

# Monthly Network Operations Report

Overview September 2024



CONSORTIUM  
COORDINATOR  
**sesar**  
DEPLOYMENT MANAGER

FOUNDING MEMBER  
**sesar**  
JOINT UNDERTAKING

NETWORK  
MANAGER



# 1. Summary

There were 1,007,427 flights in September, 4.3% more than September 2023. Traffic followed the seasonal trend, with a slight rise in early September before dropping off at the end of the month.

The network had an average of 33,581 flights/day in September, about 1,300 flights/day more than in September 2023. The busiest day was Friday 06 September with 35,270 flights, which exceeded the busiest day of September 2023 (34,296 flights). The intra-NM SW axis saw 5.8% growth compared to 2023, which influenced the network growth of 4.3%.

The conflict in Ukraine still affects overflights in several countries. EUROCONTROL continues to help manage the war's impact on aviation.

The Low-cost segment remained the primary driver of flight growth in September 2024 compared to September 2023, adding 1,146 daily flights (+10.8%) to the network.

Among the Top 20 ACCs, only Langen ACC saw no increase in traffic compared to September 2023. Notably, seven ACCs—Ankara, Vienna, Budapest, Reims, Sofia, Beograd, and Bordeaux—registered substantial double-digit growth.

The rankings of the leading 6 airlines were unchanged since June, with Ryanair as the busiest operator averaging 3,571 movements per day (+9.1%) followed by easyJet (1,839), Turkish Airlines (1,510), Lufthansa (1,242) and Air France (1,112).

Istanbul airport remained the busiest with an average of 1,481 flights/day, followed by Amsterdam Schiphol (1,438 flights/day), Paris Charles de Gaulle (1,388 flights/day), London Heathrow (1,339 flights/day) and Frankfurt (1,327 flights/day). All of the Top 20 airports had more traffic than in September 2023, with double-digit traffic growth at Barcelona Rome Fiumicino and Athens airports.

Network departure punctuality (61.5%) and arrival punctuality (67.6%) were lower than in September 2023. The network was mainly impacted by weather and ATC capacity issues. Domestic routes had a departure punctuality of 72.9%, which was higher than the network level. Punctuality on the south-east axis was 54.8% which is a decrease of 5.1 pp compared to September 2023. Network first rotation departure punctuality was 77.0% and arrival punctuality was 84.2%. Improving first rotation punctuality remains a key objective for the Network Manager (NM).

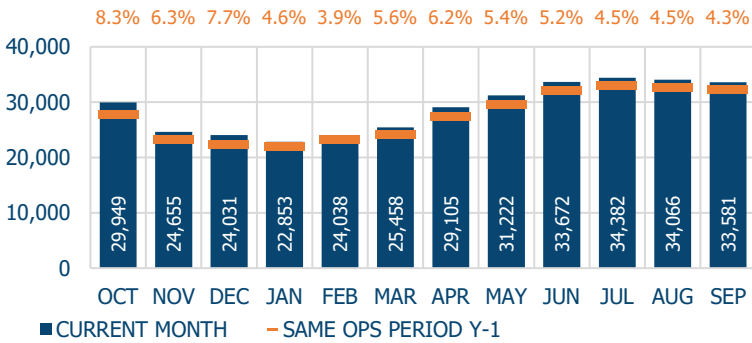
There were 3.5 million minutes of ATFM delay in September, +38.0% compared to September 2023. En-route ATFM delay represented 73% of these ATFM delays. The average en-route ATFM delay per flight for the network was 2.6 minutes in September. Total en-route ATFM delays increased by 43.5% and total airport ATFM delays increased by 24.9%. Weather issues and ATC capacity shortage mainly on the south-east axis led to extensive flow measures. ATC capacity delays increased in Karlsruhe UAC and Budapest ACC due to capacity constraints in conjunction with military traffic and additional complexity. Storm Boris affected central Europe, with 13, 14 and 15 September seeing disruptions due to weather. Convective activity impacted operations on the south-east axis, particularly in Karlsruhe, Zagreb and Beograd ACCs;

NM's Operational Centre reduced en-route ATFM delays by 10.7% and airport ATFM delays by 9.9% through direct actions.

NM estimates that 3.1 million tonnes of fuel was burnt in the en-route flight phase in the NM area in September.

## 2. Traffic evolution

Last 12 months average daily traffic

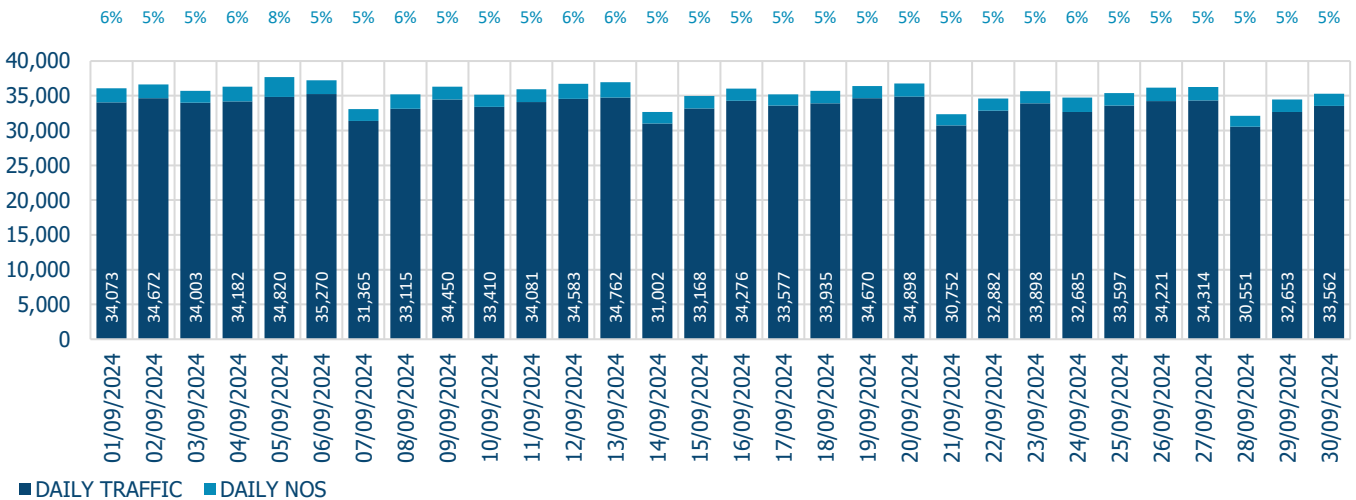


There were 1,007,427 flights throughout Europe in September 2024, 4.3% up compared to the same period last year.

