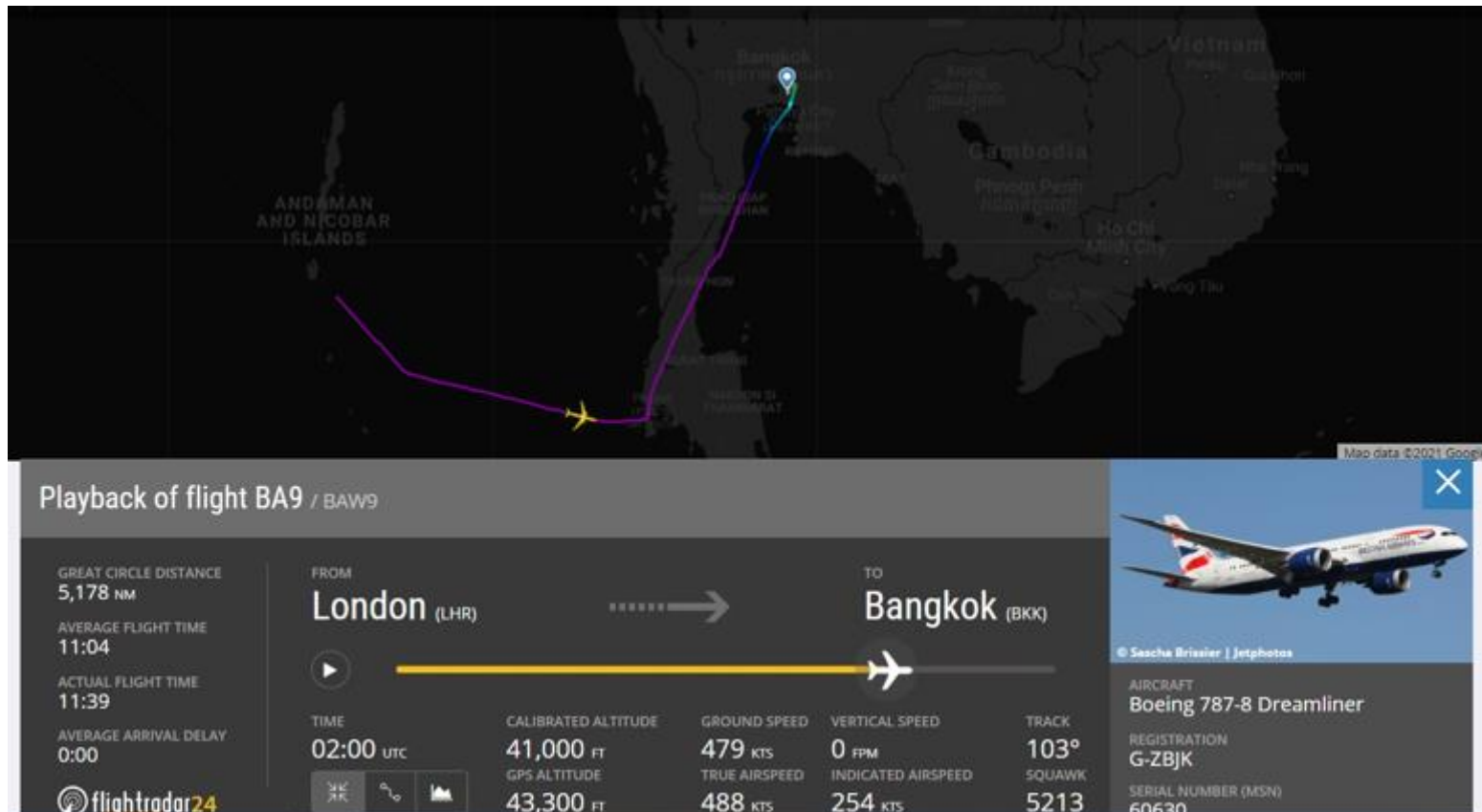
Thailand and Myanmar CNS/ATM SYSTEM



The Impact

Behold, the mighty Speedbird!

“We give our passengers a free tour of Southern Thailand”



