



Air Traffic Report

2023

The year of exceptional numbers

Analysis of Air Traffic Performance from and to the Kingdom

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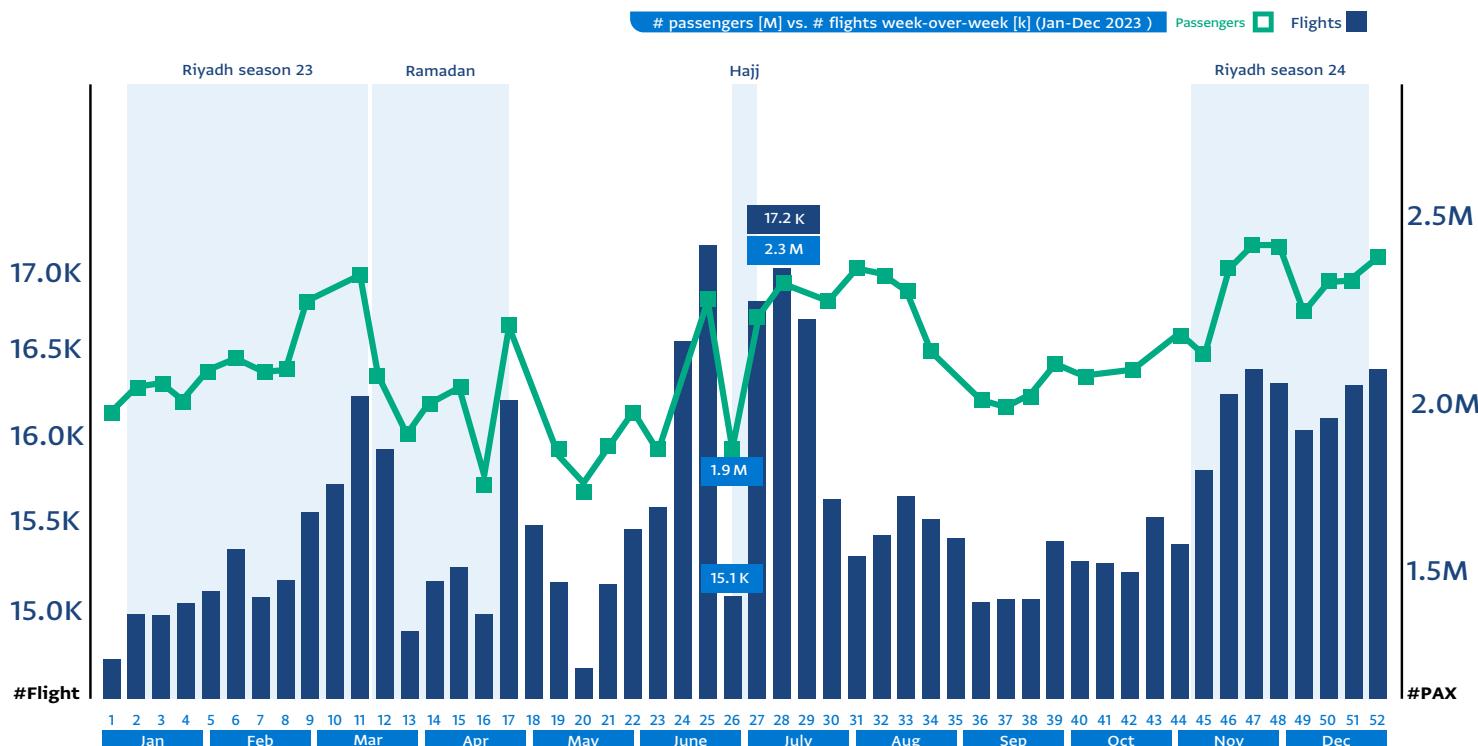
Sector at a glance

Sector at a glance: 2023 was a record year for aviation in KSA
 GACA continues to implement aviation strategy targets, contribute to the National Strategy for Transport and Logistic Services and enable broader goals of Saudi Vision 2030. In year 2023, air traffic performance demonstrated a positive outlook toward reaching Vision 2030. The total numbers of flights and passengers are approximately 815k and 112M, respectively, handled in the region- indicates a YoY increase of 16% and 26% respectively.

The number of domestic flights reached 421 thousand flights, including 359 thousand scheduled and non-scheduled flights, 62 thousand general aviation flights, and 185 air cargo flights. Meanwhile, the total number of international flights reached 394 thousand, including 370 thousand scheduled and non-scheduled flights, 14 thousand general aviation flights, and 10 thousand air cargo flights. Indeed, the average international flight carries 165¹ passengers vs 139¹ for domestic market.



Arrivals and departures have similar patterns in terms of number of flights, with peaks occurring before Ramadan, Hajj, and the holiday season in Western countries. Departures increase toward the end of celebrations or events, especially in the number of passengers aboard (e.g., departures increase the week after Hajj).