Traffic displayed the usual seasonal trend, with a slight rise before the anticipated drop by the month's end.

In September 2024, the Low-cost segment continued to be by far the main contributor to flight growth with a 10.8% increase (+1,146 flights/day) compared to September 2023. In contrast, the other major passenger flights saw much smaller increases, with the Regional segment growing by 1.7% (+70 flights/day) and the Mainline segment increasing by just 0.9% (+107 flights/day). The Mainline segment saw fewer flights across Türkiye domestic (-67 flights/day), Norway domestic (-19 flights/day) and Spain domestic (excl. Canary Islands) (-18 flights/day) along with flights between Türkiye and Israel (-30 flights/day) and between Türkiye and the Middle-East (-19 flights/day). The Charter segment recorded a decrease of -2.7% (-35 flights/day) owing mainly to fewer daily flights between Türkiye and Israel (-12), Germany and Greece (-10), Germany and Egypt (-8) and UK and Spain (excl. Canary Islands) (-7). The Business aviation segment saw a 1.4% increase (+34 flights/day) whereas the All-cargo segment grew by 1.1% (+10 flights/day). By September 2024, only two segments surpassed their September 2023 levels: Business aviation (+11.4%) and Low-cost (+6.9%). Overall, flight numbers remained 2.7% below September 2019 levels.

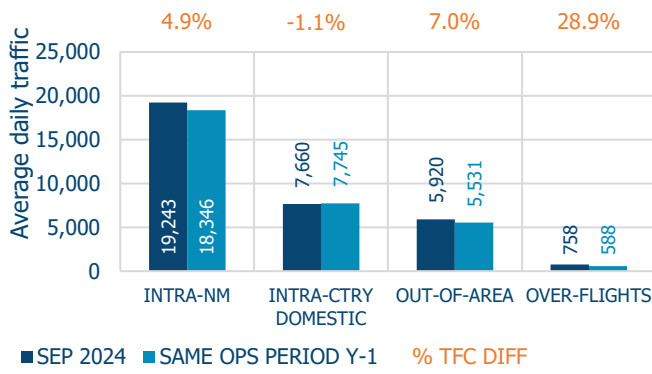
Daily network traffic evolution



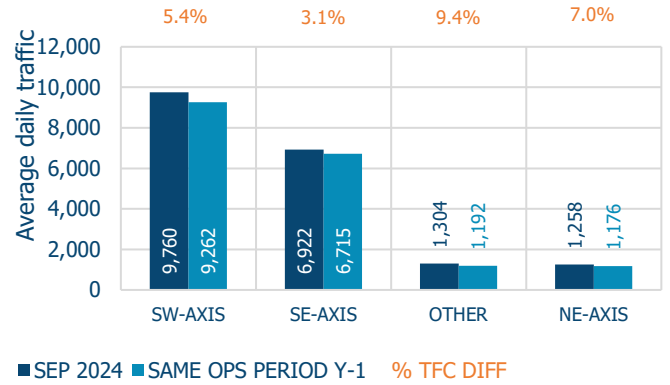
The busiest day was Friday 06 September (35,270 flights), which exceeded the busiest day of September 2023 (34,296 flights on 01 September).

On average, 5.5% of scheduled traffic did not operate in September (see Non-Operated Schedules, NOS, above).