Yangon ACC Contingency Situation

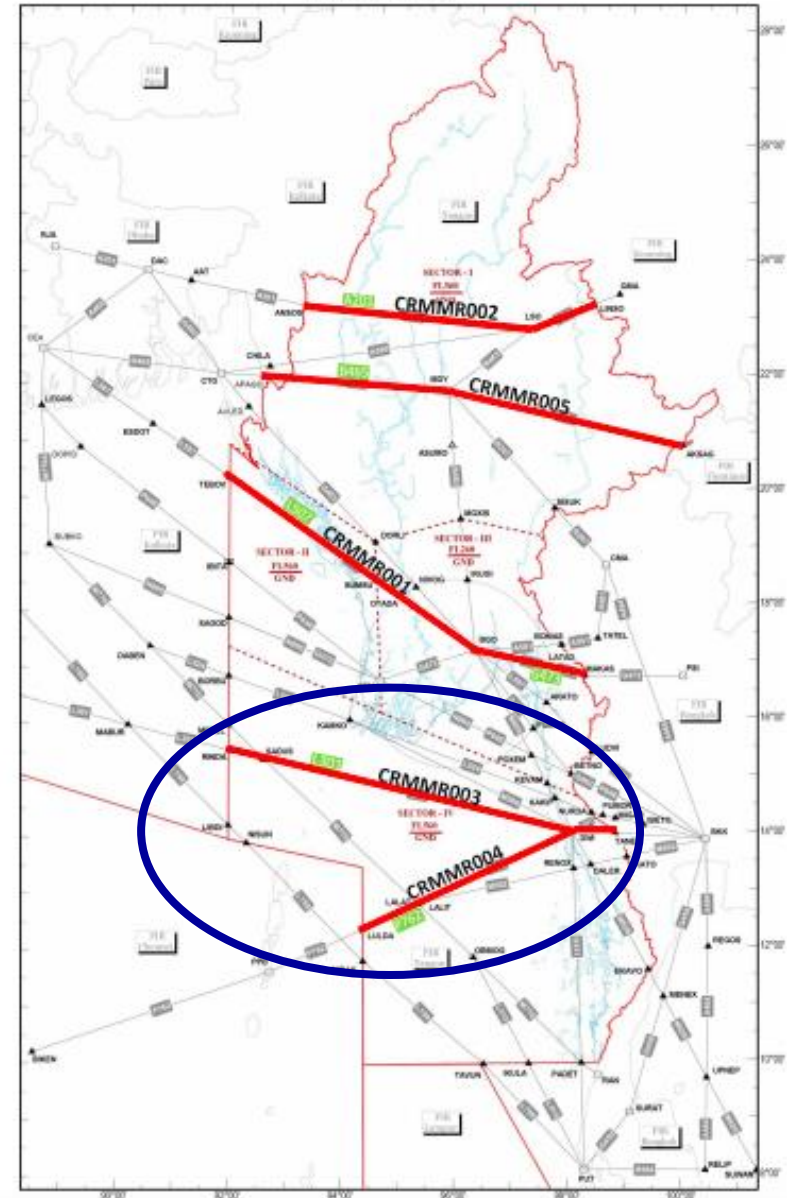
Thailand and Myanmar
CNS/ATM SYSTEM



The Impact

- Contingency Routes in effect, along with 15 MINIT spacing (10 with Mach Number technique) and limited FL available
- CRMMR003 (L301) was the most “popular” option
- Traffic departing VTBS faced significant departure delays

ATS CONTINGENCY ROUTES STRUCTURE
YANGON FIR



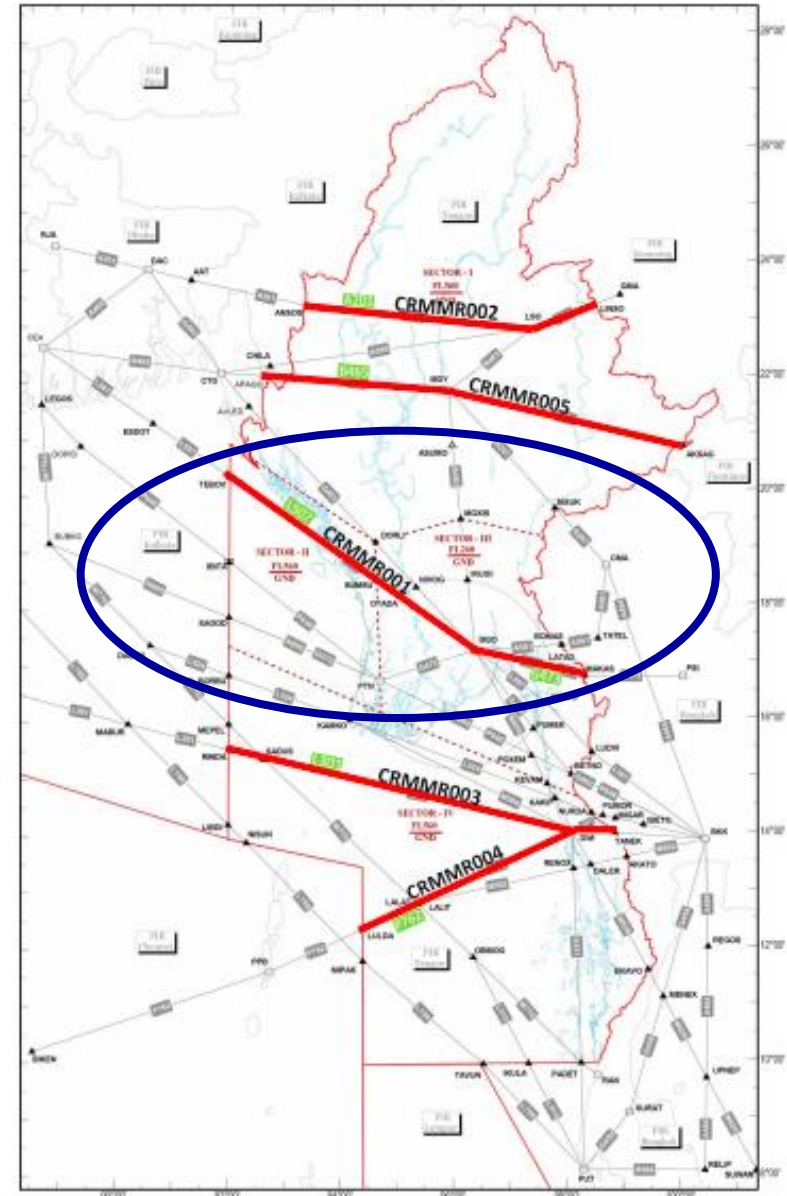
Yangon ACC Contingency Situation



The Solution

- **GDP Exemption:** BOBCAT flights departing from VTBS were exempted between 12 – 16 February 2021
- **Re-Routing:** Europe-bound flights from VTBS required to use CRMMR001 (L507) instead (~approx. +8 minutes)
- **Smooth coordination & resolution of the situation in ~2 weeks**

ATS CONTINGENCY ROUTES STRUCTURE
YANGON FIR





Thank you for your attention