Note: The above chart compares the number of passengers (green line) vs. the number of flights (bars) during the observation period. Profiles of the curves are aligned with similar peaks and lows. However, % variations of curves are not equal. For example, during Hajj the number of passengers increased from 1.9M to 2.3M from week 26 to week 28 (+21%), while the number of flights increased by roughly 15% (from 15.1k to 17.2k).

¹Excludes general aviation and cargo flights.



2

Flights

In 2023, the Kingdom saw

16%
increase over 2022



815k
flights

In 2023¹, Jeddah and Riyadh confirmed their leading position in KSA with a total of **501k flights/year**. This year, Jeddah was the leading airport both in terms of passengers and total flights

(in 2022, King Khalid Int'l airport in Riyadh was the first airport with 219k flights, while King Abdulaziz Int'l airport in Jeddah totaled 211k flights)



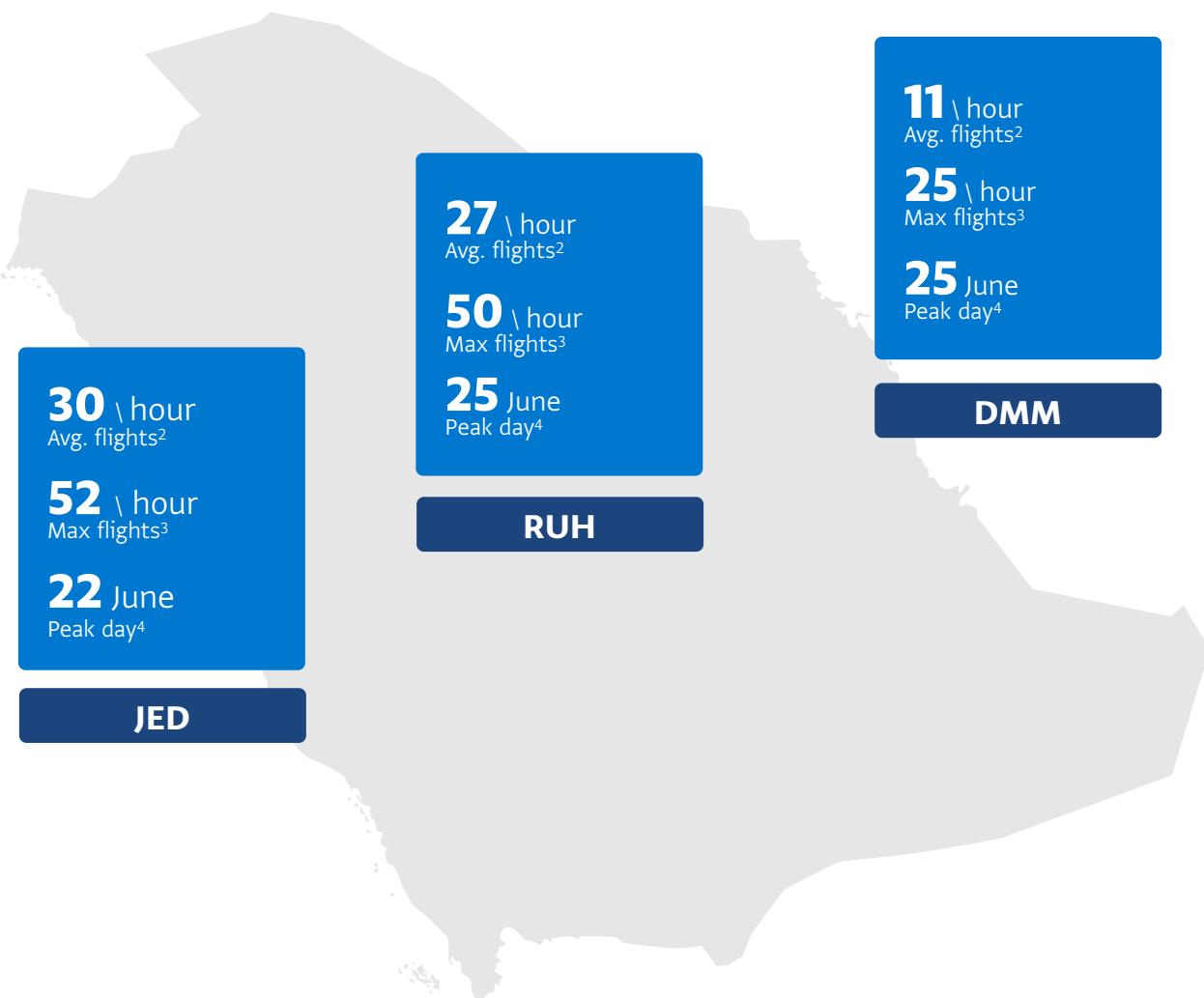
YoY positive outlook

Pre-covid volumes have fully recovered, with 9% more flights operating vs. 2019. Riyadh and Jeddah have close rates in terms of average and maximum number of operated flights per hour. Dammam airport has an average hourly rate of 11 flights/hour, reaching

a peak of 25 flights/hour (more than double its hourly average). Peak days are for all airports toward the end of June, concurrent with Hajj season. Across the world, the peak was registered on August 11th, 12% busier than an average day¹.