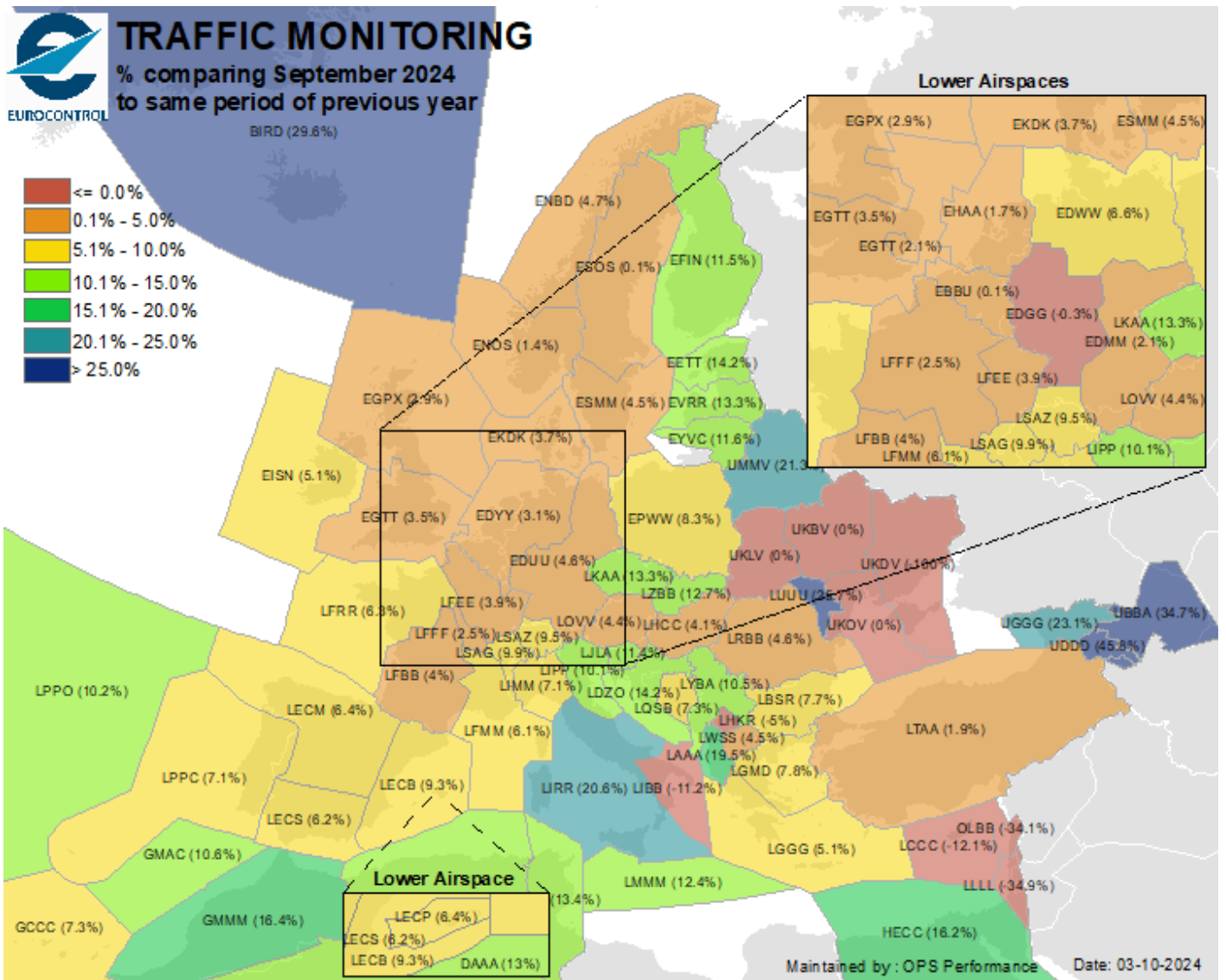
### Traffic per flow



### Intra-NM daily traffic

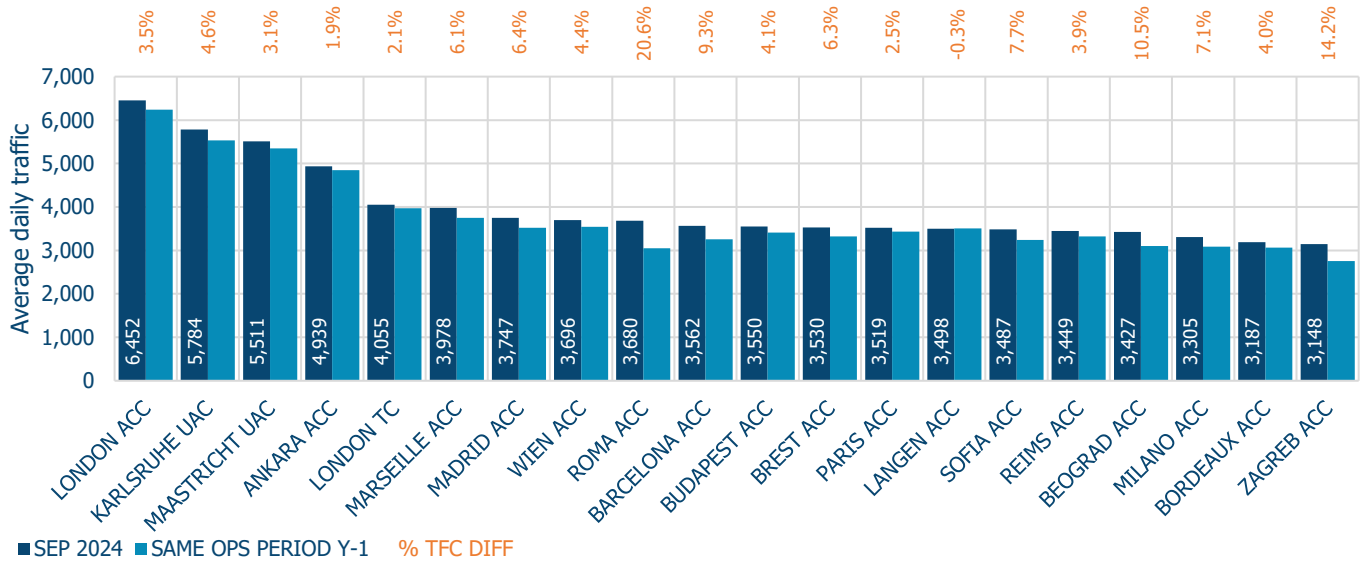


The intra-NM SW axis saw 5.4% growth compared to 2023, which influenced the network growth of 4.3%.



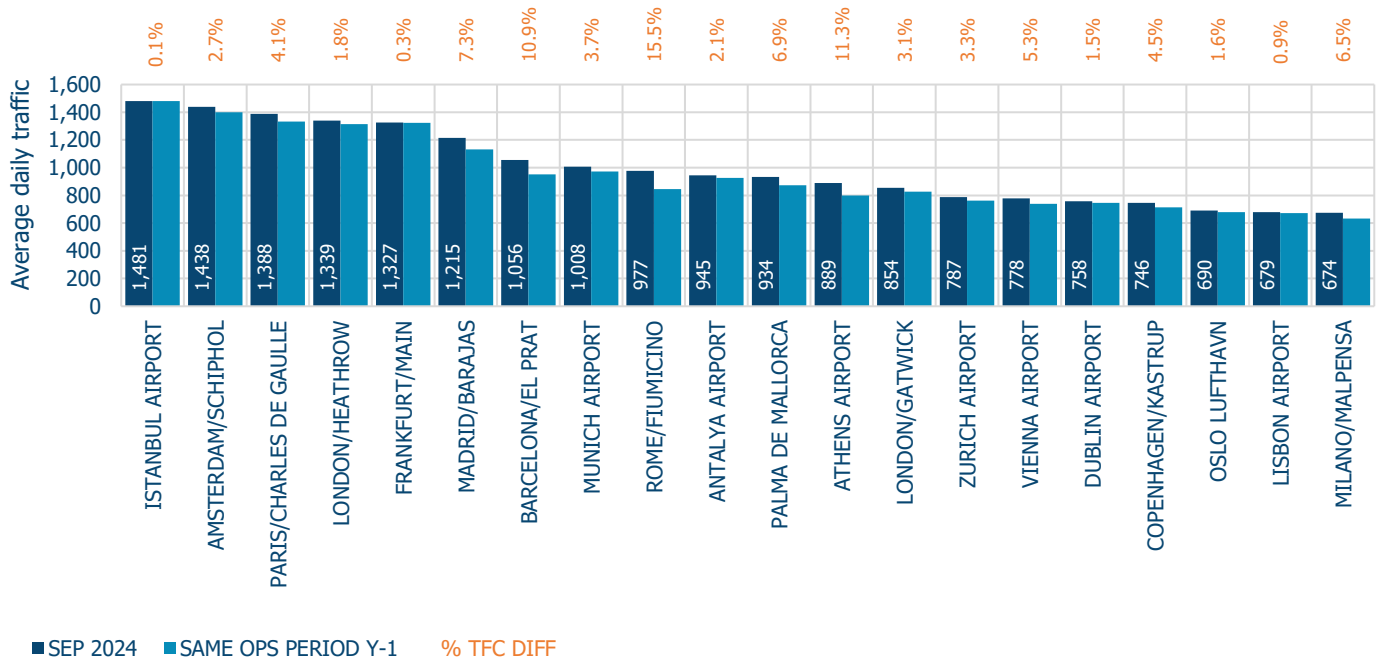
The designations employed do not imply the expression of any opinion whatsoever on the part of EUROCONTROL concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries !

## September 2024 | Top 20 ACC daily traffic



There was no change in the Top 4 ACCs compared to last month. London ACC remained the busiest followed by Karlsruhe UAC, Maastricht UAC and Ankara ACC. Among the Top 20 ACCs, only Langen ACC saw no increase in traffic compared to September 2023. Notably, seven ACCs—Ankara, Vienna, Budapest, Reims, Sofia, Beograd, and Bordeaux—registered substantial double-digit growth.

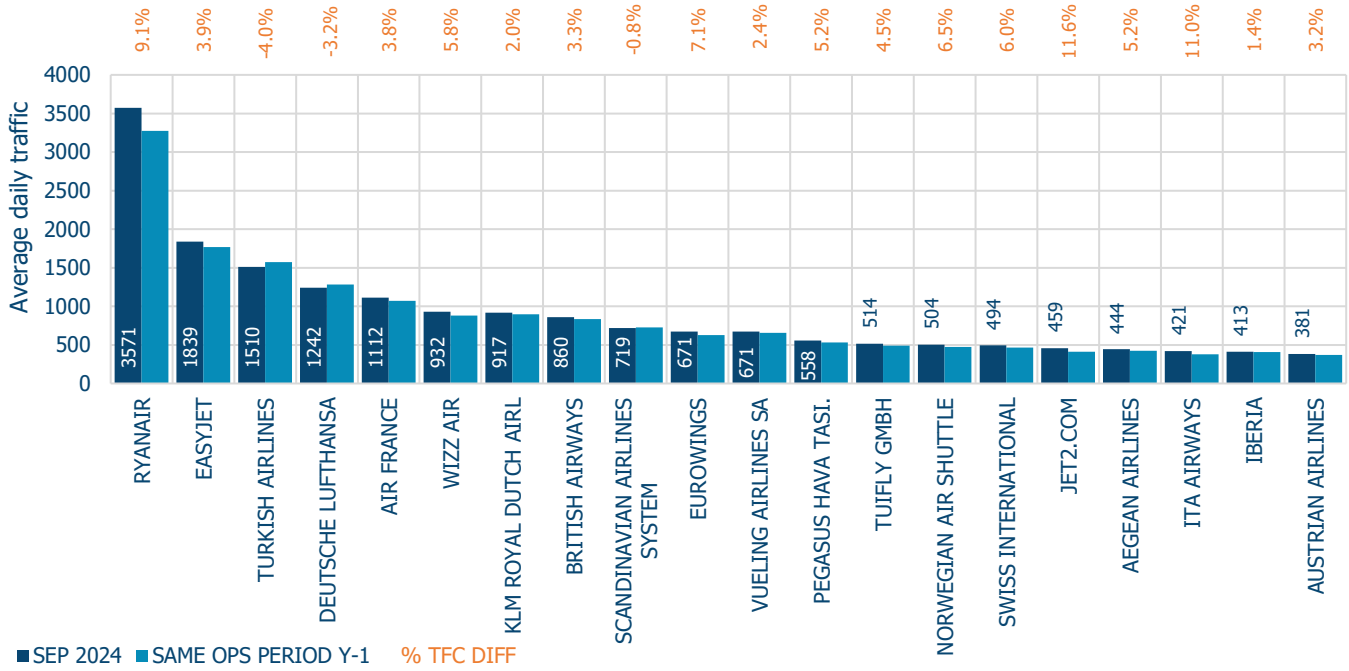
## September 2024 | Top 20 Airports daily traffic



Istanbul airport was the busiest airport with, on average, 1,481 flights/day, followed by Amsterdam Schiphol (1,438 flights/day), Paris-Charles de Gaulle (1,388 flights/day), London Heathrow (1,339 flights/day) and Frankfurt (1,327 flights/day).

All of the Top 20 airports had more traffic than in September 2023, with double-digit traffic growth at Barcelona Rome Fiumicino and Athens.

## September 2024 | Top 20 Air Operator groups daily traffic



The Top 6 air operators remained the same as in August 2024. Two air operators had a double-digit percentage traffic growth compared to last year: JET2.COM and ITA Airways.

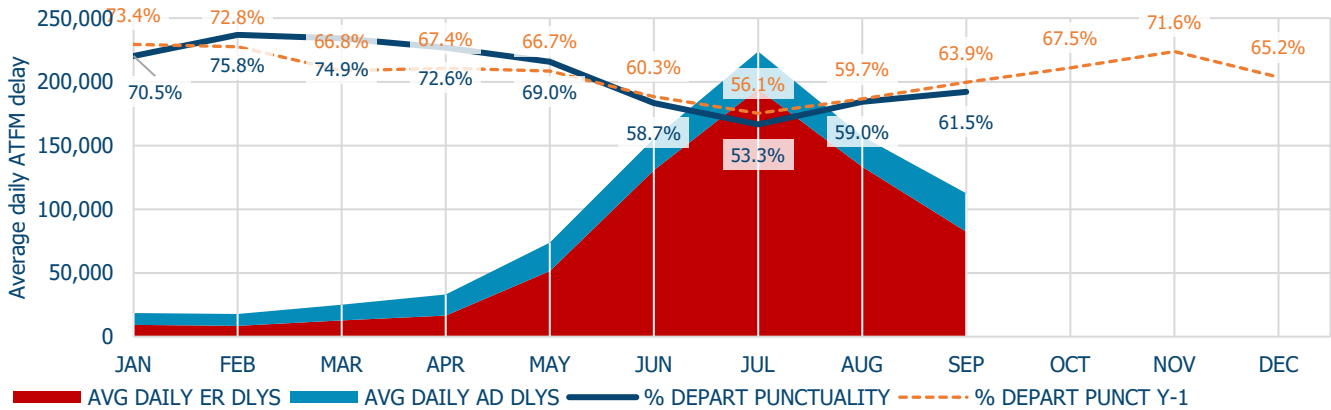
Ryanair was the busiest operator with, on average, 3,571 movements per day followed by easyJet (1,839), Turkish Airlines (1,510), Lufthansa (1,242) and Air France (1,112).

Turkish Airlines, Lufthansa and SAS saw a traffic decrease compared to September 2023.

# 3. Punctuality

## 3.1 Departure Punctuality

Network departure punctuality and ATFM delay



Network departure punctuality (61.5%) increased by 2.5 p.p in September compared to August 2024 but was still below the level of September 2023. In September, traffic grew by 4.3% along with a 38.0% rise in ATFM delay. The network was affected by convective activity and ATC capacity issues, mainly on the south-east axis, throughout the month.