Flights

2 0 2 3	815k Flights
2 0 2 2	701k Flights
2 0 2 1	497k Flights
2 0 2 0	347k Flights
2 0 1 9	750k Flights



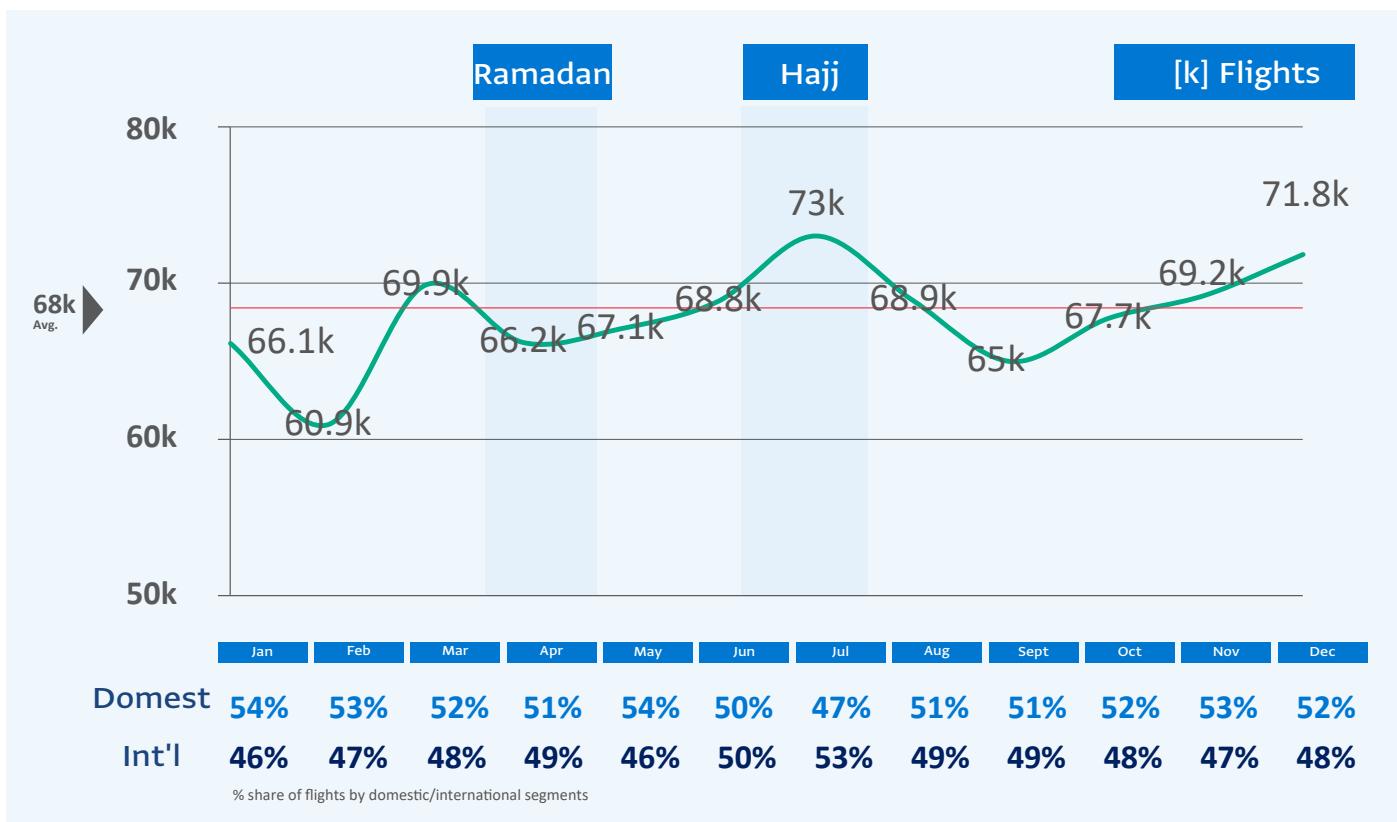
1. Source: <https://www.oag.com/blog/air-travel-statistics-2023#:~:text=In%202023%2C%20the%20busiest%20day,than%20the%20average%20travel%20day>

2. Average nr. flights arriving and departing during the same hour across the year.

3. Maximum number of flights/hours for all opening hours

4. Day with the highest number of flights

Flight distributions for the year



Local seasons drive traffic fluctuations

Summer and winter seasonal peaks arrive in March, July, and December. Summer peaks are mainly driven by international traffic (53% of total flights) partly due to summer holidays and Hajj.

Similarly, local seasons (e.g., Riyadh) drive more domestic traffic across KSA. Finally, peaks in March can be explained by school holidays and the beginning of Ramadan the following month.