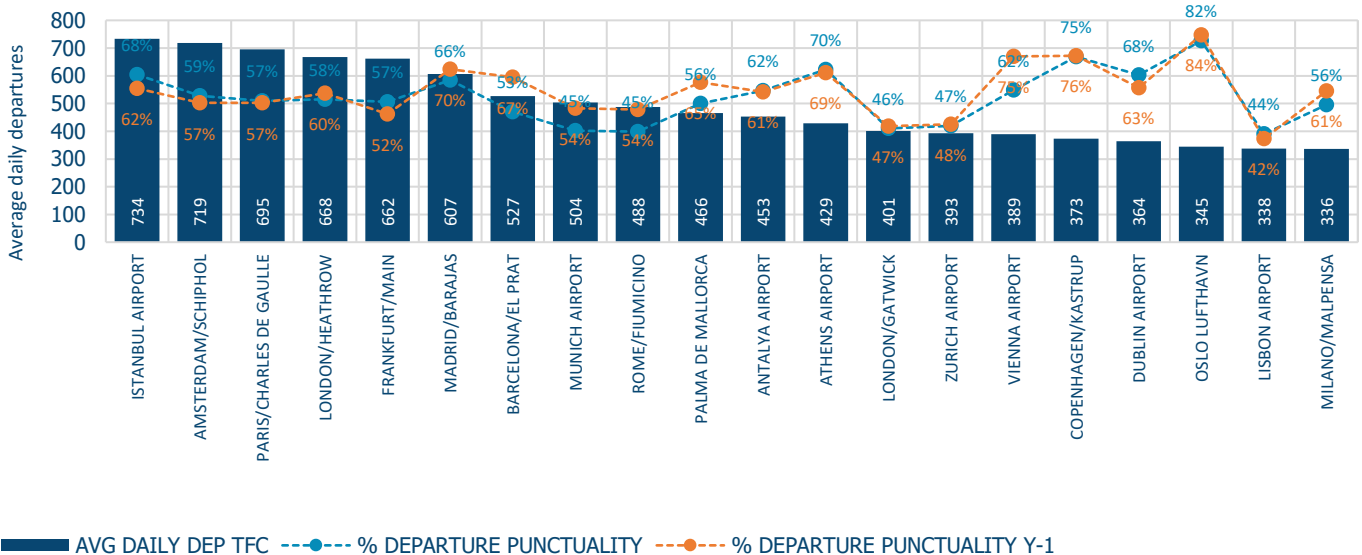
Punctuality on the domestic routes was higher (73.9%) than punctuality at network level. Punctuality on the south-east axis was 54.8% which is a decrease of 5.1 p.p. compared to September 2023.

Network first rotation departure punctuality was 77.0%. Improving first rotation punctuality remains a key objective for NM.

\*This view of operational punctuality can be tracked in near real-time by aircraft operator and airport level in the [NORTI Dashboard](#) and in [MIRROR](#). Archived data can be found in the [FATHOM interactive dashboard](#).

The Central Office for [Delay Analysis CODA reports](#) provide further detailed analysis of airline reported delay reasons.

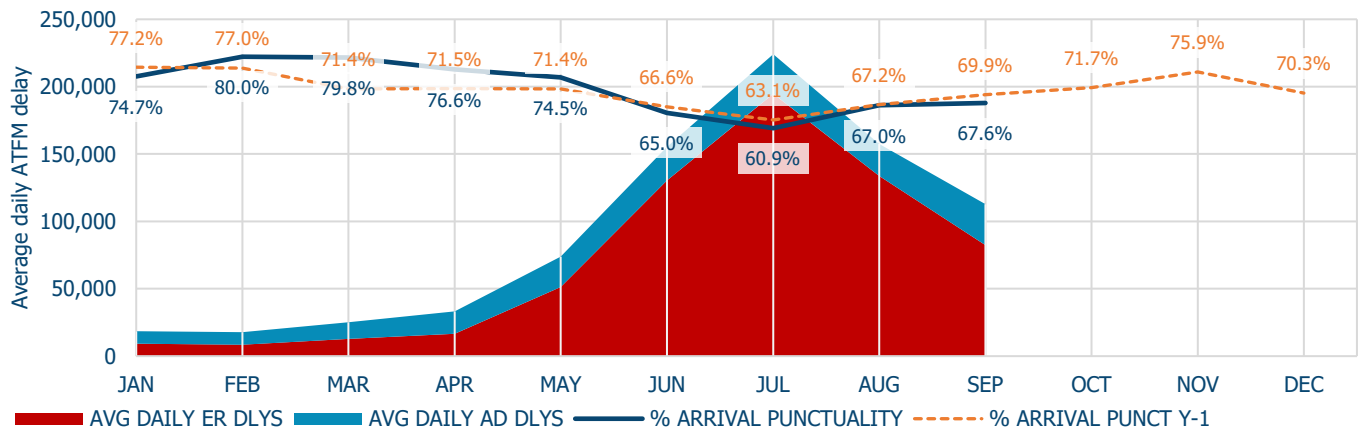
September 2024| Top 20 Airport departure traffic and punctuality



Punctuality in general deteriorated at the Top 20 airports, however it remained stable at the Top 5 busiest airports. Barcelona saw high delays due to weather (mainly CB activity and heavy rain) notably on 04 September. This significant weather also influenced performance in the Balearics with Palma also seeing delays on 03 and 04 September. Elsewhere in the network Vienna suffered from weather (heavy rain and strong winds) with some days seeing single runway operations.

### 3.2 Arrival Punctuality

Network arrival punctuality and ATFM delay

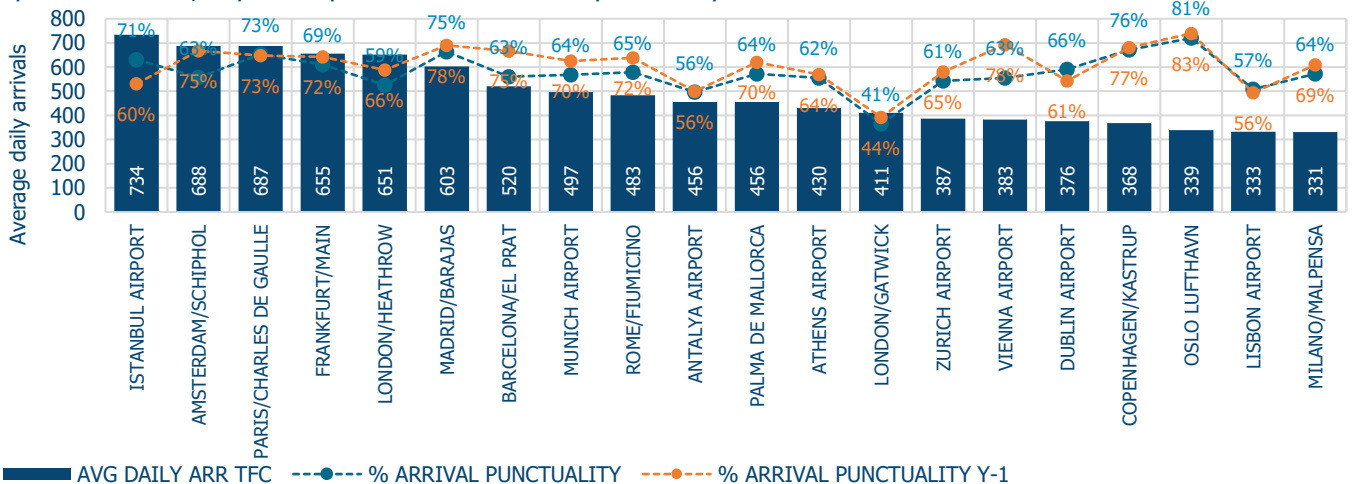


Network arrival punctuality (67.6%) slightly increased by 0.6 p.p. in September compared to August 2024 and was lower than September 2023 level (-2.3 p.p.).

Domestic routes (74.6%) arrival punctuality was higher than the network level. Punctuality on the south-east axis was 60.6% which is decrease of 4.3 p.p. compared to September 2023.

First rotation arrival punctuality was 84.2%.

September 2024 | Top 20 Airport arrival traffic and punctuality



Amsterdam Schiphol experienced daily ATFM regulations due to high demand, the airport also saw weather delays (low cloud base, strong winds and rain) notably between 11 and 13 September. London Heathrow also saw daily delays due to weather (high winds and LVP). London Gatwick suffered from multi-factors of weather, aerodrome capacity and ATC staffing, with the latter causing high delays on the 08 September.



# 4. Operations

## 4.1 Network Manager

NM continued to support operations affected by the Ukrainian war. It maintained airspace closures and NM systems supporting EU Sanctions Regulation for the Russian Federation and Belarus.

For Tel-Aviv FIR the NM provided a consolidated view of relevant NOTAMs on the NOP Portal and the EUROCONTROL Network Manager Operations Centre (NMOC) continues working 24/7 to implement State required airspace restrictions and in support to daily airline operations for routings and delay mitigation. On Saturday 28 September EASA published Conflict Zone Information Bulletins (CZIBs) concerning the airspaces of Israel and Lebanon, valid until 31 October unless reviewed earlier.

NM held preparatory coordination meetings in September for the 4-Flight OPS trials in LFFF ACC (8-9 October) and impact assessment in collaboration with the DSN has been performed for Bordeaux ACC (LFBB) 4-Flight system training.

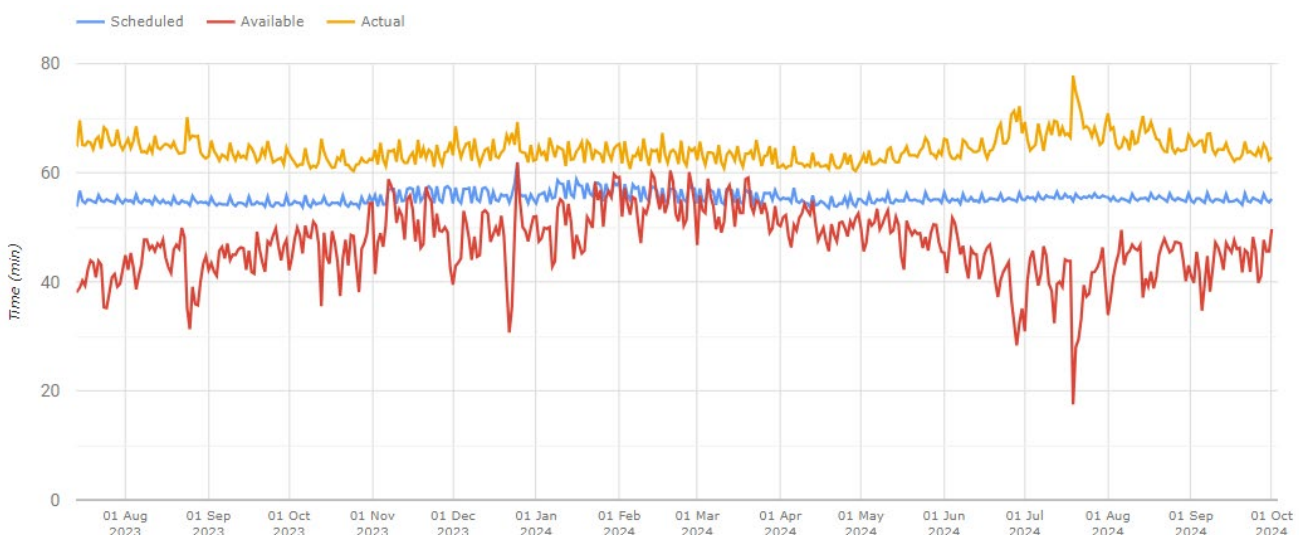
ATFM delays, re-routings and flight cancellations resulting from weather disruption decreased compared to August, however storm Boris had a notable ATFM effect mid-September in Central European states. NM is working on providing weather-based operations as a new service from NMOC. Weather resilience is crucial to maintain current levels of safety.

NMOC's E-Helpdesk received 87,000 requests in August: 64,000 from AOs, 12,000 from FMPs and 11,000 from Towers. 10,000 of these requests were about flights that the AO considered "critical". The average delay saved per processed request was 25 minutes.

NMOC reduced en-route ATFM delays by 10.7% and airport ATFM delays by 9.9% through direct actions.

## 4.2 Ground

MIRROR's<sup>i</sup> indicator shows that in September the network (average) available turnaround time remained stable when compared to September 2023. It did follow the summer seasonal trend (see last year) of decreasing on specific days such as 05 September where weather (low visibility and CBs) impacted Amsterdam Schiphol and London area airports. As well as the 26 Sept where Lisbon and Porto saw high delays due to weather. Here network effects and reactionary (knock-on delays) accumulated, influencing available and actual turnaround times, as unpredictability for ground operations increased.



NM is monitoring TTOT<sup>ii</sup> calculation quality for the 32 A-CDM airports. The average error at a network level was 8.7 minutes which decreased by 0.4 minutes compared to August, and by 0.5 minutes compared to September 2023. Oslo/Gardermoen (ENGM) continues to have the lowest error among all 32 airports – 5.6 minutes, which is 0.4 minutes lower than August. Lisbon (LPPT) had the highest error value at 14.3 minutes, up from 12.0 minutes in August. NM is providing the details of the TTOT error to the A-CDM airports and is working with selected airport operators to improve the TTOT quality.