Main events in 2023



Riyadh season



Hajj season



Ramadan



Founding day

Oct 2022-Mar 2023
Nov 2023-Mar 2024

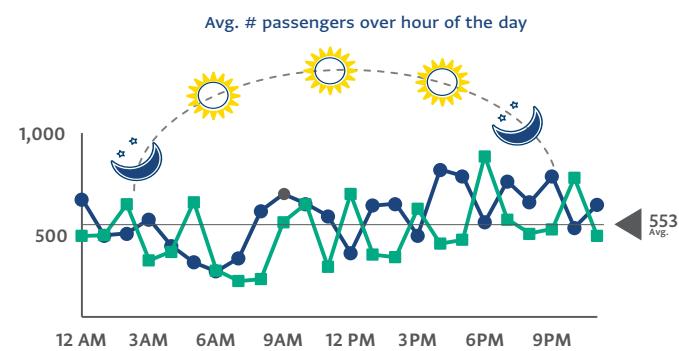
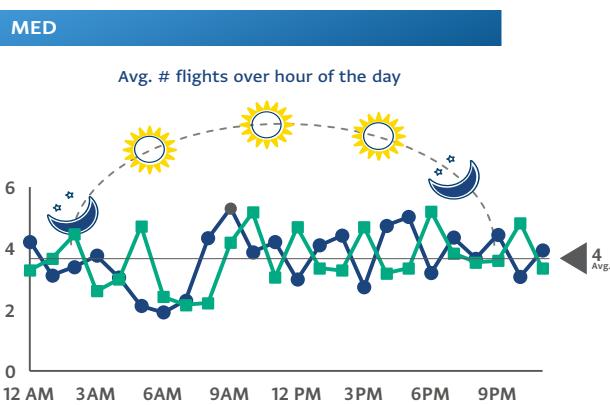
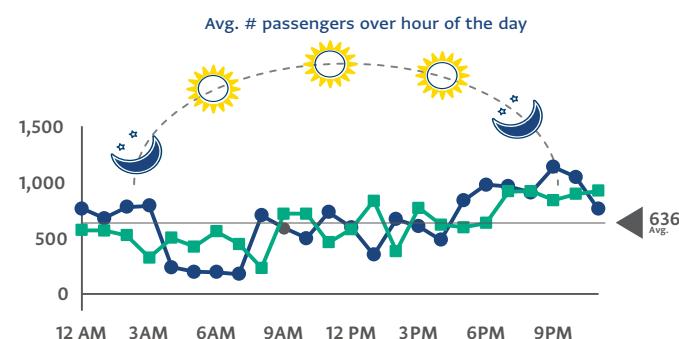
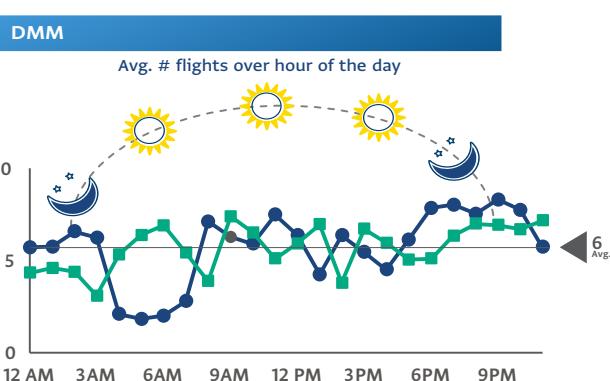
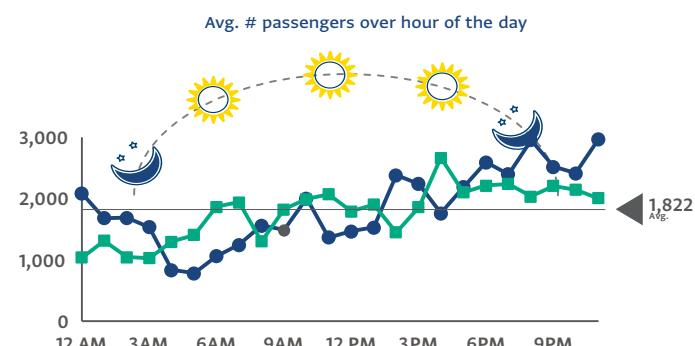
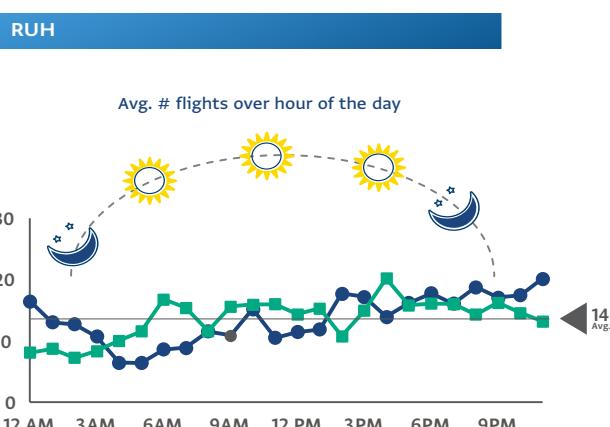
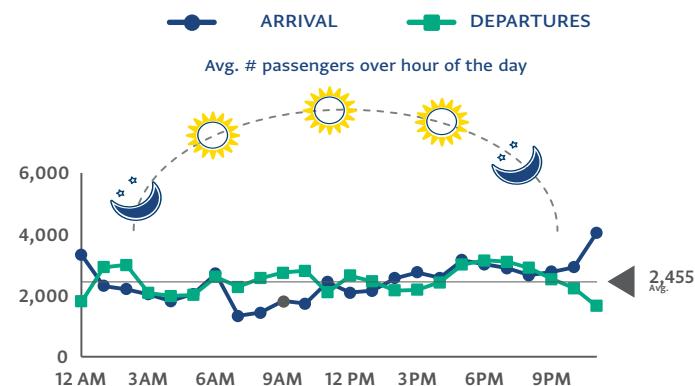
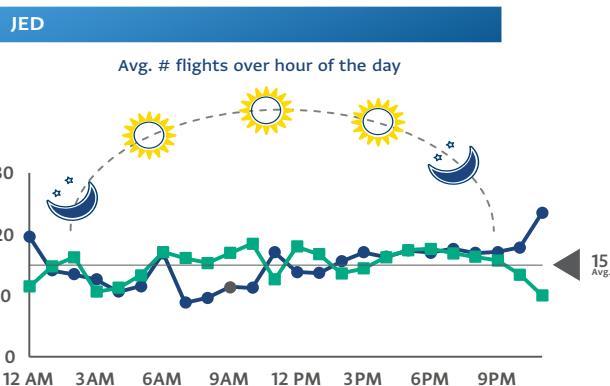
May 21st -June 25th

Mar 22nd -Apr 20th

Feb 22nd

On average, more than 3K travelers arrive or depart from Saudi Arabia every hour. Yet, major differences are observed across airports. For example, the 3 major airports (except Madinah) have a higher number of flights during the night-time hours.

During the day, arrival peaks coincide with lower departure rates as passengers transfer to other aircraft. This pattern is particularly evident at Dammam airport, where arrival and departure curves tend to shift by 1.5 hours.





3

Passengers

KSA airports handled in 2023

26%
increase over 2022



112M
passengers

Total number of passengers reaches new record in 2023¹ Covid-recovery is evident, not only in number of flights but also in number of passengers. We saw an 9% increase with respect to 2019, and a total 112M passengers.

Jeddah and Riyadh are the two main hubs regarding passenger numbers; Dammam comes in third with 11M passengers per year.



Growth from January to December 2023 16%

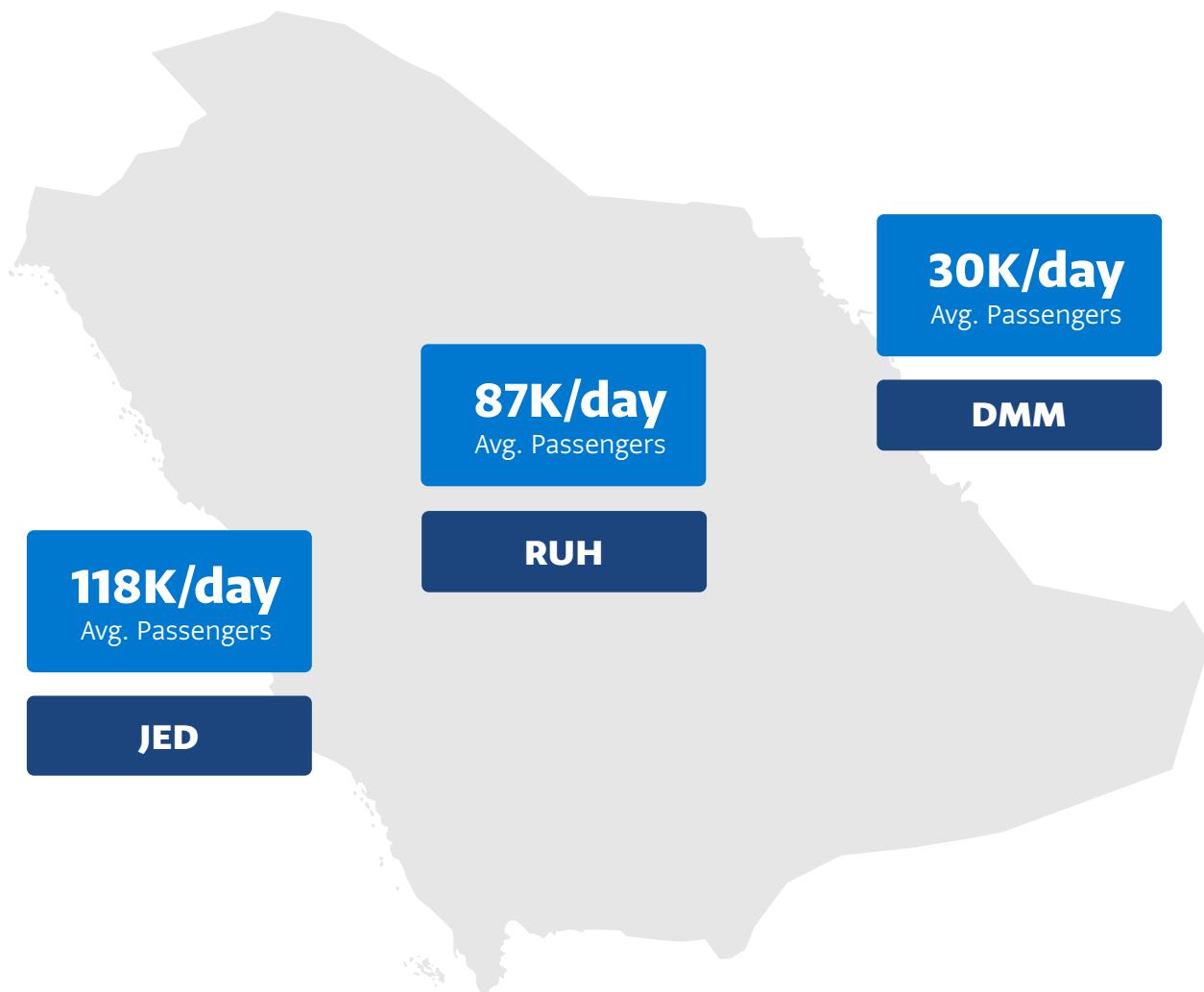
As for flights, passenger flows follow the seasons, with peaks in July, August, and December when the number of monthly passengers was 20% higher than in the low season (e.g., comparing May to December).