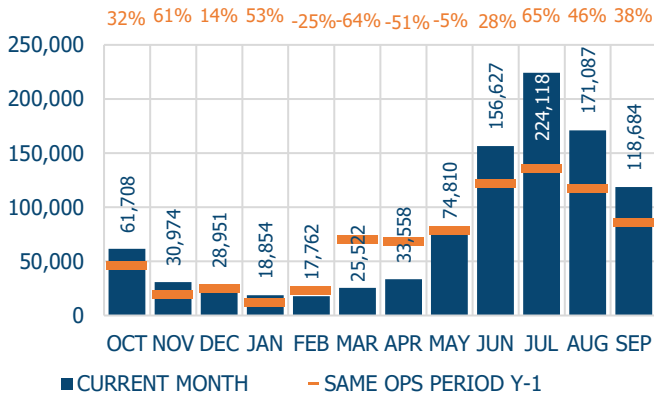
### 4.3 Network

There were 3,560,915 minutes of ATFM delay in September, 38.0% higher than September 2023.

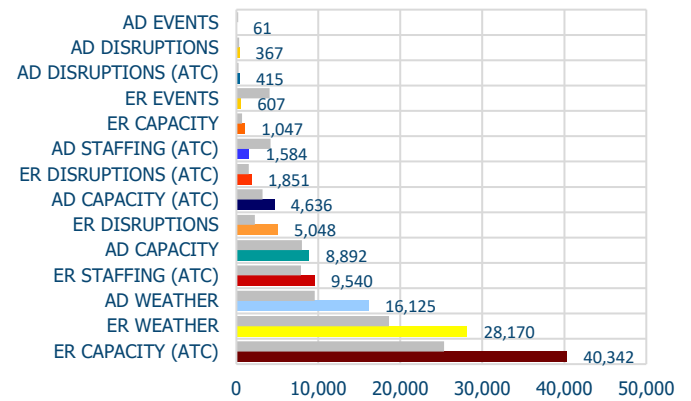
En-route ATFM delays accounted for 73.0% and airport ATFM delays accounted for 27.0%. Most of ATFM delays were due to ATC capacity and weather.

The average en-route ATFM delay per flight for the network was 2.6 minutes in September.

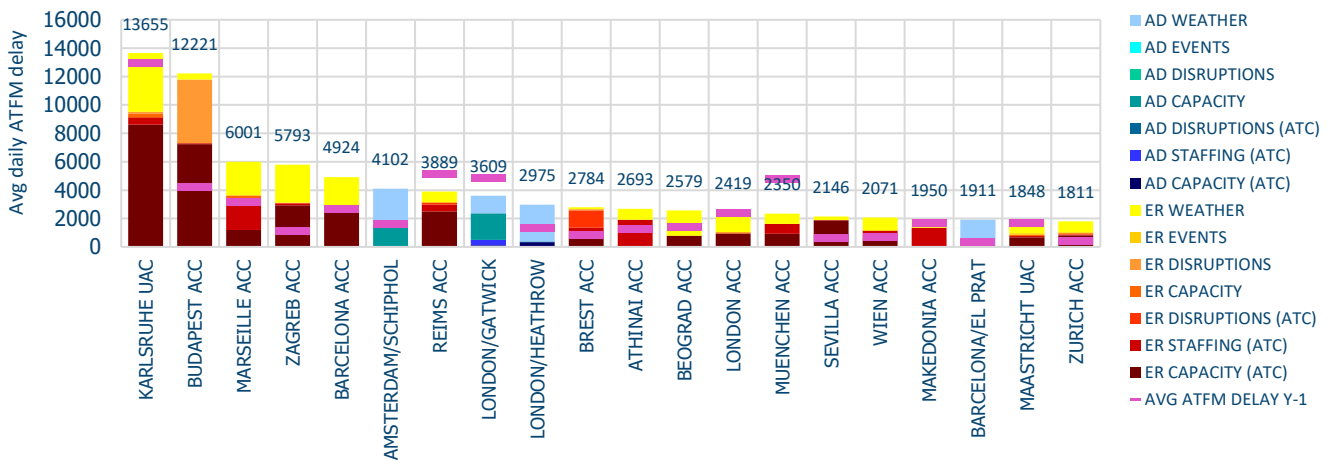
Last 12 months average daily ATFM delays



September 2024 | Reasons for ATFM delays



Top 20 delay reference locations in September 2024



The chart above shows the Top 20 delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily ATFM delays in minutes for the individual locations:

- ATC capacity issues in Karlsruhe, Budapest, Zagreb, Barcelona and Reims ACCs.
- Storm Boris affected central Europe, with 13, 14 and 15 September seeing ATFM disruptions due to weather.
- Convective activity impacted operations on the south-east axis, particularly in Karlsruhe, Zagreb and Beograd ACCs.
- The additional complexity due to the Ukrainian crisis generated high delays in Budapest ACC.
- Staffing shortage in Marseille. Athens and Makedonia ACCs also had ATC staffing regulations while delivering expected (NOP) sector configurations.
- Heathrow continued to generate daily delays attributed to weather.
- Disruption delays in Brest ACC due to the unserviceability of a radio antenna located in Spain. delay due to radio system issue in Brest.

## 4.4 Significant Events

There were several European events in September: Paralympics games in Paris from 28 August to 08 September, Cannes Yachting Festival from 09 to 15 September, Monaco Yacht Show from 25 to 28 September, International Civil Aviation Airports exhibition in Istanbul airport from 26 to 28 September and Tax Free World Exhibition at Cannes. NM and all operational stakeholders worked well together to handle these events smoothly and with little network delay.

### Events

- Skydive sport event in Teuge (The Netherlands) generated 4,266 minutes of ATFM delay in Amsterdam ACC;
- Implementation of Hermes project in Gran Canaria ACC generated 1,942 minutes of ATFM delay;
- WIC24 military exercise generated 3,831 minutes of ATFM delay in Maastricht UAC;
- TLP military exercise generated 6,124 minutes of ATFM delay in Madrid ACC.

### Technical

- Due to the unavailability of a radio antenna located on the Cantabrian coastline, the number of available sectors provided by Brest ACC in the Bay of Biscay was limited, prompting 36,938 minutes of ATFM delay;
- Data Link issue in Reims ACC on 01 September generated 4,870 minutes of ATFM delay;
- Technical issues with Oceanic Center systems in Shanwick OACC on 07 September generated 1,321 minutes of ATFM delay;
- FDP maintenance in Zurich ACC on 10 September generated 2,036 minutes of ATFM delay;
- Electrical failure at Antalya airport on 11 September generated 2,944 minutes of ATFM delay;
- Communication system failure in Zagreb ACC on 23 September generated 1,113 minutes of ATFM delay;
- Communication system failure in Marseille ACC on 24 September generated 6,888 minutes of ATFM delay; additional 1,492 minutes of delay were recorded in Alger ACC due to precautionary measures, 1,345 minutes in Barcelona and 1,408 minutes in Madrid ACC due to traffic unload.