Total passengers¹**2 0 2 3 112M**

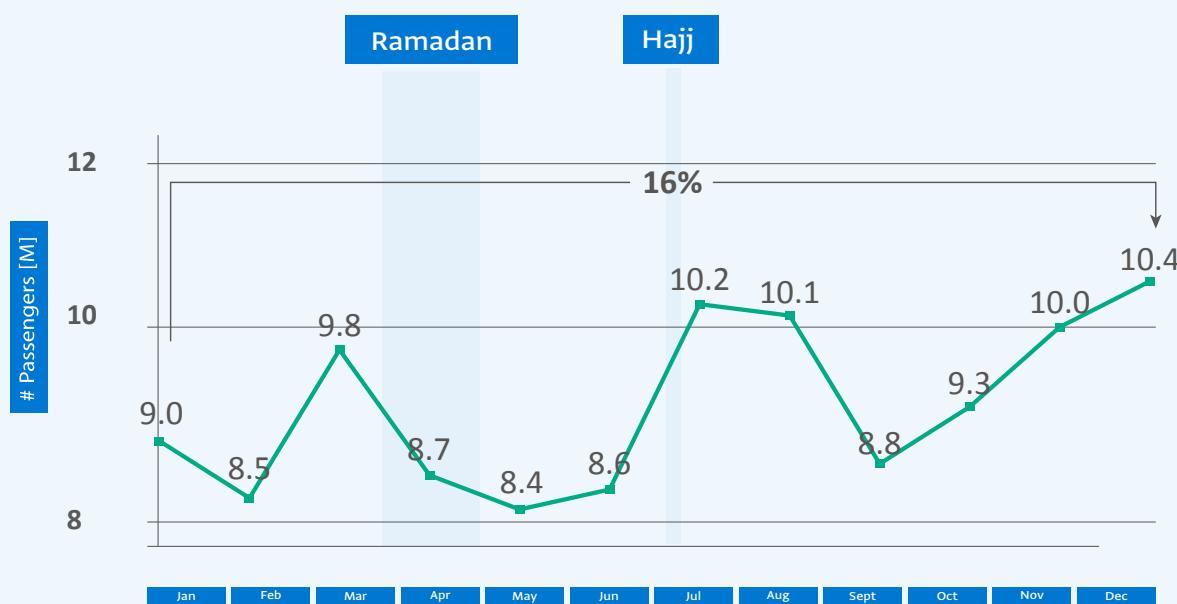
2 0 2 2 88 M

2 0 2 1 49 M

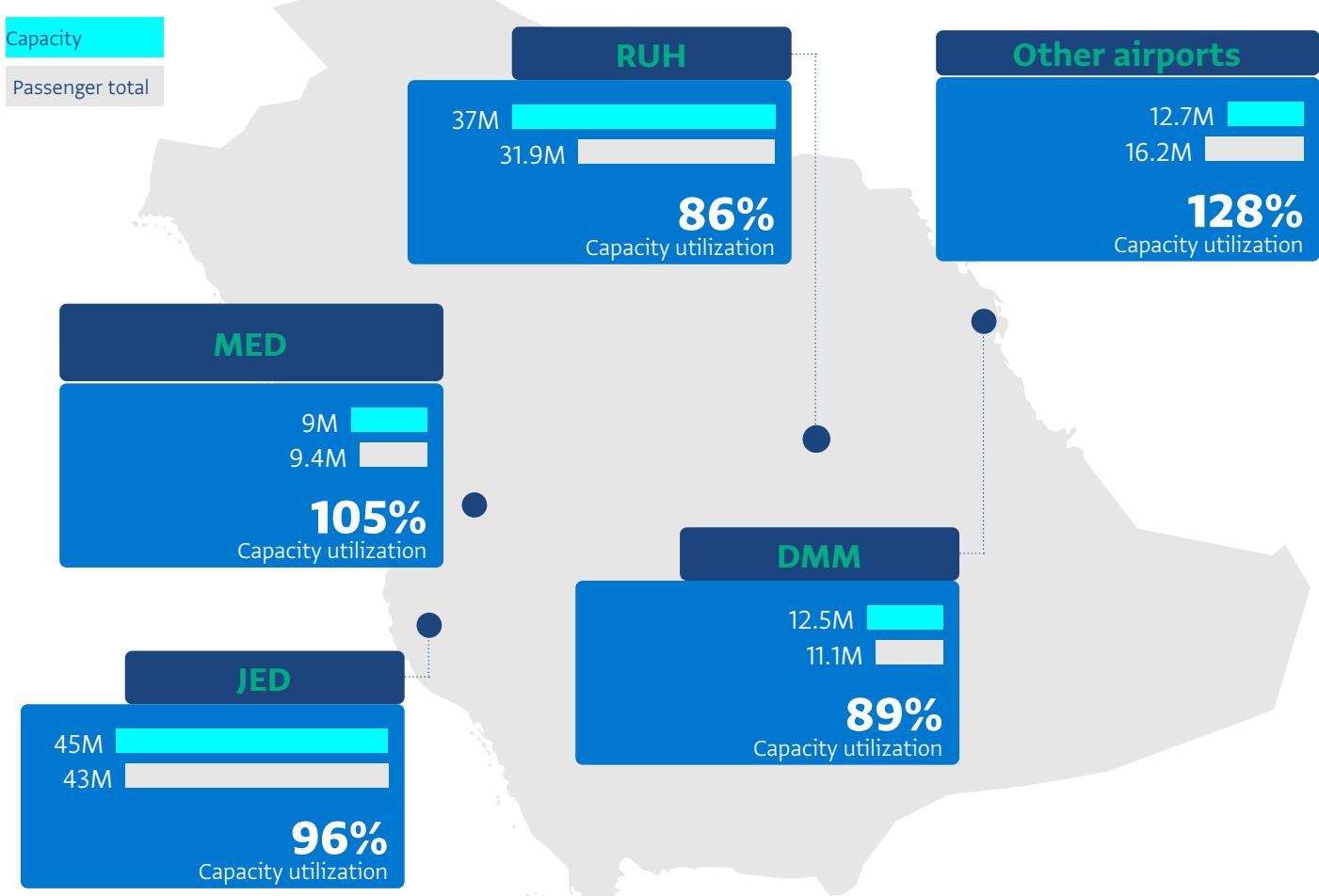
2 0 2 0 37 M

2 0 1 9 103M

Passenger distribution Jan-Dec 2023



Passenger capacity per airport 2023



Regarding capacity utilization, the Kingdom's four major airports boast an average 92%¹ utilization of passengers per year. Jeddah and Madinah operate near capacity. Similarly, in all other airports in the Kingdom, demand exceeds capacity (128% average utilization).

¹sum of total pax/sum of total maximum capacity

4

Destinations

International					
	Flight	Destination	Terminal	Gate	06/10/20 18:43
03:40	PR 5657	MANILA	T2	23	
04:10	SV 708	KARACHI	T2	24	
05:10	TK 4943	ISTANBUL	T2	25	
05:15	XY 293	KHARTOUM	T2	24	
05:15	SV 037	WASHINGTON	T2	25	
6:10	EY 9838	ABU DHABI	T2	25	
7:10	G8 6569	NEW DELHI	T2	25	
7:40	SV 311	CAIRO	T2	25	
08:10	XY 201	DUBAI	T2	25	
	SV 724	ISLAMABAD	T2	25	DELAY TO 13:00