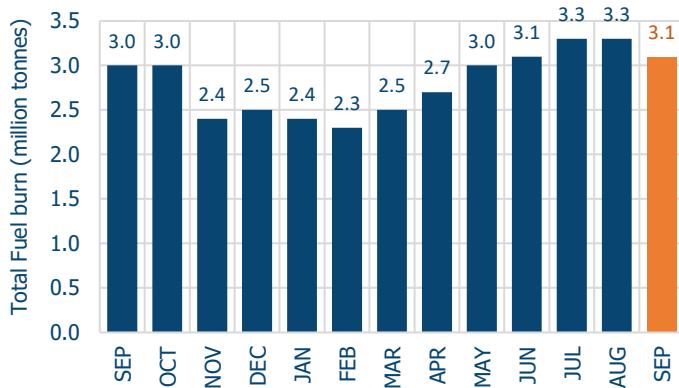
### Other

- Budapest ACC recorded 134,796 minutes of ATFM delay owing to daily protective capacity measures with significant on-load of traffic avoiding L'viv ACC and limited availability of ATCOs.
- The additional complexity due to the Ukrainian crisis generated 5,356 minutes of ATFM delays in Warsaw ACC.

# 5. Flight Efficiency

## 5.1 Fuel Burn

Total fuel burn within NM area (tonnes)



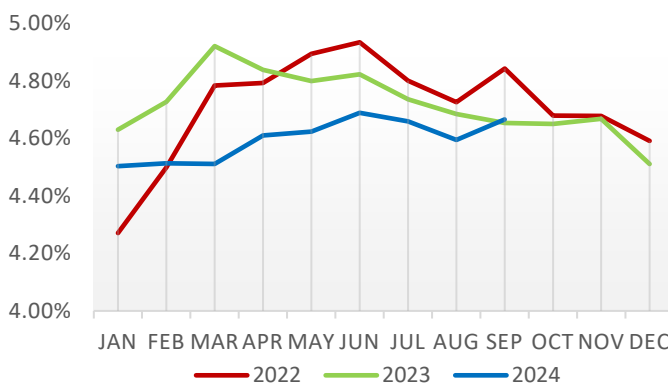
NM estimates that 3.1 million tonnes of fuel was burnt in the en-route flight phase in the NM area in September.

It remained stable compared to September 2023, with 1,300 extra flights per day in September 2024.

## 5.2 Horizontal Flight Efficiency

There are two horizontal flight efficiency KPIs<sup>iii</sup>. The indicators provide a measure of the average en-route additional distance with respect to the great circle distance. One is based on the last filed flight plan (KEP) and the other on actual trajectory (KEA). KEA remained stable and KEP increased compared to August 2024.

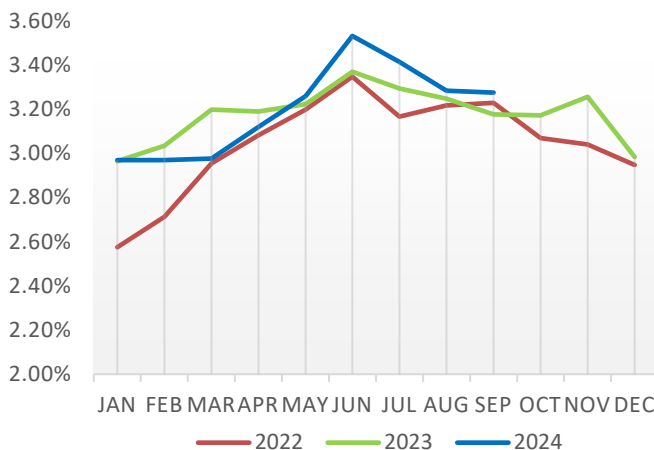
KEP evolution in NM Area



KEP indicator (4.67%) exceeded 2023 level (4.65%)

NM Flight Efficiency Taskforce continues to support AOs to further improve their flight planning.

KEA evolution in NM Area



KEA indicator (3.28%) remained stable compared to August 2024 and was higher than in 2023 (3.18%).

# 6. Notice

## Traffic and Delay Comparisons

All traffic and delay comparisons are between report month and equivalent operational period of the previous year.

## Traffic Monitoring

Country traffic counts are based on arrivals and departures traffic, overflights are excluded.

## NM Area

All figures presented in this report are for the geographical area that is within Network Manager's responsibility (NM area). For further information on the NM Area go to the Reporting Assumptions and Descriptions document available on the EUROCONTROL website at <https://www.eurocontrol.int/network-performance>

## Regulation Reason Groupings

For further information on the NM Area and the regulation reason groupings, go to the Reporting Assumptions and Descriptions document available on the EUROCONTROL website at <https://www.eurocontrol.int/network-performance>

## Airline Groupings

Description and definition available on the EUROCONTROL website at <https://www.eurocontrol.int/directory/airline-groups-lookup>

## ATFM Statistics dashboard

More detailed information available via the [ATFM Statistics dashboard](#)

## FATHOM dashboard

Interactive analysis tool to access archived data [FATHOM interactive dashboard](#)

## Network Operations Analysis document

ATFM statistics provides an alternative source of network traffic and ATFM delays. <https://www.eurocontrol.int/dashboard/air-traffic-flow-management-statistics-dashboard>

And stakeholders can use FATHOM for a more detailed view of their operational performance. <https://www.eurocontrol.int/tool/network-manager-interactive-analysis-tool>

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<sup>i</sup> The apparent growth in traffic for Iceland is partly accounted for by Reykjavik FIR joining the IFPZ from 30-November 2023 (IFPZ = IFPS-Zone, the area for which the Integrated Initial Flight Plan Processing System collects, processes and distributes flight plans). Consequently, Flight Plans previously not counted (Icelandic domestic, departures or arrivals to-from North America) became visible. The growth in traffic for Tbilisi and Baku FIRs is partly due to a change in air operators routings resulting from the situation in the Middle East. Brindisi ACC traffic decrease was due to a new sector configuration: The northern sectors of Brindisi ACC are under Roma ACC control since 13 June 2024.

<sup>ii</sup> Target Take-Off Time (TTOT) calculation quality at A-CDM airports is the average absolute difference between ATOT and TTOT at IOBT-30 minutes for non-regulated flights.

<sup>iii</sup> More information on KEP and KEA, see [ANS performance page](#).



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