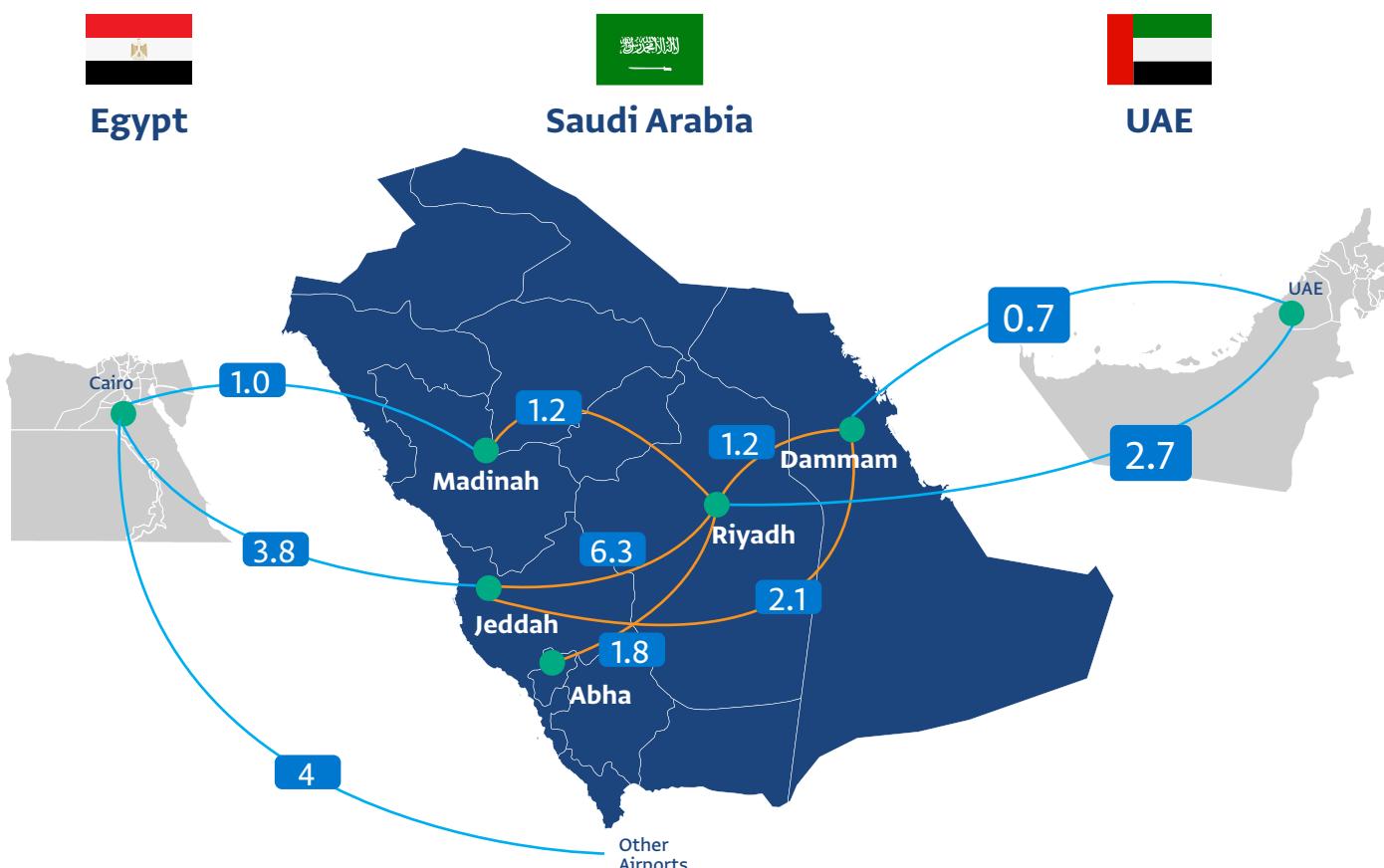
+140 destination cities have at least one weekly connection from KSA¹

In 2023, 2 KSA routes (CAI-JED and DXB-RUH) were among the 10 busiest int'l routes by number of seats²

In 2023, a total of 197K international flights departed KSA (48% of total departures) with 29.7M passengers (54% of total departures). Four of the top 5 int'l routes (by number of passengers) connect Jeddah and Riyadh to UAE and Egypt. These 4 int'l routes have more than 2 million passengers each.

During Hajj season (21 May to 25 June), 1.6M³ Hajj passengers flew to KSA, with 47% of total passengers arriving in the same time period. Hajj and Umrah passengers are concentrated in Madinah and Jeddah; more than 22% of passengers fly to Madinah for these events.

Top routes by # of passengers per airport⁴



Passengers [M]-top International destinations per airport
Passengers [M]-top domestic destinations per airport

Worldwide ranking

4.80 seats² CAI-JED **2**

3.99 seats² DXB-RUH **6**

¹Includes all countries of either origin or destination with at least 52 flights/year; total number for 2023 is 148

²Source: <https://www.oag.com/busiest-routes-world-2023>

³Source: General Authority for Statistics ⁴ Excludes general aviation and cargo flights. For domestic flights, only departures are considered, to avoid double-counting

